THE EXPECTATIONS OF CONSUMERS

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In the few years following promulgation of the Restatement (Third) of Torts: Products Liability, several courts have reaffirmed their allegiance to the consumer expectations test for product design defect liability, while rejecting the Restatement's contrary recommendation to adopt a design defect test that focuses primarily on technical features regarding the risk and utility of alternative product designs. In this Article, Professor Kysar reviews the post-Third Restatement decisions, identifying within them a common failure to articulate a coherent, independent doctrinal role for the consumer expectations test, despite the courts' clearly expressed desire to do so. In Kysar's view, courts adhering to the consumer expectations test are correct to sense that the reasonable alternative design standard of the Third Restatement offers an inappropriately constrained basis for evaluating product designs. The consumer expectations test that they offer in its place, however, provides only an amorphous and ill-explained doctrinal formulation that repeatedly seems to collapse into the very Restatement framework that it purports to reject. Kysar seeks to overcome these failings of the consumer expectations doctrine by identifying a conceptually distinct, normatively desirable role for the doctrine to play within products liability law: The consumer expectations test should be redirected toward important cognitive and behavioral phenomena regarding the manner in which individuals evaluate risk, phenomena that are not as readily subsumed within the more analytically-rigid risk-utility test.

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INTRODUCTION

The consumer expectations test for design defectiveness has become products liability's version of the rule against perpetuities: a doctrine nearly universally reviled but stubbornly and inexplicably persistent.¹ Purporting to arise from the venerable section 402A of the Restatement (Second) of Torts,² the test actually appears to represent a gross misreading of that section.³ From this questionable origin, the consumer expectations test rose to prominence during the products liability revolution of the 1960s and 1970s. Even during the doctrine's heyday, however, academic commentators were expressing reservations about its attempt to rest product design liability on the simple but essentially formless question of whether a product disappointed the safety expectations of an "or-

¹. The consumer expectations doctrine states that manufacturers are liable for product-induced harm whenever the product is considered "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." Giglio v. Conn. Light & Power Co., 429 A.2d 486, 488 (Conn. 1980) (citations and internal quotation marks omitted). Typically, "[w]hether a product is unreasonably dangerous is a question of fact [about which jury members] . . . can draw[ ] their own reasonable conclusions as to the expectations of the ordinary consumer and the knowledge common in the community at large." Id. at 489 (citations and internal quotation marks omitted).

². See Restatement (Second) of Torts § 402A (1965) [hereinafter Restatement (Second)].

³. See infra text accompanying notes 53–57.
ordinary consumer."  

Indeed, by the 1980s, a consensus view among products liability scholars emerged that the consumer expectations test was both indefensible in theory and unworkable in practice. In its stead, scholars advocated the explicit cost-benefit balancing approach of the primary alternative doctrine that courts had developed for determining design defectiveness, the risk-utility test. Finally, as products liability entered its fourth decade of confusion concerning the scope and significance of the consumer expectations test, the American Law Institute appointed Professors Henderson and Twerski, two academic critics of judicial expansion of product manufacturer liability, as co-Reporters of the ALI’s ambitious and important project, the Restatement (Third) of Torts: Products Liability. When the ALI eventually adopted the results of the Reporters’ prodigious efforts on May 20, 1997, it endorsed a set of black-letter statements that finally and definitively rejected the consumer expectations test as an independent test for product design defect in favor of the more analytically sound risk-utility test.

At least, that was the plan. In the few years following promulgation of the Third Restatement, however, several courts have issued opinions ex-

4. See, e.g., W. Page Keeton, Products Liability—Design Hazards and the Meaning of Defect, 10 Cumb. L. Rev. 293, 310, 312–13 (1979); Gary T. Schwartz, Foreword: Understanding Products Liability, 67 Cal. L. Rev. 435, 475 n.257, 476 n.241 (1979) [hereinafter Schwartz, Foreword]; see also Todd v. Societe Bic, S.A., 21 F.3d 1402, 1406, 1409 (7th Cir. 1994) (“Under the Restatement, the consumer [expectations] test was the only standard authorized to determine whether a product was unreasonably dangerous. But tort commentators soon began to express dissatisfaction with the test’s restrictions on manufacturer liability.”).


6. As described infra text accompanying notes 47–49, courts have employed two primary versions of the risk-utility test: one in which the aggregate costs and benefits of the marketed product design are assessed, and one in which only the marginal costs and benefits of a proposed alternative design are assessed. The former “macro-balancing” approach examines the safety and utility tradeoffs of the product as a whole, while the latter “micro-balancing” approach examines only the tradeoffs posed by a suggested safety improvement or design alteration to the product. See David G. Owen, Toward a Proper Test for Design Defectiveness: “Micro-Balancing” Costs and Benefits, 75 Tex. L. Rev. 1661, 1664, 1670–86 (1997) [hereinafter Owen, “Micro-Balancing”].


8. Specifically, the new Restatement rests design defect liability on a risk-utility balancing approach in which costs and benefits of a proposed safety improvement to the product design are weighed in order to determine whether the absence of the improvement renders the marketed design “not reasonably safe.” Id. § 2(b).
pressing varying degrees of judicial allegiance to the consumer expectations test.\(^9\) Indeed, at times they have appeared deeply suspicious of the ALI Restatement project and its recommendation to abandon consumer expectations as an independent means for determining product design liability. These judicial objections are puzzling in light of the aforementioned consensus view among commentators that the consumer expectations test is in one way or another harmful to plaintiffs, defendants, and the judicial process itself. They are even more puzzling given that, as the Reporters carefully have explained, judicial opinions that purport to apply the consumer expectations doctrine generally fail in practice to articulate and apply anything other than a veiled risk-utility standard or a simple res ipsa loquitur-like exception thereunder.\(^10\) Significantly, even post-Third Restatement consumer expectations decisions, which profess a strong desire to retain an independent role for the consumer expectations test, tend to fit this pattern.\(^11\) In the view of the Reporters, therefore, continued insistence by courts on portraying the consumer expectations test as something more than it is gives rise to unnecessary “rhetorical confusion.”\(^12\) It perpetuates a “myth that the general standard for defective product design is unsettled and unclear” when in fact judicial “consensus has been achieved.”\(^13\)

This Article examines the disjunction between rhetoric and reality in post-Third Restatement products liability decisions. It aims to demonstrate, first, that the doctrinal framework established by the Third Restatement is in fact an accurate representation of design defect litigation despite the apparent persistence of the consumer expectations test. Courts that retain the consumer expectations doctrine typically express concern that


11. See infra Part II.B.


13. Id. at 872, 919.
risk-utility analysis imposes an undue burden on injured plaintiffs, particularly when such analysis is read to require demonstration of an alternative product design that would have avoided the plaintiff's harm at a reasonable cost. They also worry that the risk-utility test fails to capture the full spectrum of concerns relevant to products liability law and its goal of "insur[ing] that the costs of injuries resulting from defective products are borne by the manufacturers that put such products on the market rather than by the injured persons who are powerless to protect themselves." As this Article will underscore, despite the force of these critiques, courts applying the consumer expectations test have offered in the alternative only an ill-defined doctrinal construction that seems repeatedly to collapse into the very risk-utility framework that the courts claim to reject.

Second, this Article seeks to explain and build upon the puzzling rhetorical allegiance of courts to the consumer expectations doctrine, ultimately offering a reinvigorated understanding of the doctrine that fulfills its purpose of providing a normatively desirable alternative to the risk-utility test. As will be seen, the choice between the consumer expectations and risk-utility tests for design defect litigation mirrors current debates in risk regulation regarding the respective roles of public safety demands, which often hinge on qualitative aspects of a given health or safety hazard, and cost-benefit analysis, which tends to abstract away from such nuances in order to provide a more uniform, ordered assessment of risks. Evidence from cognitive psychology and other studies of human perception and behavior suggest two broad findings. First, the public's reaction to health and safety hazards often differs markedly from that of scientists and other expert observers. Second, although much of the divergence between expert and lay modes of risk evaluation may be attributed to factual or cognitive errors on the part of lay observers, a substantial remaining core of divergence seems to flow from the failure of expert risk-assessment models to accommodate areas of significant, legitimate public concern. In light of these two findings, this Article concludes

14. See, e.g., Potter, 694 A.2d at 1332; Vautour, 784 A.2d at 1183.
16. Professor Shapo's recent description of the divide among advocates of risk-utility and consumer expectations analysis helps to illuminate these parallels:

On one side . . . there stand advocates for whom law is basically an exercise in balance sheets, quantifying human production and human injury and making decisions based primarily, even exclusively, on how the balance comes out. On the other side is a cadre with a more psychologically oriented view of law, who emphasize tying legal rules closely to the springs of human behavior.

Marshall S. Shapo, Tort Law and Culture 215 (2003) [hereinafter Shapo, Tort Law and Culture]; see also id. at 10, 293, 297 (referring to a distinction between "justice culture" and "market culture" influences on tort law). The central doctrinal recommendation of this Article—that the consumer expectations doctrine should be reoriented toward capturing the ways in which lay risk perceptions systematically differ from expert assessments—can be seen as an effort to tie "legal rules closely to the wellsprings of human behavior" in just the manner described by Shapo.

17. See infra Part IV.A.
that products liability courts should adopt a twin-test approach to design defect litigation, resting manufacturer liability either on a product's failure to pass risk-utility analysis or on its failure to comport with the firmly established safety expectations of consumers.\textsuperscript{18} Such a construction would serve to effectuate important lay risk values that seem unlikely to register in the more narrowly delineated risk-utility test. At the same time, the twin-test approach would acknowledge the fallibility of ordinary consumer perceptions by including risk-utility analysis as an additional, more technically-oriented standard for determining product manufacturer liability.

In order to prevent the consumer expectations prong of the test from operating as an amorphous or unprincipled doctrine, as it appears to have operated in the past, attention should be directed specifically toward the ways in which consumer beliefs about product safety are likely to depart from the results of risk-utility analysis. More particularly, a products liability plaintiff who fails to present traditional risk-utility evidence nevertheless should survive summary judgment if she raises a triable question of fact regarding a significant identified aspect of consumer risk perception that is not captured by conventional risk-utility analysis but that is implicated by the injurious product.\textsuperscript{19} Tying consumer expectations analysis to the findings of risk perception research in this manner would eliminate much of the perceived arbitrariness that concerns critics of the consumer expectations doctrine, while still infusing the test with an independent substantive role.

This Article proceeds as follows. Part I provides a brief overview of products liability law's half-century struggle to develop an acceptable test for design defectiveness, beginning with the revolutionary but problematic language of section 402A of the Restatement (Second) of Torts and culminating in the Third Restatement's unequivocal rejection of the consumer expectations test.\textsuperscript{20} Part II then reviews a series of state court rulings issued after the ALI's adoption of the Third Restatement, each of which expresses some degree of reluctance to abandon the consumer ex-

\textsuperscript{18} This is similar to the approach adopted first in California and subsequently followed in several other states. See infra text accompanying notes 68--72.

\textsuperscript{19} See infra Part IV.B.

pectations test as an independent means for establishing design defective-
ness. Nevertheless, as predicted by the Reporters, the decisions tend to
fit quite comfortably within the doctrinal framework established by the
Third Restatement, despite the courts' proclamations to the contrary.

In light of this expressed desire but general failure of several courts
to articulate a conceptually distinct role for the consumer expectations
test, Part III argues that products liability scholars should reexamine the
much derided doctrine to ascertain what exactly courts are struggling to
accomplish through its retention.21 Part III begins that task by reviewing
the positive and normative depictions of consumer behavior that have,
from time to time, appeared in products liability opinions and scholar-
ship. Consistent with earlier criticisms of the consumer expectations test,
these depictions for the most part fail to describe the content and signifi-
cance of consumer expectations in a manner that is both separable from
risk-utility analysis and suitable for products liability adjudication. Thus,
at least initially, Dean Keeton seems to be correct in his assessment that
"there is no way to avoid a risk-benefit analysis in passing upon designs."22

Part IV, however, discusses more promising findings that emerge
from cognitive and social psychology, behavioral economics, and other
social science investigations of human behavior and decisionmaking. In
particular, researchers from these fields have uncovered a wealth of
knowledge in recent years concerning the manner in which individuals
perceive and process information regarding health and safety dangers.
As it turns out, lay individuals frequently comprehend such risks in ways
that depart systematically from the approaches that characterize expert
decisionmaking. Although such departures sometimes result from unde-
sirable factual or cognitive errors on the part of individuals, a substantial
remaining core of lay risk perception cannot easily be dismissed as irra-
tional or otherwise lacking foundation. Instead, the research suggests a
form of "rival rationality" on the part of lay observers, coexisting with
expert conceptions of risk and arguably deserving of equal recognition

21. For earlier efforts to explore the positive and normative implications of a
consumer-focused products liability law, see generally Michael D. Bernacchi, A Behavioral
Model for Imposing Strict Liability in Tort: The Importance of Analyzing Product
Performance in Relation to Consumer Expectation and Frustration, 47 U. Cin. L. Rev. 43
(1978); Reed Dickerson, How Good Does a Product Have To Be?, 42 Ind. L.J. 301 (1967);
F. Patrick Hubbard, Reasonable Human Expectations: A Normative Model for Imposing
Strict Liability for Defective Products, 29 Mercer L. Rev. 465 (1978); Joseph W. Little, The
Place of Consumer Expectations in Product Strict Liability Actions for Defectively
Designed Products, 61 Tenn. L. Rev. 1189 (1994); Paul D. Rheingold, What Are the
Consumer's "Reasonable Expectations"?, 22 Bus. Law. 589 (1967); Marshall S. Shapo, A
Representational Theory of Consumer Protection: Doctrine, Function and Legal Liability
for Product Disappointment, 60 Va. L. Rev. 1109 (1974) [hereinafter Shapo, Representational Theory];

(1973).
within legal analysis of health and safety decisions. Part IV therefore concludes that the consumer expectations test should be redirected toward these important cognitive and behavioral phenomena that are not as readily subsumed within the rubric of the risk-utility test. Such doctrinal recognition of the ways in which lay risk evaluations differ from those of experts would help to complement the increasingly technical orientation of products liability law by identifying specific areas in which risk-utility analysis is likely to ignore or overlook important product-related variables. Moreover, because these lay risk values have been well demonstrated in social science experiments, the approach advocated in this Article would help to satisfy the desire of courts to vindicate the interests of ordinary consumers without entailing the degree of uncertainty and vagueness in application that previous incarnations of the consumer expectations doctrine appear to have suffered.

As Professors Henderson and Twerski note, the consumer expectations test is "[t]he only serious alternative" to the risk-utility test. To date, however, the doctrine has proven a decidedly inferior alternative as courts and commentators have failed to articulate adequately the doctrine's conceptual foundation, particularly as it relates to the competitor standard of risk-utility analysis. Properly conceived, a doctrine that seeks to vindicate the expectations of consumers would be premised on well-supported, distinctive notions of what it is that consumers actually expect from the modern marketplace and why it is that those expectations should ground a standard of liability for design defectiveness. Recent findings from cognitive psychology and other social science fields have begun to provide a more nuanced portrayal of individual risk perception, one that provides a strong substantive foundation for the consumer expectations doctrine. Indeed, if consumer expectations come to be understood from this perspective, then the consumer expectations test will help to accommodate fundamental value distinctions that exist in the way expert and lay observers think about and react to product risks. In that manner, the doctrine that refuses to die may yet find a purpose, nearly fifty years after its accidental birth.

23. See infra notes 272–274 and accompanying text. The phrase "rival rationality" originates in Howard Margolis, Dealing with Risk: Why the Public and the Experts Disagree on Environmental Issues 21 (1996) [hereinafter Dealing with Risk]. Some scholars, including Professor Margolis and more recently Professor Sunstein, have challenged the claim that risk perception research collectively makes the case for a rival rationality. This objection is discussed infra Part IV.C–C.1.

24. A recent examination of toxic tort doctrines by Professor Heinzerling and Cameron Hoffman reflects a similar call to increase tort law's sensitivity to social science understandings of risk perception. See Lisa Heinzerling & Cameron Powers Hoffman, Tortious Toxics, 26 Wm. & Mary Envtl. L. & Pol'y Rev. 67 (2001). In their article, Heinzerling and Hoffman contend that tort law should "decouple the notion of 'risk' and risk-based harms from numerical probabilities of physical injuries" and instead consult the "treasure trove of insights relevant to toxic tort law" that emerge from sociological and psychological understandings of risk. Id. at 68, 76.

I. THE DESIGN DEFECT TEST DEBATE IN PRODUCTS LIABILITY

The expansion of product manufacturer liability throughout the latter half of the twentieth century stands "among the most dramatic [changes] ever witnessed in the Anglo-American legal system." At no point, however, did the expansion in liability reach its logical extreme of absolute manufacturer liability for all physical harms caused by consumer products. Despite frequent academic support for the establishment of such a system of "enterprise liability," American courts invariably have stopped short of making the manufacturer bear the personal injury costs of all product-caused accidents irrespective of fault. As a consequence, courts have been put to the task of fashioning various doctrinal tests for ascertaining when a product will be considered "defective" such that its manufacturer bears responsibility for the costs of ensuing harm.


Generally speaking, in those cases when a product fails to comport with its own intended design—that is, when a "manufacturing defect" causes the product to depart from the defendant's own standards for the product line—courts have had little trouble finding liability.\(^\text{29}\) When the product's intended design itself is challenged, however, courts have been required to engage in a more wide-ranging inquiry to determine whether the product suffers from a deficiency severe enough to justify imposing accident costs on its manufacturer. As numerous courts and commentators have noted, this latter task—of determining the proper test for design defectiveness—has been the central issue in products liability law for the last four decades.\(^\text{30}\) This Part traces the development of the design defect test concept from its early twentieth-century origins to its most recent incarnation in the *Third Restatement*.

A. *The Restatement (Second) of Torts § 402A*

Products liability law was much simpler prior to Judge Cardozo's landmark opinion in *MacPherson v. Buick Motor Co.*\(^\text{31}\): It did not exist. Before *MacPherson*, courts generally followed the "privity rule," which held that a product manufacturer could not be liable in tort to a consumer with whom the manufacturer had no direct contractual relationship.\(^\text{32}\) Because the expansion and modernization of retail markets meant that few products were being purchased directly from their makers, manufacturers enjoyed wide immunity from injury claims based on the design and production of consumer products. Judge Cardozo's opin-

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\(^\text{29}\) See Epstein, supra note 20, at 70.

\(^\text{30}\) See, e.g., Caterpillar Tractor Co. v. Beck, 593 P.2d 871, 880 (Alaska 1979) ("Design defects present the most perplexing problems in the field of strict products liability . . ."); Prentis v. Yale Mfg. Co., 365 N.W.2d 176, 182 (Mich. 1984) (noting that design defect presents "the most agitated and controversial" problems in products liability law); Richard A. Epstein, Products Liability: The Search for the Middle Ground, 56 N.C. L. Rev. 643, 647-49 (1978) (describing judicial confusion in assessing design defects); Keeton, supra note 4, at 298 n.25 ("The search for the universally acceptable definition of defect has been the most elusive one in the products liability field."); Little, supra note 21, at 1190 ("The difficult and politically contentious cases are those that involve allegations of defective design."); Marshall S. Shapo, In Search of the Law of Products Liability: The ALI Restatement Project, 48 Vand. L. Rev. 631, 638 (1995) [hereinafter Shapo, The ALI Restatement Project] ("[A] crucial aspect of products liability law—perhaps the core concept, if any one idea may be described that way—lies in the definition of defect."); Marshall S. Shapo, Products at the Millennium: Traversing a Transverse Section, 53 S.C. L. Rev. 1031, 1053 (2002) ("However divided analysts of products law may be about concept, most would agree that the heart of the matter in products liability is the concept of defect.").


ion in *MacPherson*, however, eviscerated this immunity by “put[ting] aside
the notion that the duty to safeguard life and limb, when the conse-
quences of negligence may be foreseen, grows out of contract and noth-
ing else.”\(^3\) Rather, the duty to prevent foreseeable harms caused by neg-
ligent conduct, according to Cardozo, emanated directly from “the law”\(^4\)
without regard to the extent or quality of contractual relations between
manufacturer and consumer.

In addition to *MacPherson*, the New Jersey case of *Henningsen v.
Bloomfield Motors, Inc.* also provides a key moment in the historical devel-
opment of products liability law.\(^5\) By recognizing an implied warranty of
merchantability irrespective of consumer-manufacturer privity, and by ref-
fusing to enforce a manufacturer’s attempted contractual disclaimer of
such a warranty, *Henningsen* followed through on the early movement of
*MacPherson* away from freedom of contract as the exclusive jurispruden-
tial paradigm for product-caused injuries.\(^6\) Noting the consumer’s rela-
tive lack of knowledge and control of product safety factors, the pressure
of modern advertising and marketing techniques, and the “gross inequa-
arity of bargaining position occupied by the consumer in the automobile
industry,” the *Henningsen* court concluded that safety was simply too im-
portant an element of “social justice” to leave entirely to the operations of
the marketplace.\(^7\) Thus, just as *MacPherson* earlier had recognized a neg-
ligence-based cause of action for injuries caused by defective products,
*Henningsen* firmly established a warranty-based cause of action for such
injuries.

Finally, Justice Traynor’s opinion for the California Supreme Court
in *Greenman v. Yuba Power Products, Inc.* took the strict liability concept
underlying warranty law and incorporated it directly into the law of
torts.\(^8\) On the heels of this famous opinion, the ALI released the Restate-
ment (Second) of Torts in 1965. Section 402A of the Second Restatement,
which was to become the most frequently cited section in all of the ALI

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33. 111 N.E. at 1053.
34. Id.
expansion in the post-1965 period” of products liability law was “fueled” by early judicial
limitation of the role of contract in injury law).
37. 161 A.2d at 83–87.
38. 377 P.2d 897, 901 (Cal. 1963). Justice Traynor wrote:

Although ... strict liability has usually been based on the theory of an express or
implied warranty running from the manufacturer to the plaintiff, the
abandonment of the requirement of a contract between them, the recognition
that the liability is not assumed by agreement but imposed by law, and the refusal
to permit the manufacturer to define the scope of its own responsibility for
defective products make clear that the liability is not one governed by the law of
contract warranties but by the law of strict liability in tort.

Id. (citations omitted).
Restatement projects, stated plainly that “[o]ne who sells any product in a defective condition unreasonably dangerous to the user or consumer . . . is subject to liability for physical harm thereby caused to the ultimate user or consumer.”

Moreover, subsection 2 emphasized that such liability was strict in nature and did not depend on contractual privity. Although Dean Prosser, the chief architect of the Second Restatement and section 402A, could point only to Justice Traynor’s opinion as judicial authority for these dramatic propositions at the time the Second Restatement was promulgated, within a generation the section received nearly unanimous endorsement throughout the United States.

Several aspects of section 402A merit particular attention. Most notably, although it purports to establish a regime of “strict liability” for product manufacturers, in fact the section requires demonstration of a “defective condition” in the product to trigger manufacturer liability. The critical question then becomes, of course, how to define the notion of product defectiveness. Section 402A does not provide a direct answer to this question. Courts are advised by the section to apply liability whenever a product is in a “defective condition unreasonably dangerous to the user or consumer,” but the notions of defectiveness and unreasonable danger do not provide self-executing tests for manufacturer liability. Instead, to give flesh to these concepts, courts over the years have devised various doctrinal means of assessing the adequacy of product designs. For instance, many courts have utilized some version of cost-benefit balancing, often by weighing the seven risk-utility factors identi-
fied by Dean Wade in his highly influential 1973 article. More recently, the trend among risk-utility jurisdictions has been to replace the aggregate cost-benefit balancing approach of the Wade test with a more narrow analysis focusing only on the marginal costs and benefits entailed by particularized safety aspects of the product design, a distinction that Professor Owen terms "macro-balancing" versus "micro-balancing."

In contrast to these risk-utility approaches, a significant number of courts have attempted to fashion their design defect standard for products liability from a notion of consumer expectations that lies within the comments to section 402A itself. Specifically, comment i provides: "The article sold must be dangerous to an extent beyond that which

47. See John W. Wade, On the Nature of Strict Tort Liability for Products, 44 Miss. L.J. 825 (1973). Dean Wade’s seven factors were:
(1) The usefulness and desirability of the product—its utility to the user and to the public as a whole.
(2) The safety aspects of the product—the likelihood that it will cause injury, and the probable seriousness of the injury.
(3) The availability of a substitute product which would meet the same need and not be as unsafe.
(4) The manufacturer’s ability to eliminate the unsafe character of the product without impairing its usefulness or making it too expensive to maintain its utility.
(5) The user’s ability to avoid danger by the exercise of care in the use of the product.
(6) The user’s anticipated awareness of the dangers inherent in the product and their avoidability, because of general public knowledge of the obvious condition of the product, or of the existence of suitable warnings or instructions.
(7) The feasibility, on the part of the manufacturer, of spreading the loss by setting the price of the product or carrying liability insurance.

Id. at 837-38.

48. See Restatement (Third), supra note 7, § 2 cmt. d reporters’ note, I.A.

49. See Owen, "Micro-Balancing," supra note 6, at 1664; see also William C. Powers, Jr., The Persistence of Fault in Products Liability, 61 Tex. L. Rev. 777, 786 (1983) (noting that "[i]t is tempting to compare the overall risks and benefits of a product, but the risk-utility test is appropriately applied only to the specific feature that allegedly makes the product defective").

50. It bears noting that commentators differ sharply in their assessments of how widely the consumer expectations test for design defect has been adopted. Compare John F. Vargo, The Emperor’s New Clothes: The American Law Institute Adorns a "New Cloth" for Section 402A Products Liability Design Defects—A Survey of the States Reveals a Different Weave, 26 U. Mem. L. Rev. 493, 553, 556-57 (1996) (suggesting a greater number of jurisdictions had adopted some form of consumer expectations test than had adopted the risk-utility test), with Henderson & Twerski, Achieving Consensus, supra note 12, at 911-19 (responding to critics who have asserted that a majority of jurisdictions use the consumer expectations test). The debate centers on the question of whether cases nominally applying the consumer expectations test nevertheless can more properly be understood as applying risk-utility analysis or a recognized exception thereunder. As noted infra text accompanying notes 125-142, the Reporters, who argue that consumer expectations jurisdictions often apply a doctrine that turns out to be conceptually indistinguishable from more common doctrinal formulations, appear to have the better of the debate.
would be contemplated by the ordinary consumer who purchases it, with the ordinary knowledge common to the community as to its characteristics.”

Relying on this somewhat ambiguous statement, numerous courts over the years have hinged the outcome of design defect litigation on the question of whether a product’s failure frustrated the safety expectations of the ordinary consumer.\(^\text{52}\)

The most basic problem with resting the consumer expectations doctrine on the comments to section 402A is that the quoted language appears not to have been directed at all toward the task of fashioning a test for design defectiveness.\(^\text{53}\) Rather, the most likely interpretation is that the drafters had in mind a type of catastrophic product failure that subsequently has come to be known as a manufacturing defect.\(^\text{54}\) At the time of the drafting of the Second Restatement, manufacturing defect cases dom-

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51. Restatement (Second), supra note 2, § 402A cmt. i; see also id. at cmt. g (“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.”).

52. See, e.g., Lester v. Magic Chef, 641 P.2d 353, 357, 361 (Kan. 1982) (upholding jury instruction providing that a product is unreasonably dangerous if it is dangerous beyond the expectations of a consumer with knowledge “common to the community”); Rahmig v. Mosley Mach. Co., 412 N.W.2d 56, 82 (Neb. 1987) (affirming Nebraska’s use of the “user-contemplation” test to determine design defectiveness); Heaton v. Ford Motor Co., 435 P.2d 806, 809 (Or. 1967) (en banc) (“The jury is supposed to determine the basically factual question of what reasonable consumers do expect from the product.”); Vincer v. Esther Williams All-Aluminum Swimming Pool Co., 230 N.W.2d 794, 798 (Wis. 1975) (“[T]he test in Wisconsin of whether a product contains an unreasonably dangerous defect depends upon the reasonable expectations of the ordinary consumer concerning the characteristics of this type of product.”).

53. See Mary J. Davis, Design Defect Liability: In Search of a Standard of Responsibility, 39 Wayne L. Rev. 1217, 1232 (1993) (“Neither section 402A nor Greenman purported to identify a method of imposing strict liability for design defects . . . ”); James A. Henderson, Jr. & Aaron D. Twerski, Arriving at Reasonable Alternative Design: The Reporters’ Travelogue, 30 U. Mich. J.L. Reform 563, 572 (1997) (“The simple explanation for the drafters' reliance on a consumer expectations test in section 402A comments g and i is that the drafters were not addressing design defect litigation.”); John E. Montgomery & David G. Owen, Reflections on the Theory and Administration of Strict Tort Liability for Defective Products, 27 S.C. L. Rev. 803, 812-13 (1976) (providing history of the ALI proceedings leading up to adoption of section 402A and concluding that “failure of a consumer's expectancy interest” was not intended to be the entire inquiry for determining product defectiveness); George L. Priest, Strict Products Liability: The Original Intent, 10 Cardozo L. Rev. 2301, 2303 (1989) (concluding that the “founders” of strict products liability did not contemplate liability for design defects in their proposals); Schwartz, Modern American Tort Law, supra note 20, at 623-24 (noting that “[t]he Second Restatement adopts, in section 402A, a rule of strict liability that readily applies to cases involving manufacturing defects,” and that Dean Prosser justified the strict liability rule of section 402A with “the high correlation between manufacturer negligence and manufacturing defects”).

54. See supra text accompanying note 29. The section also was intended to eliminate the possibility that manufacturers of unavoidably dangerous products such as knives or alcohol would be subjected to liability. See infra text accompanying note 66.
inated thinking about the nascent field of products liability.\footnote{55} The facts of \textit{Henningsen}, in which the steering mechanism of a new automobile spun wildly out of control just ten days after the vehicle was purchased, provide a typical example.\footnote{56} By hinging liability on the expectations of the ordinary consumer, the drafters of section 402A recognized that inherent limitations in the manufacturing process sometimes result in severe product failures that neither the consumer nor the manufacturer expects or desires. To that extent, consumer expectations provide a serviceable means of establishing a defendant's responsibility for injuries caused by manufacturing flaws. As numerous commentators subsequently have indicated, however, subjecting a manufacturer's \textit{intended} product design to the same measure of consumer expectations requires justification beyond the largely unhelpful \textit{Restatement} comments.\footnote{57} Moreover, as the next section notes, torts scholars for the most part have been unable to locate any such justification.


\footnote{57} See Charles E. Cantu, Reflections on Section 402A of the Restatement (Second) of Torts: A Mirror Crack'd, 25 Gonz. L. Rev. 205, 218 (1990) ("The courts did not recognize that the test used to determine whether a product was mismanufactured was not necessarily the appropriate test to determine whether the product was defective due to error in the designing or marketing process."); David A. Fischer, Products Liability—The Meaning of Defect, 39 Mo. L. Rev. 339, 345 (1974) (noting that the consumer expectations test "is sometimes wrongly singled out as the only Restatement test of defect"); Gray, supra note 20, at 86–88 (observing that section 402A reflected established concepts with regard to manufacturing defects, but also produced "subsidiary doctrines," such as the consumer expectations test, that "were confusing because of the verbiage"); James A. Henderson, Jr., Judicial Review of Manufacturers' Conscious Design Choices: The Limits of Adjudication, 73 Colum. L. Rev. 1531, 1542–44, 1547 (1973) [hereinafter Henderson, Conscious Design Choices] (distinguishing "manufacturing flaws" from "generically dangerous products" as more readily justiciable); David G. Owen, The Graying of Products Liability Law: Paths Taken and Untaken in the New \textit{Restatement}, 61 Tenn. L. Rev. 1241, 1243 (1994) (stating that at the time of \textit{Second Restatement} drafting "the defect concept was only roughly understood and was conceived of quite naively as a \textit{unitary} concept; products were either too dangerous, i.e., 'defective,' or safe enough, i.e., 'nondefective'"). To be sure, the primary authority for section 402A, \textit{Greenman}, involved a challenge to the manufacturer's intended design, rather than a mere manufacturing defect. However, the plaintiff in \textit{Greenman} established such a defect by introducing evidence of "other more positive ways of fastening the parts of the [product] together, the use of which would have prevented the accident." \textit{Greenman v. Yuba Power Prods., Inc.}, 377 P.2d 897, 899 (Cal. 1963). In other words, the sole strict products liability precedent existing at the time of the drafting of section 402A relied on the type of evidence typically presented under the risk-utility test, not the consumer expectations test.
B. Dissatisfaction with the Consumer Expectations Test

Not long after courts began to devise a design defect test based on section 402A's consumer expectations language, academic commentators began to note the problems inherent in such a project. Most fundamentally, scholars repeatedly have complained that the expectations of consumers provide too amorphous a basis on which to assess manufacturer liability. As Deans Prosser and Keeton note in their treatise, "The meaning is ambiguous and the test is very difficult of application to discrete problems. . . . [As a result, t]he test can be utilized to explain most any result that a court or jury chooses to reach."

In a particularly memorable critique of the doctrine's arbitrariness, Professor Gary Schwartz recites a series of ever-shifting automobile marketing messages, querying whether the extent of a manufacturer's liability really should hinge on the particular message that happens to entice an injured consumer. These commentators encapsulate the widely held view that consumer expectations provide only the most meager and insufficient guidance to factfinders charged with the difficult task of assessing the adequacy of a product design. Indeed, to many observers, the test simply "is so vague as to be lawless."
Scholars also have made more narrow attacks on the consumer expectations test. For instance, several commentators have pointed out that the test provides little or no guidance in cases where product-caused harm befalls bystanders who have neither purchased nor consumed the product. In such a case, the factfinder is directed to evaluate the product in light of expectations that are likely to be nonexistent. Similarly, for a great variety of technologically complex products, consumers may not have formed specific expectations at all with regard to the relevant product features. As Professors Montgomery and Owen observe, in such cases "the consumer may have at most only a generalized expectancy—perhaps more accurately only an unconscious hope—that the product will not harm him if he treats it with a reasonable amount of care."

To the extent that consumer attitudes do take this simplistic form ("I expect not to be harmed by a product"), then the consumer expectations test threatens to become in practice the very standard of absolute manufacturer liability that no American jurisdiction has appeared ready to accept. An altogether different objection to the consumer expectations test is that the doctrine too easily can work against plaintiffs under circumstances in which defendant liability might further the instrumental goals of products liability law. For instance, because consumer expectations generally derive from impressions of the existing state of the product marketplace, safety demands of consumers may lag behind technological improvements in product design whose absence under risk-utility balancing would subject a manufacturer to liability. Similarly, manufacturers head... It nakedly invites the fact-finder to use his or her gut instincts to determine the dispute.


62. Montgomery & Owen, supra note 53, at 823; see also Turner v. Gen. Motors Corp., 584 S.W.2d 844, 851 (Tex. 1979) (rejecting consumer expectations test due to "the inconclusiveness of the idea that jurors would know what ordinary consumers would expect in the consumption or use of a product"); Keeton, supra note 4, at 303 (criticizing "the fallacious assumption that the ordinary purchaser has definite expectations regarding the dangerousness of the products purchased"); Powers, supra note 49, at 796-97 ("The vague expectations of consumers probably oscillate between never expecting a product to injure them... and actually expecting some products to be 'lemons.'"); Wade, supra note 47, at 829 ("In many situations... the consumer would not know what to expect, because he would have no idea how safe the product could be made.").

63. See supra text accompanying notes 27-28. Note, though, that a sizable group of products liability commentators over the years would have viewed such a development favorably. See supra note 28 and accompanying text.

64. See Dickerson, supra note 21, at 314 ("[C]onsumer expectations will lag behind actual practices, and [therefore] the further extension of safety practices designed to minimize the consequences of accidents will depend either on direct regulation or on the
under a consumer expectations test may escape liability for product-caused harm whenever consumers can be said to "expect" the possibility that such harm will occur. Thus, whenever a product-imposed danger may be characterized as "open and obvious" to the typical consumer, plaintiffs may be unable to recover irrespective of whether the manufacturer could have eliminated the risk cost-effectively. 65

Much of the language in section 402A and its comments was in fact designed to prevent consumers from recovering against manufacturers of products, such as kitchen knives, alcohol, or cigarettes, that pose unavoidable health and safety risks. 66 Nevertheless, even an unavoidably unsafe product sometimes can be made marginally less unsafe. By allowing courts to balance the risks and rewards posed by alternative product designs, the risk-utility test provides manufacturers with incentives to constantly evaluate and adopt such reasonable alternative designs. The consumer expectations test, on the other hand, operates to shield manufacturers generally from liability to customers who, through experience, education, or otherwise, have come to expect a particular type of product to pose significant danger. Thus, although plaintiffs' advocates have been the most vocal opponents of attempts to restrict the use of the consumer expectations test, 67 even such consumer-oriented observers have reason to be concerned about the effects of the doctrine.

Considerations of this sort led the Supreme Court of California in Barker v. Lull Engineering Co. to provide a prominent early departure from consumer expectations as the exclusive means for judging design defectiveness in products liability litigation. 68 The Barker court noted that relying on consumer expectations alone can lead to an underprovision of safety incentives for product manufacturers, particularly in cases where consumers lack concrete safety expectations or where product dangers

65. See Restatement (Third), supra note 7, § 2 cmt. d (noting that some courts have utilized the consumer expectations test in order to deny recovery to victims of "obvious" product dangers).


68. 573 P.2d 443 (Cal. 1978).
are considered to be open and obvious.69 "The flaw in the [consumer expectations] analysis," in the court's view, was "that it treats such consumer expectations as a 'ceiling' on a manufacturer's responsibility under strict liability principles, rather than as a 'floor.'"70 To overcome this limitation, the court held that a finding of design defect may result from a demonstration either that the product failed to perform as safely as an ordinary consumer would expect under normal operating circumstances, or that the risks inherent in the product's design outweigh the benefits of that design.71 Several jurisdictions over the years have followed California in this twin-test approach.72

C. The Restatement (Third) of Torts: Products Liability § 2(b)

In light of problems such as those described in the previous section, the majority of both courts and commentators have favored one form or another of risk-utility balancing as the controlling test for design defectiveness.73 At the same time, however, the vaunted language of section 402A has continued to exert a strong but confusing rhetorical influence on judicial opinions in many jurisdictions.74 Against this background of increasingly apparent discord and uncertainty in the law of products liability, the ALI in 1992 appointed Professors Henderson and Twerski as Reporters of a volume of the Restatement (Third) of Torts that was to be devoted entirely to the field of products liability.75 Over the next several years, the Reporters navigated a seemingly endless array of interested observers, commentators, and critics,76 eventually producing a voluminous,

69. Id. at 451.
70. Id. at 451 n.7.
71. Id. at 455–56. Notably, the Barker court held that the defendant bears the burden of proof under the second prong of the design defect test; that is, "if the plaintiff demonstrates that the product's design proximately caused his injury [then] the defendant [must] establish, in light of the relevant factors, that, on balance, the benefits of the challenged design outweigh the risk of danger inherent in such design." Id. at 456.
72. See infra note 123 and text accompanying notes 122–124.
73. See Jane Stapleton, Product Liability 236 (1994) ("By the early 1980s the inappropriate and unsupported 'consumer expectations' test had been supplanted in most US jurisdictions by an approach openly based on balancing a product's costs and benefits . . . .").
74. Cf. Geoffrey C. Hazard, Jr., Foreword to Restatement (Third), supra note 7, at xvi ("No one can seriously argue that the law of products liability in any jurisdiction has evolved in a straight line from § 402A of the Restatement Second.").
75. See Henderson & Twerski, Proposed Revision, supra note 10, at 1513. The two previous incarnations of the Restatement of Torts were issued as self-contained volumes.
76. As an indication of the level of interest generated by the project, consider the number of academic symposia that have been devoted to the Third Restatement, focusing on such areas as its substantive content, its drafting process, its implications for the tort reform debate, and its early reception in the courts. See generally Symposium, The Restatement (Third) of Torts and the Future of Tort Law, 10 Kan. J. L. & Pub. Pol'y 2 (2000); Symposium, Restatement (Third) of Torts: Products Liability, Is the Best Defense Redefining the Offense?, 26 N. Ky. L. Rev. 531 (1999); Symposium, Proving Product Defect After the Restatement (Third) of Torts: Products Liability, 30 Seton Hall L. Rev. 202
exhaustively documented study that received the endorsement of the American Law Institute Council in May of 1997. This section provides a brief overview of the treatment of design defect litigation in the new Restatement.  

Although section 1 of the Third Restatement announces the general liability of product manufacturers for the costs of defect-induced harm, section 2 begins in earnest the substantive work of the new Restatement. Reflecting the Reporters' decision to focus on functional criteria necessary to establish liability rather than overly formalistic doctrinal requisites, section 2 provides that a product defect can be shown through a failure in the product's manufacture, design, or accompanying warnings. Thus, for the first time, the Restatement recognizes an explicit conceptual distinction between manufacturing flaws and alleged deficiencies in product design. Significantly, this categorical distinction allows the Reporters to specify a standard for design defectiveness that is unclouded by language more appropriately restricted to manufacturing defects. As noted above, the drafters of the Second Restatement, whose emerging understanding of products liability law centered nearly exclusively on manufacturing defects, were not afforded such a luxury.

To establish a defective design under the Third Restatement, plaintiffs must pass a fairly rigid version of the risk-utility test by showing that "the foreseeable risks of harm posed by the product could have been reduced or avoided by the adoption of a reasonable alternative design." In other words, the plaintiff must show that some modified version of the

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78. Restatement (Third), supra note 7, § 1.

79. See Restatement (Third), supra note 7, § 1 cmt. a; see also Keith N. Hylton, The Theory of Tort Doctrine and the Restatement (Third) of Torts, 54 Vand. L. Rev. 1413, 1437 (2001) (supporting shift from formal to functional organization in the Restatement, as "a better sense of the functional similarities among rules should enhance efforts to clarify by reducing the fragmentation or diffusion of legal concepts").

80. Restatement (Third), supra note 7, § 2.

81. See supra text accompanying notes 54–56.

82. Restatement (Third), supra note 7, § 2(b).
product would have avoided her injury at a cost that is reasonable in light of the degree of harm thereby reduced. This definition of design defect, which was supported by the Reporters in their academic writings prior to the ALI project,\(^3\) proved controversial during the Restatement drafting process for at least two reasons. First, many commentators criticized the explicit rejection of consumer expectations as an independent test for defectiveness. Second, several scholars and practitioners argued that the requirement of a reasonable alternative design constitutes an unwarranted evidentiary burden for consumer plaintiffs.\(^4\) After all, these critics argued, the law of products liability emerged precisely in response to the fact that plaintiffs in product injury cases typically have little access to the information necessary to demonstrate fault on the part of the manufacturer.\(^5\) Thus, these commentators argued that plaintiffs should be permitted to proceed under the more flexible "macro-balancing" approach of the Wade test, rather than be required to offer the more demanding level of "micro-balancing" proof required under the reasonable alternative design test.\(^6\)

Although it is too early to fully assess the Third Restatement's impact on product design litigation, one can observe that the document on its face appears more sensitive to such concerns than its critics generally admit. For instance, the new Restatement has not rejected entirely the relevance of consumer expectations; rather, it expressly considers the expectations of product users as part of the overall assessment of existing and

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83. See, e.g., Henderson & Twerski, Proposed Revision, supra note 10, at 1514 (proposing section 402A revision in which a design defect can be shown only if a product risk "could have been reduced at reasonable cost by the seller's adoption of a safer design").


85. See, e.g., Cronin v. J.B.E. Olson Corp., 501 P.2d 1153, 1162 (Cal. 1972) ("[T]he very purpose of... [the development of strict products liability] was to relieve the plaintiff from problems of proof inherent in pursuing negligence. . . .").

86. See supra notes 47–49 and accompanying text.
THE EXPECTATIONS OF CONSUMERS

alternative product designs. Moreover, as comment b to section 2 makes clear, the reasonable alternative design rule of section 2(b) is by no means the exclusive test governing design defects. Most notably, section 3 provides for a res ipsa loquitur-like inference of defect for any plaintiff able to demonstrate that her injury "was of a kind that ordinarily occurs as a result of product defect." Significantly, the res ipsa inference of section 3 can be applied either to design defect scenarios or to the type of unexpected product malfunctions typically associated with manufacturing flaws.

In addition to section 3's evidentiary relief, plaintiffs relying on section 2's comment e also may attempt to demonstrate that, irrespective of whether a product could have been replaced by a reasonable alternative design, the product as actually manufactured and sold has such "low social utility and high degree of danger" that it constitutes a "manifestly unreasonable design." Although only three courts appear ever to have held a manufacturer responsible under a theory similar to that of comment e, several have endorsed the concept in

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87. See Restatement (Third), supra note 7, § 2 cmt. g; see also id. § 2 cmt. f (noting that relevant factors under section 2(b) include "the nature and strength of consumer expectations regarding the product, including expectations arising from product portrayal and marketing"). In addition, the Third Restatement identifies consumer expectations as the primary standard for determining whether food products are defective, see id. § 7, and as the benchmark for deciding whether sellers of used products should be held to the standards governing new products, see id. § 8.

88. Id. § 2 cmt. b.

89. Id. § 3(a). The res ipsa loquitur doctrine is explained in the proposed Restatement (Third) of Torts: General Principles as follows: "It may be inferred that the defendant has been negligent when the accident causing the plaintiff's physical harm is a type of accident that ordinarily happens because of the negligence of the class of actors of which the defendant is the relevant member." Restatement (Third) of Torts: Gen. Principles § 15 (Discussion Draft 1999).

90. See Restatement (Third), supra note 7, § 3 cmts. b & c. For instance, comment b notes that "an aircraft may inadvertently be designed in such a way that, in new condition and while flying within its intended performance parameters, the wings suddenly and unexpectedly fall off, causing harm." Id. § 3 cmt. b. In such a case, the trier of fact may draw the inference that a defect existed, without the plaintiff specifically identifying the type or nature of the product's defect.

91. Id. § 2 cmt. e. One can think of this provision as offering a sort of "thumb on the scales" version of the "macro-balancing" approach to design defect.

dicta\textsuperscript{93} and, thus, section 2's comment e exists as an area for possible further development by the courts.\textsuperscript{94}

As one can see, the new products liability Restatement attempts to synthesize a significant amount of case law into a single workable framework for litigation. Although several critics bemoaned its demotion of the consumer expectations test, the Reporters argued persuasively throughout the drafting process that the actual manner in which courts apply the test, as a general matter, is functionally indistinguishable from the Third Restatement's doctrinal structure.\textsuperscript{95} In the view of the Reporters, courts that purport to apply a consumer expectations test largely can be grouped into one of two categories: those that simply cloak a risk-utility test with consumer expectations language,\textsuperscript{96} and those that emphasize consumer expectations only in the context of product malfunctions that would equally merit an inference of defect under the Restatement's section 3.\textsuperscript{97}

More specifically, as shown diagrammatically in Figure 1, the Reporters envision a set of defective products in which a small subgroup consists

\textsuperscript{93} See, e.g., Kallio v. Ford Motor Co., 407 N.W.2d 92, 97 n.8 (Minn. 1987) ("Conceivably, rare cases may exist where the product may be judged unreasonably dangerous because it should be removed from the market rather than be redesigned."); Wilson v. Piper Aircraft Corp., 577 P.2d 1322, 1328 n.5 (Or. 1978) ("There might be cases in which the jury would be permitted to hold the defendant liable on account of dangerous design feature even though no safer design was feasible . . . ."); Sumnicht v. Toyota Motor Sales, U.S.A., Inc., 360 N.W.2d 2, 17 (Wis. 1984) ("A product may be defective and unreasonably dangerous even though there are no alternative, safer designs available.").

\textsuperscript{94} For reasons advanced prior to their role in the Restatement project, the Reporters believe that this type of "product category liability" will remain an infrequently used doctrine. See Henderson & Twerski, Closing the Frontier, supra note 20, at 1297–1328 (arguing that courts are ill-equipped to make the type of comprehensive, multi-factored judgments required in condemning a consumer product category). Nevertheless, it has received express recognition in the Third Restatement.

\textsuperscript{95} Again, Henderson and Twerski expressed a similar view prior to their appointment as Reporters for the Third Restatement. See, e.g., Henderson & Twerski, Proposed Revision, supra note 10, at 1528, 1533–34 (concluding that courts "temper[ed] [consumer expectations] with significant risk-utility balancing").

\textsuperscript{96} See Restatement (Third), supra note 7, § 2 cmt. d reporters' note, II.C; Twerski, Inside the Restatement, supra note 77, at 843 n.21 (observing that courts applying consumer expectations "rarely did so without engaging in some risk-utility balancing").

\textsuperscript{97} See Restatement (Third), supra note 7, § 2 cmt. d reporters' note, II.C; see also James A. Henderson, Jr. & Aaron D. Twerski, The Politics of the Products Liability Restatement, 26 Hofstra L. Rev. 667, 675 (1998) [hereinafter Henderson & Twerski, Politics] ("When a product fails to perform its manifestly intended function, a court may impose liability saying that the product failed the consumer expectations test. This version of the consumer expectations test is nothing more than the traditional rule of res ipsa loquitur in a products liability setting." (footnotes and citations omitted)); Henderson & Twerski, Europe, Japan, supra note 55, at 10 ("In almost every instance, the so-called 'other, independent' tests for design defect turn out to be one or another of the exceptions to [reasonable alternative design] built into the Restatement itself . . . .").
of products whose very manner of malfunctioning reveals obvious, fundamental mistakes in the product. Such cases may consist either of manufacturing defects (e.g., an automobile sold inadvertently without brake pads) or design defects so obvious in nature as to make precise specification unnecessary (e.g., an automobile sold with brake pads that fail without warning after a single day's use). For these types of res ipsa situations, the Reporters acknowledge that courts should and do allow the plaintiff to establish product defect without undertaking a costly inspection of pertinent costs and benefits. Similarly, in those jurisdictions that adhere to it, the consumer expectations test accommodates this category of products liability litigation by judging the product against a standard—the safety expectations of consumers—that generally does not tolerate catastrophic and otherwise inexplicable product failure.

98. Although not depicted in Figure 1, allowance also has been made in the Third Restatement for the possibility of a cause of action premised on a "manifestly unreasonable design." Restatement (Third), supra note 7, § 2 cmt. e. In addition, the Third Restatement allows plaintiffs to avoid the reasonable alternative design requirement of the risk-utility test when a product fails to comply with a relevant product safety statute or regulation. Id. § 4.

99. Section 3 of the Third Restatement therefore allows a factfinder to infer the presence of a design defect whenever "the incident that harmed the plaintiff...was of a kind that ordinarily occurs as a result of product defect." Id. § 3. Section 3 also requires that the incident "was not, in the particular case, solely the result of causes other than product defect existing at the time of sale or distribution." Id.

100. Similar reasoning explains the Reporters' decision to retain the consumer expectations standard of liability for adulterated, impure, or otherwise harmful food products. See id. § 7. In this instance, the Reporters believed that consumer expectations are sufficiently stable and predictable to provide a coherent standard of defectiveness. Id. § 7 cmt. b.
The Reporters' argument is perhaps best exemplified by California's twin-test approach to design defect liability. Although it was already evident in *Barker*, the Supreme Court of California subsequently made clear in *Soule v. General Motors Corp.* that use of the consumer expectations prong of the test should be limited to simple, res ipsa-like product failures, and that remaining design defect claims should be determined by juries with the guidance of expert testimony regarding the risks and benefits of a product's design. In broad outline, therefore, the *Barker* test appears to be functionally compatible with the construction of Figure 1 and the *Third Restatement's* formulation of design defect.

Conceivably, some remaining courts might apply a consumer expectations doctrine that does not fit within the Reporters' categories of doctrinal equivalency. However, in light of the paucity of their numbers and the strong academic view that they provide an essentially indecipherable basis for assessing liability, the Reporters decided against relying on these courts to recognize the consumer expectations test as "an independent standard for judging the defectiveness of product designs." Given the Reporters' charge to bring much-needed coherence to the law of products liability, and given the cases and commentaries before them, the decision to reject consumer expectations as a stand-alone test for design defectiveness would seem to have been an easy one, which courts would quickly embrace. As will be seen in Part II, however, despite the careful reasoning and exhaustive research that went into the *Third Restatement*, its promise to harmonize the law of design defect litigation has encountered some unexpected difficulties.

II. THE PUZZLING PERSISTENCE OF THE CONSUMER EXPECTATIONS TEST

In most respects, the *Third Restatement* has been an unqualified success in the courts. For instance, among other issues, the new *Restatement* has brought considerable clarity to the questions of how product warnings interact with claims of defective design, whether consumers can

101. See Barker v. Lull Eng'g Co., 573 P.2d 443, 454 (Cal. 1978) ("Under [the consumer expectations] standard, an injured plaintiff will frequently be able to demonstrate the defectiveness of a product by resort to circumstantial evidence, even when the accident itself precludes identification of the specific defect at fault." (citations omitted)).
102. 882 P.2d 298, 308 & n.4 (Cal. 1994).
103. See supra notes 58-63 and accompanying text.
104. *Restatement* (Third), supra note 7, § 2 cmt. g.
105. Several courts previously had relied on comment j to section 402A of the *Second Restatement* for the proposition that a product bearing an adequate warning cannot be deemed defective in other respects. See Howard Latin, "Good" Warnings, Bad Products and Cognitive Limitations, 41 UCLA L. Rev. 1193 (1994). Comment j provides: "Where [adequate] warning is given, the seller may reasonably assume that it will be read and heeded; and a product bearing such a warning, which is safe for use if it is followed, is not in defective condition, nor is it unreasonably dangerous." *Restatement* (Second), supra note 2, § 402A cmt. j. In contrast, comment 1 to section 2 of the *Third Restatement* recognizes that product warnings often are ineffective; therefore, the new *Restatement*
recover for damages caused by "open and obvious" dangers, how damages are to be assessed in "crashworthiness" cases, whether manufacturer warning responsibilities continue post-sale, and whether strict products liability applies to component part manufacturers that do not participate in the design or manufacture of a finished product. Courts have been less uniformly receptive, however, of the Third Restatement's reasonable alternative design requirement and its concomitant demotion of the consumer expectations test to a subsidiary role for purposes of design defect litigation. Although the Iowa Supreme Court recently embraced the Third Restatement's defective design framework, several other state courts have proclaimed their continued commitment to use of the consumer expectations doctrine despite the contrary recommendation of the Third Restatement.

Such cases pose a puzzle for products liability scholars: How is one to explain the dedication of judicial authorities to a doctrine that learned to hold manufacturers to the reasonable alternative design standard irrespective of the presence or adequacy of warnings. Restatement (Third), supra note 7, § 2 cmt. l. Several courts already have cited this comment favorably, thereby avoiding a potentially significant gap in the safety incentives provided to manufacturers by products liability law. See Hanson & Kysar, TBSI, supra note 28, at 699–704 (discussing Latin's review of behavioral research and its conclusions about resulting consumer and manufacturer behavior).


observers, after considerable deliberation, have concluded is conceptually indistinguishable from the risk-utility test and its recognized exceptions? This Part explores that question, considering whether the courts issuing these opinions have failed to justify the existence of the consumer expectations doctrine, whether the Reporters of the Third Restatement have overlooked something significant in their reading of the case law, or whether some other factor altogether explains the puzzling persistence of the consumer expectations test.

A. Recent Developments

Just one week after the ALI adopted the Third Restatement, the project suffered its first judicial rebuke.111 Issued on May 27, 1997, the decision of the Supreme Court of Connecticut in Potter v. Chicago Pneumatic Tool Co. expressly declined the new Restatement's invitation to abandon the consumer expectations test.112 Writing pointedly about the "substantial controversy" engendered by the Third Restatement drafting process, the Potter court set out to demonstrate that the new ALI publication both misinterpreted the state of existing products liability law and offered normatively unattractive rules in place of that law.113 Rather than follow such a seemingly flawed project, the Connecticut Supreme Court chose to "continue to adhere to [its] long-standing rule that a product's defectiveness is to be determined by the expectations of an ordinary consumer."114

Other state high courts, including those of Kansas,115 Wis-

111. See Marshall S. Shapo, Products Liability: The Next Act, 26 Hofstra L. Rev. 761, 761 (1998) [hereinafter Shapo, The Next Act]. Although the case predates formal adoption of the Third Restatement, mention also should be made of Denny v. Ford Motor Co., in which the Court of Appeals of New York declined a suggestion that the doctrines of negligence, strict liability, and implied warranty of merchantability should be merged into a single products liability cause of action. 662 N.E.2d 730, 736-39 (N.Y. 1995); see also Restatement (Third), supra note 7, § 2 cmt. n. The Denny court reasoned that strict liability and warranty claims in New York do not perfectly overlap because the former relies on a risk-utility test for determining defectiveness while the latter utilizes a consumer expectations test. 662 N.E.2d at 736. Thus, the opinion reflects a belief that the consumer expectations and risk-utility tests are not coextensive in the manner argued by the Reporters.

112. 694 A.2d 1319 (Conn. 1997).

113. See id. at 1331-32 & n.11.

114. Id. at 1333.

115. Delaney v. Deere & Co., 999 P.2d 930 (Kan. 2000). The Supreme Court of Kansas went to great lengths to express its disappointment with the Third Restatement when answering certified questions from the Tenth Circuit Court of Appeals. Although asked only to clarify the relationship between product safety warnings and claims of defective product design, the Kansas court determined that "[a] complete answer to this . . . question involves consideration of Kansas law in relation to the Restatement (Second) of Torts § 402A and the Restatement (Third) of Torts § 2." Id. at 940. Describing the Third Restatement as a "harshly criticized" document that went beyond "simply taking a photograph of the law of the field," the Delaney court strongly rejected the notion that design defect cases should be resolved according to risk-utility analysis and the reasonable
consin,\textsuperscript{116} New Hampshire,\textsuperscript{117} and Maryland,\textsuperscript{118} have echoed both the Potter court's distrust of the products liability \textit{Restatement} and its strong desire to retain the consumer expectations standard for design defectiveness. For instance, in \textit{Halliday v. Sturm, Ruger & Co.}, the Court of Appeals of Maryland began its discussion of the \textit{Third Restatement} by noting that the project "has attracted considerable criticism and has been viewed by many as a retrogression, as returning to negligence concepts and placing a very difficult burden on plaintiffs.\textsuperscript{119} The court briefly acknowledged the Reporters' view that "the formulation in Restatement (Third), § 2, represents the majority thinking in the United States," but sharply countered with the claim that this view "represent[s] an unwanted ascendancy of corporate interests under the guise of tort reform.\textsuperscript{120} Rather than enter such potentially troubled waters, the Maryland court chose to retain its "existing jurisprudence," which focuses on a range of factors that may influence the safety expectations of consumers.\textsuperscript{121}

Other courts have chosen to signal their disagreement with the \textit{Third Restatement} framework using considerably less charged language. For instance, the Oklahoma Supreme Court recently indicated continued adherence to the consumer expectations standard for design defect claims without addressing at all the contrary recommendation of the ALI.\textsuperscript{122} In addition, four state supreme courts since 1997 have chosen to retain a Barker-style twin test for design defect, in which either risk-utility or consumer expectations measures of defect may be employed to demonstrate alternative design requirement. Id. at 945–46. Rather, the court held that in Kansas, "whether a design defect in a product exists [must continue to be] determined using the consumer expectations test." Id.

\textsuperscript{116} Green v. Smith & Nephew AHP, Inc., 629 N.W.2d 727 (Wis. 2001). As with the Connecticut and Kansas decisions, the opinion in \textit{Green} took pains to "note that there has been considerable controversy over the Restatement (Third) of Torts § 2(b)," even going so far as to quote one commentator's characterization of section 2(b) as "a wish list from manufacturing America."" Id. at 751 n.16 (quoting Frank J. Vandall, Constructing a Roof Before the Foundation Is Prepared: The Restatement (Third) of Torts: Products Liability Section 2(b) Design Defect, 30 U. Mich. J.L. Reform 261, 261 (1997)). The court stated that it was "troubled" by these and other aspects of the \textit{Third Restatement} and concluded that section 2(b) "is fundamentally at odds with current Wisconsin products liability law." Id. at 751.

\textsuperscript{117} Vautour v. Body Masters Sports Indus., Inc., 784 A.2d 1178 (N.H. 2001). Predictably, the Supreme Court of New Hampshire characterized the \textit{Third Restatement} approach as a "rigid" one that had garnered "considerable controversy" during the drafting process. Id. at 1182–84. Rather than endorse the ALI project, the New Hampshire court chose to retain its existing test for design defectiveness, which focuses on the degree of product safety "contemplated by the ordinary consumer." Id. at 1182. As noted infra text accompanying notes 136–138, however, the New Hampshire court further defines its consumer expectations test in a manner that expressly commits the factfinder to risk-utility balancing.

\textsuperscript{118} Halliday v. Sturm, Ruger & Co., 792 A.2d 1145 (Md. 2002).

\textsuperscript{119} Id. at 1154.

\textsuperscript{120} Id. at 1154–55.

\textsuperscript{121} Id. at 1159.

product defect. Significantly, despite the Reporters' powerful argu-
ment that the Barker approach to design defect is functionally equivalent
to that of the Third Restatement, these courts have preferred the California
formulation to the Third Restatement's res ipsa construction. Thus, even in
the context of the Barker test, which the Reporters cite as perhaps the
clearest demonstration of their point regarding doctrinal equivalency, courts
seem unwilling to take the Reporters' bait.

B. The Reporters' Explanation

All told, at least twelve state jurisdictions have announced some mea-
sure of disagreement with the Third Restatement's design defect frame-
work. As noted earlier, however, the Reporters' response to such deci-
sions is quite convincing: Most courts that cling to the consumer expectations
test apply it in such a manner that it becomes effectively indistinguishable from the doctrinal framework applied in many other
jurisdictions and in the new Restatement itself.

Ironically, the Potter case provides ample support for the Reporters' argument. After commenting sharply on the drafting process of the
Third Restatement, the Potter court proceeded to outline the state of the law
in Connecticut with respect to design defect litigation. First, the court
noted that a reasonable alternative design requirement such as that im-
posed by the Third Restatement is inconsistent with the notion that "a jury
may, under appropriate circumstances, infer a defect from the evidence
without the necessity of expert testimony." Such an inference, of
course, is precisely the type of evidentiary mechanism provided by section
3 of the Third Restatement. Second, the Potter court argued that "in
some instances, a product may be in a defective condition unreasonably
dangerous to the user even though no feasible alternative design is availa-
ble." Again, such a situation seems adequately covered by comment e
to section 2, which expressly contemplates the possibility that "designs of
some products [may be] so manifestly unreasonable, in that they have low

(refusing manufacturer's invitation to abandon the consumer expectations test); Acoba v.
Gen. Tire, Inc., 986 P.2d 288, 304 (Haw. 1999) (noting that both "consumer expectation"
and "risk-utility" tests are valid ways to establish product defectiveness (internal quotation
marks and citation omitted)); Hansen v. Baxter Healthcare Corp., 764 N.E.2d 35, 43-46
(Ill. 2002) (upholding jury verdict under both consumer expectations test and risk-benefit
analysis); Jackson v. Gen. Motors Corp., 60 S.W.3d 800, 803-06 (Tenn. 2001) (construing
state products liability statute such that "the consumer expectation test is applicable to any
products liability case in which a party seeks to establish that a product is unreasonably
dangerous under Tennessee law").
124. See Restatement (Third), supra note 7, § 2 cmt. d reporters' note, II.D.
125. See supra text accompanying notes 95-102.
127. See Restatement (Third), supra note 7, § 3.
128. 694 A.2d at 1332.
social utility and high degree of danger, that liability should attach even absent proof of a reasonable alternative design.”

The Potter court then examined the consumer expectations test itself, conceding quickly that “there may be instances involving complex product designs in which an ordinary consumer may not be able to form expectations of safety.” In such cases, the court held that Connecticut law requires application of a “modified consumer expectation test” that focuses on “various factors that balance the utility of the product’s design with the magnitude of its risks.” Apart from the fact that it treated evidence of a reasonable alternative design as a factor rather than a requirement in its risk-utility test, it is difficult, if not impossible, to discern a consequential difference between the Potter court’s formulation of the “modified consumer expectation test” and the doctrinal framework established by the Third Restatement. Just as the Third Restatement requires risk-utility balancing in the absence of a res ipsa-like situation, the Connecticut Supreme Court unequivocally mandates that “the jury should engage in the risk-utility balancing required by our modified consumer expectation test when the particular facts do not reasonably permit the inference that the product did not meet the safety expectations of the ordinary consumer.”

As one can see, there is considerable force to the Reporters’ argument that “the Connecticut Supreme Court’s analysis in Potter is, in actuality, perfectly consistent with this Restatement.” Other post-Third Restatement cases also support the Reporters’ argument regarding doctrinal equivalency, despite their purported adherence to the consumer expectations test. For instance, the Kansas Supreme Court in Delaney accepted “the validity of risk/utility analysis as a guide in determining the expectations of consumers in complex cases.” Thus, although the court professed to have reaffirmed Kansas’s general adherence to the consumer expectations test, the court actually seemed to embrace the test only in those simple product defect situations that equally would be treated as res ipsa-like failures under section 3 of the Third Restatement.

Vautour v. Body Masters Sports Industries, Inc. demonstrates an even more obvious collapsing of risk-utility and consumer expectations frameworks. In Vautour, the Supreme Court of New Hampshire expressly noted that “whether a product is unreasonably dangerous to an extent beyond that which would be contemplated by the ordinary consumer is

129. Restatement (Third), supra note 7, § 2 cmt. e.
130. 694 A.2d at 1333.
131. Id.
132. Id. at 1334.
133. Restatement (Third), supra note 7, § 2 cmt. d reporters’ note, II.C; see also 1 David G. Owen et al., Madden & Owen on Products Liability § 8:6, at 493 (3d ed. 2002) (“Potter’s basic result is sound, but tying the risk-utility prong to consumer expectations unfortunately sows seeds of confusion for future design defect litigation.”).
135. Id.
determined by the jury using a risk-utility balancing test." Quite literally, then, the expectations of consumers are invoked in name only when assessing design defectiveness in New Hampshire. Such a rhetorical construction follows the approach taken by numerous pre-Third Restatement cases. Unfortunately, like those earlier decisions, the confusing language of Vautour may lead products liability observers to classify it as a case that adheres to the consumer expectations test, despite the express equation of consumer expectations with risk-utility analysis.

Finally, even the Halliday court, which resisted the trend to undermine the nominally independent consumer expectations test by incorporating risk-utility analysis, nevertheless failed to identify the affirmative doctrinal role for which it felt the need to preserve the consumer expectations test. In that case, the Court of Appeals of Maryland declined to adopt a risk-utility balancing test at the request of a plaintiff whose three-year-old child had accidentally shot himself with a handgun. Knowing that her claim against the manufacturer of the gun would fail under a consumer expectations test—because "regrettably, [the gun] worked exactly . . . as any ordinary consumer would have expected it to work"—the mother of the deceased child instead argued that the handgun was defective because any of several alternative safety designs would have avoided the death of her child at an acceptable increase in the cost of the product. Without a glimmer of self-awareness concerning the tension in its reasoning, the Halliday court refused to accept the plaintiff’s theory of liability because, it argued, adopting the alternative reasonable design approach of the Third Restatement would "plac[e] a very difficult burden on plaintiffs." The court apparently failed to appreciate that its own version of the consumer expectations test resembled an affirmative defense for product manufacturers, rather than a mechanism for easing the evidentiary burdens of injured consumers. The Third Restatement, of course, would have permitted the plaintiff to plead her case based on the proffered design modification.

137. See, e.g., Aller v. Rodgers Mach. Mfg. Co., 268 N.W.2d 830, 834–35 (Iowa 1978) ("The article sold must be dangerous to an extent beyond that which would be contemplated by the ordinary consumer . . . . Proof of unreasonableness involves a balancing process. On one side of the scale is the utility of the product and on the other is the risk of its use." (citation omitted)); 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 . . . .").
140. Id. at 1158.
141. Id. at 1149.
142. Id. at 1154.
C. Alternative Explanations

As described in the previous section, there is much truth to the Reporters' claim that courts have failed in practice to stake out a conceptually distinct role for the consumer expectations test. Nevertheless, a number of courts have reacted with palpable hostility to the Reporters' effort to point out that, in the kingdom of consumer expectations, the emperor appears to have no clothes. Surprisingly, the opinions of these courts frequently acknowledge the limitations of the consumer expectations test even as they proclaim allegiance to it. Such judicial awareness of the limitations of the consumer expectations test tends to cast doubt on the Reporters' belief in the "'inexorable inevitability' of the definitions of defect included in the new Restatement." Rather than a doctrine that eventually will be abandoned as a matter of "pragmatic inevitability," the consumer expectations test may have longevity in spite of its (fully acknowledged) shortcomings. As Professor Hathaway has noted, such persistence would not be unprecedented or even especially unusual in a common law system.

This possibility prompts one to search beyond the view that consumer expectations represent only a temporary way station in the logical unfolding of risk-utility analysis as the governing standard for design defect. Toward that end, this section considers three alternative explanations for post-Third Restatement persistence of the consumer expectations doctrine: First, courts may perceive both practical and symbolic advantages to retaining their traditional formulation of the design defect test, even if the Reporters are correct that the formulation substantially mirrors the Third Restatement framework; second, courts may acknowledge but accept the ambiguity inherent in the consumer expectations test because they recognize similar failings in the risk-utility test; and third, given their view that the alternative risk-utility test fails to assure an adequate degree of protection to product users, courts may simply and sincerely be struggling toward an independent role for the consumer expectations test. The latter explanation, which takes courts at face value in
their expressed desire to articulate a normatively significant role for consumer expectations analysis, provides the point of departure for Parts III and IV of this Article, which seek to elucidate just such a role.

1. Rules, Exceptions, and Expressions. — Unlike the Reporters' view depicted in Figure 1, courts in consumer expectations jurisdictions may believe that the universe of compensable product-caused accidents better resembles the portrayal in Figure 2, in which the res ipsa/consumer expectations category of accidents forms a much more significant component than it does in Figure 1. On this view, retaining the consumer expectations test as an independent doctrine simply may be a practical response to the perceived distribution of compensable product-caused accidents. Risk-utility balancing remains necessary to supplement the primary test when consumer expectations provide an ill-formed or otherwise inadequate basis for assessing liability (i.e., bystanders, small children, highly complex product failures, open and obvious dangers). However, the consumer expectations test is not construed as a mere exception to some more general rule of risk-utility. Instead, given the perceived frequency of its significance in design defect cases, the consumer expectations test is treated as a primary and independent doctrine that sometimes must be supplemented by risk-utility considerations.

147. Cf. Robert C. Casad & Kevin M. Clermont, Res Judicata: A Handbook on Its Theory, Doctrine, and Practice 39-40 (2001) (suggesting that rules and exceptions, albeit "logically interchangeable," differ in that rules "constitut[e] a general formulation of inclusion [establishing] the prima facie reach of the doctrine," while exceptions are "exceptional in excluding only certain special situations from the doctrine's application"). The Reporters seem implicitly to discount the significance of the res ipsa-like cases for which they accept that a consumer expectations test may be appropriate. See Henderson & Twerski, Europe, Japan, supra note 55, at 17 (describing "the majority of design cases [as those] that do not involve [res ipsa-like] product malfunctions, violations of safety regulations, or egregiously dangerous products" (emphasis added)). Other commentators, however, view the consumer expectations test as "probably the central test for determining a product defect," even arguing that the risk-utility test "can be comfortably subsumed under consumer expectations." Phillips, supra note 138, at 1048. For a similar argument that the proposed Restatement (Third) of Torts: General Principles carries undesirable connotations by treating various areas of strict liability in tort law as exceptional or anomalous, rather than competitive with the negligence standard, see Keating, supra note 28.

148. See Delaney v. Deere & Co., 999 P.2d 930, 944, 945 (Kan. 2000) (expressing conviction that "consumer expectations play a dominant role in the determination of defectiveness," but also noting "the validity of risk/utility analysis as a guide in determining the expectations of consumers in complex cases"). By contrast, the Halliday court, which refused to permit plaintiff's offer of risk-utility evidence to supplement the consumer expectations doctrine in this manner, seemed to express the view that only the inner circle of product-caused accidents is worthy of compensation through tort law. See Halliday v. Sturm, Ruger & Co., 792 A.2d 1145, 1153-54, 1158-59 (Md. 2002).
The choice of doctrinal construction also may be seen to hinge on the type of judicial error that courts wish to minimize. By treating consumer expectations as an independent means of establishing design defectiveness, the consumer expectations test seems engineered to minimize cases in which designs are erroneously deemed nondefective due to background assumptions about the limited frequency of res ipsa-like cases. On the other hand, the Third Restatement, by implicitly deeming res ipsa-like product failures anomalous or exceptional, seems designed to minimize cases in which designs are erroneously found to be defective through overly generous application of the consumer expectations test. The choice of doctrinal construction therefore rests at least partially on the policy question of whether one prefers judicial errors to occur in the favor of accident victims or product manufacturers.149

With that choice in mind, one can perhaps better understand the reluctance of some courts to embrace the Reporters' doctrinal framework. After all, the history of products liability jurisprudence is littered with eloquent paens to the consumer, whose acquisitive habits are seen as representing the driving force behind the success of modern capitalism, but whose haplessness and gullibility are seen to require constant

149. Cf. Casad & Clermont, supra note 147, at 41 (noting that the choice between alternative rule-exception constructions may depend on whether lawmakers prefer "overinclusion" or "underinclusion" as a policy matter). Courts that refuse to treat demonstration of a reasonable alternative design as a requirement, rather than just an element, of the risk-utility test often do so on similar pragmatic grounds. The Vautour court, for instance, believed that "a requirement of proving a reasonable alternative design coupled with [the Third Restatement's] broad exceptions will introduce even more complex issues for judges and juries to unravel." Vautour v. Body Masters Sports Indus., Inc., 784 A.2d 1178, 1183 (N.H. 2001).
safeguarding by the courts. While contemporary decisions address consumers with considerably less condescension, courts nevertheless remain proud of their pioneering role in the products liability revolution and their commitment to the norm of consumer protection. Recent consumer expectations opinions, for instance, are quick to point out that section 402A of the Second Restatement "was regarded as an important pro-consumer advance," that the court in question was among the first jurisdictions to adopt section 402A; and that section 2(b) of the Third Restatement appears to depart from this storied tradition by placing an unacceptable "burden on injured persons."

Thus, in addition to the practical considerations described above, courts also seem concerned about the expressive implications of the Third Restatement, notwithstanding the Reporters' otherwise accurate observation regarding the functional equivalence of doctrinal frameworks. In other words, demoting consumer expectations to an explicitly subsidiary role might give rise to the impression that courts have abandoned their resolve to ensure the fulfillment and protection of

150. See infra text accompanying notes 222–224 (providing quotes to that effect from seminal products liability decisions).

151. Halliday, 792 A.2d at 1154.


153. Green, 629 N.W.2d at 752; see also Halliday, 792 A.2d at 1154 (noting perception of the Third Restatement as "a retrogression, as returning to negligence concepts and placing a very difficult burden on plaintiffs"). In addition, many of the recent opinions that refuse to endorse the Third Restatement's test for design defect do so only after engaging in a lengthy, almost self-congratulatory review of the history of products liability law in the courts. See, e.g., Potter, 694 A.2d at 1327–30 (reviewing history of products liability from the privity rule to the Third Restatement).


155. See Stapleton, supra note 60, at 386 (describing the doctrinal ordering of design defect categories in the Third Restatement as an "example of the Reporters sacrificing analytical clarity in favor of attempting to 'send messages' through the choice of format for the Restatement"). The Reporters also appear to appreciate the expressive significance of how doctrinal categories are framed or presented. See James A. Henderson, Jr. & Aaron D. Twerski, Product Design Liability in Oregon and the New Restatement, 78 Or. L. Rev. 1, 3 (1999) [hereinafter Henderson & Twerski, Oregon] (emphasizing the importance of introducing exceptions to the reasonable alternative design rule before examining the rule itself). Indeed, Professor Henderson has reported to the author that a great deal of thought and debate during the drafting process centered on the question of whether to label the baseline design defect standard "consumer expectations," but then define the standard by using the same substantive provisions that ultimately were adopted in the new Restatement. The Reporters opposed such a move, however, on the ground that it would perpetuate the same longstanding rhetorical confusion that they were attempting to transcend.
consumer expectations in the modern marketplace. A significant number of jurisdictions appear unwilling to risk sending such a message.

2. Risk, Utility, and Ambiguity. — In addition to the practical and symbolic benefits described in the previous subsection, another explanation for the reluctance of some courts to abandon the notion of an independent consumer expectations test may be that these courts perceive as much ambiguity in the risk-utility doctrine as products liability scholars do in the consumer expectations test. After all, Judge Learned Hand, whose opinion in United States v. Carroll Towing Co. provided tort law's most famous formal expression of cost-benefit balancing for negligence law, also held the view that "all such attempts [to quantify the determinants of liability] are illusory, and, if serviceable at all, are so only to center attention upon which one of the factors may be determinative in any given situation." If even the foremost originator of risk-utility analysis in tort law found its precision "illusory," perhaps some jurisdictions continue to adhere to the consumer expectations doctrine simply because they do not see an obviously superior alternative in the risk-utility test.

Judge Hand's admonition notwithstanding, courts and scholars for many years appeared to take the analytical clarity of the risk-utility test as an article of faith, particularly when judged in comparison to a consumer expectations inquiry. In a prominent 1988 article, however, Professor Alan Schwartz argued that any doctrine requiring factfinders to balance product risks against benefits was theoretically flawed. Because the degree of consumer utility provided by a product design could be ascertained only through highly sophisticated econometric analyses, Schwartz concluded that the practice of "requiring juries to [derive such figures] is asking statues to dance." Soon thereafter, Professor Viscusi offered an equally critical examination of the manner in which courts actually apply risk-utility balancing, concluding that "the increased use of the risk-utility approach has not been accompanied by a sound articulation of the pro-

156. 159 F.2d 169, 173 (2d Cir. 1947). The opinion indicated that negligence may be determined by reference to the following formula: "[I]f the probability [of an accident occurring] be called P; the injury, L; and the burden [of avoiding the accident], B; liability depends upon whether B is less than L multiplied by P: i.e., whether B < PL." Id.
157. Moisan v. Loftus, 178 F.2d 148, 149 (2d Cir. 1949). In another opinion, Judge Hand wrote that the negligence determination "always involves some preference, or choice between incommensurables, and it is consigned to a jury because their decision is thought most likely to accord with commonly accepted standards, real or fancied." Conway v. O'Brien, 111 F.2d 611, 612 (2d Cir. 1940), rev'd, 312 U.S. 492 (1941).
158. See David G. Owen, Risk-Utility Balancing in Design Defect Cases, 30 U. Mich. J.L. Reform 239, 240 (1997) ("Few courts or commentators have attempted to unravel the mysteries that lie within the various formulations of the balancing equation.").
160. Id. at 388.
cedures that courts should follow when undertaking the analysis.”\textsuperscript{161} Instead, courts have developed only a “muddle” of factors that “do[ ] not provide a systematic or coherent framework for assessing liability.”\textsuperscript{162}

Professors Schwartz and Viscusi express concern over the ability of lay juries to estimate the utility that consumers derive from product designs.\textsuperscript{163} In addition to assessing product design benefits in this manner, the risk-utility test also requires juries to engage in an instrumentalist assessment of the value of human life and health. That is, in order to engage in a meaningful comparison of the costs and benefits posed by an alternative product design, factfinders must conceive of the risk of personal injury in a manner that is commensurable with the fiscal costs of the alternative design. The “micro-balancing” approach of the Third Restatement’s reasonable alternative design requirement does help to streamline the design defect equation by narrowing the scope of relevant factors.\textsuperscript{164} Nevertheless, members of the jury still ultimately must complete

\textsuperscript{162} Id. at 578.
\textsuperscript{163} See Schwartz, supra note 159, at 388; Viscusi, Wading, supra note 161, at 593, 612 (implying that expert economic analysis is required to assess consumer benefit, and noting that “[t]he nature of the information required to undertake a risk-utility assessment is routinely calculated as part of a regulatory analysis, though it is certainly not the norm in court cases”). The Reporters demonstrate similar concerns about the ability to quantify “social benefits” when arguing against risk-utility analysis of a particular product in its entirety, rather than merely in relationship to some proposed alternative design. See Henderson & Twerski, Achieving Consensus, supra note 12, at 885. As early as 1965, Judge Calabresi presaged this concern by noting that

\[d\]espite Learned Hand’s formulation that negligence is a balancing of the “danger of an activity” against what must usefully be given up to avoid that danger, it is altogether too clear that a system of fault liability is designed to deal only with “useless” conduct and not with the more subtle interests involved in measuring the value and danger of an activity.


\textsuperscript{164} Indeed, evidence from psychology appears to bolster the case for requiring evidence of a reasonable alternative design when undertaking risk-utility analysis. In one experiment designed to test the role of affective and cognitive factors in decisionmaking, subjects were asked to state their willingness to pay for one of two music dictionaries. See Christopher K. Hsee, The Evaluability Hypothesis: An Explanation for Preference Reversals Between Joint and Separate Evaluations of Alternatives, 67 Organizational Behav. & Hum. Decision Processes 247, 248 (1996). Dictionary A was described as containing 10,000 entries and being in “like new” condition. Dictionary B was described as containing 20,000 entries and having a “torn cover.” When presented with both options, subjects favored Dictionary B, presumably because it contained twice the number of entries as Dictionary A. When presented with only one dictionary, however, those subjects presented with Dictionary A expressed a higher willingness to pay than subjects presented with Dictionary B. Id. The number of entries therefore played a much larger role in the subjects’ expressed preferences when they were presented with a context for evaluating it. See id. at 249–50. Similarly, the Reporters might argue that juries will be much more
the analysis by weighing relevant monetary costs against the value that they place on human life and physical well-being, a requirement that introduces considerable variability into the design defect equation.\textsuperscript{165}

Indeed, a growing body of empirical evidence suggests that juries are simply unable or unwilling to approach the final step of the risk-utility analysis in the tidy, algebraic manner required by economic theory.\textsuperscript{166}

capable of evaluating the defectiveness of product designs when they are presented with alternative designs for comparison. Cf. Paul Slovic et al., The Affect Heuristic [hereinafter Slovic et al., The Affect Heuristic], in Heuristics and Biases: The Psychology of Intuitive Judgment 397, 408 (Thomas Gilovich et al. eds., 2002) [hereinafter, Heuristics and Biases] (referencing unpublished study showing respondents were more willing to support safety program described as saving 98\% of 150 lives than one described as saving 150 lives with no other context). Notice, however, that affective factors will not always be as insignificant as the "like new"/"torn cover" product characteristic in the dictionary experiment. Indeed, affective dimensions of health and safety risks tend to carry great significance to lay observers, even when they appear in the presence of readily evaluable actuarial information. See infra text accompanying notes 258-274. Ideally, therefore, products liability law should attempt to capture both quantitative and qualitative dimensions of risk by employing the risk-utility and consumer expectations doctrines as complementary tests for design defect. See infra text accompanying notes 275-309.

165. Cf. Stephen G. Gilles, On Determining Negligence: Hand Formula Balancing, the Reasonable Person Standard, and the Jury, 54 Vand. L. Rev. 813, 818-19 (2001) ("[The] facts relating to the Hand Factors only set up the problem; they cannot solve it. To compare $1,000 with a 1\% chance of losing the use of a leg, the decisionmaker must make a value judgment."); Little, supra note 21, at 1192 n.24 ("Though valuable in analysis involving quantifiable economic costs, [the risk-utility test] is quickly rendered into inescapable quagmires of conflicting values when applied in settings involving non-monetary consequences, such as environmental disputes and disputes over loss of life and personal injury."); Stapleton, supra note 60, at 379 (arguing that the risk-utility route has the "same characteristic of impenetrability as the consumer expectations test"—it "incorporates at its core a subjective judgment[, but] simply provides an elaborately structured path in getting there").

Rather, lay jury members seem to exhibit behavior that is consistent with a deontological moral outlook in which human life is not viewed as properly subject to instrumentalist trading against inferior competing interests. To be sure, judges facing summary judgment motions may be better situated to conform to the risk-utility model, given their repeated exposure to the relevant decisionmaking context. Nevertheless, evidence suggests that judges are subject to many of the same human impulses and cognitive predilections that affect lay individuals, including the reluctance to reduce personal injury risk tradeoffs to a simple economic cost-benefit formula. Of course, such tradeoffs must and do occur at least implicitly on a daily basis, but as psychologist Philip Tetlock explains, nominal adherence to the proposition that life has infinite value serves important social purposes that advocates of risk-utility analysis ignore. In this sense, the reluctance of consumer expectations jurisdictions to accept the stark instrumentalist balancing of risk-utility analysis may re-

167. Such behavior is consistent with psychological research regarding "taboo trade-offs," in which individuals steadfastly refuse to make explicit comparisons between "sacred" categories, such as human life, and "secular" categories, such as monetary profit. See Alan Page Fiske & Philip E. Tetlock, Taboo Trade-offs: Reactions to Transactions that Transgress Spheres of Justice, 18 Pol. Psychol. 255, 256 (1997); Philip E. Tetlock et al., The Psychology of the Unthinkable: Taboo Trade-Offs, Forbidden Base Rates, and Heretical Counterfactuals, 78 J. Personality & Soc. Psychol. 853, 854 (2000) [hereinafter Tetlock et al., The Psychology of the Unthinkable]; Philip E. Tetlock et al., Revising the Value Pluralism Model: Incorporating Social Context and Context Postulates, in The Psychology of Values 25, 36–37 (Clive Seligman et al. eds., 1996).

168. See W. Kip Viscusi, How Do Judges Think About Risk?, 1 Am. L. & Econ. Rev. 26, 43 (1999) (reporting that with respect to an empirical survey of judges, "in situations involving personal injury, there is a much greater willingness to undertake repairs and impose punitive damages than in situations involving property damage even though the expected economic losses are the same in each instance"); id. at 59 ("Judges' application of negligence rules became much more out of line with standard law and economic prescriptions once substantial nonpecuniary damages were involved."); W. Kip Viscusi, Jurors, Judges, and the Mistreatment of Risk by the Courts, 30 J. Legal Stud. 107, 114–15 (2001) (noting that judges are much more likely to impose punitive damages where harm consists of injury to person than where harm consists of injury to property).

169. Tetlock writes:

The guiding idea is that our commitments to other people require us to deny that we can compare certain things quantitatively. To transgress this normative boundary, to attach a monetary value to one's friendships or to one's children or to loyalty to one's country, is to disqualify oneself from certain social roles, to demonstrate that one does not have the faintest idea of what it means to be a true friend or parent or scholar ("You just don't get it"). We experience constitutive incommensurability whenever treating values as commensurable subverts one of the values in the trade-off calculus; to compare is to destroy. Merely thinking about certain trade-offs degrades one's standing as a moral being.

flect an understanding that, although the description of life and limb as priceless is nonsense, it is "useful nonsense." \(^{170}\)

Recent work by pioneering cognitive psychologist Paul Slovic concerning the critical role played by "affect" in individual cognition casts further doubt on the ability of risk-utility analysis to provide a neat, step-wise solution to product design defect claims. \(^{171}\) In light of the apparently powerful influence exerted by affect on cognition, a growing number of researchers are coming to view human thought according to a dual-process model, in which individuals rely both on a deliberative, analytical system of reasoning and on an impressionistic, emotional, or experiential system. \(^{172}\) The latter is driven by intuitive, affective reactions to stimuli, while the former operates according to conscious, deliberative processes of problem solving and information analysis. Neither system appears to hold exclusive dominion over human motivations and actions. Instead, the two systems seem to operate more or less concurrently, with affective tags providing a quick, nontaxing means for responding to most daily experiences, and cognitive reasoning standing in for more complex or unfamiliar tasks. \(^{173}\)

The significance of the affect research for products liability and the risk-utility test centers on the way in which affective and cognitive processing systems appear to interact. Specifically, affect has been shown to exert a strong influence over individual perceptions and understandings of both risk and utility. \(^{174}\) For instance, Slovic’s well-known research on the

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171. For an overview, see Slovic et al., The Affect Heuristic, supra note 164, at 397. The concept of affect can be thought of as a "specific quality of 'goodness' or 'badness' (1) experienced as a feeling state (with or without consciousness) and (2) demarcating a positive or negative quality of a stimulus." Id. A vivid example of affect can be experienced by considering one's reaction to the word "hate." Even before the formal meaning associated with the term is processed, the mind has experienced a distinctly negative sensation. The word has been coded previously with a negative affect that is called to mind and experienced almost instantaneously upon reading it. Id.


173. See Slovic et al., The Affect Heuristic, supra note 164, at 400.

174. For evidence regarding the role of affective inputs for individual preferences, consider a study in which researchers asked participants to review Chinese characters and their English meanings. David K. Sherman & Heejung S. Kim, Affective Perseverance: The Resistance of Affect to Cognitive Invalidation, 28 Personality & Soc. Psychol. Bull. 224
psychometric paradigm of risk demonstrates that individuals' perceptions of risk are strongly correlated with feelings of dread, a concept that contains obvious affective dimensions. A subsequent study shows that both perceived risk and perceived benefit are driven substantially by the degree to which a stimulus item is associated with a generally positive or negative affect. Being associated with a positive affect tends to cause an activity to appear of high benefit and low risk; conversely, a negative affect coding causes an activity to appear of low benefit and high risk. Rather than assessing risk and benefit as separate factors, individuals seem to assess an activity or object through a sort of gestalt evaluation in which determinations of risk and benefit are both inversely related and influenced substantially by prior affective impressions. As Slovic notes, this research "implies that people base their judgments of an activity or a technology not only on what they think about it but also on what they feel about it." (2002). Half of the characters were described as having positive meanings (e.g., beauty), and half negative (e.g., disease). When researchers asked the study participants to express which characters they preferred, they selected characters associated with positive meanings over 70% of the time. Researchers then told participants that the Chinese characters actually had different, neutral meanings (e.g., desk). Participants were again asked to state their preferred characters and, despite the apparent change in meaning associated with the characters, their responses did not differ markedly from previous evaluations. As Slovic describes, this study demonstrates that "affect [can be] a strong conditioner of preference." Slovic et al., The Affect Heuristic, supra note 164, at 401. While the meanings associated with the characters originally appeared to play a role in establishing subjects' preferences, once the characters had been coded with positive affect, subsequent changes in substantive meaning had little effect.

175. This research is described infra Part IV.A.
177. Slovic and his collaborators also have tested whether information about an activity designed to manipulate affect would alter individual perceptions of the activity's risk or benefit accordingly. Slovic et al., The Affect Heuristic, supra note 164, at 412 (reporting results of study on influence of affective processes on toxicologists' judgments of risks). As predicted, information designed to demonstrate high benefit resulted in perceptions of low risk, while information suggesting low risk caused perceptions of high benefit. Conversely, information designed to suggest low benefit resulted in perceptions of high risk, while information suggesting high risk caused perceptions of low benefit. A still more recent study by Slovic and colleagues found a less significant correlation between perceived risk and benefit when subjects were urged to "take as much time as desired" in evaluating stimulus items. The overall inverse pattern remained, however. Melissa L. Finucane et al., The Affect Heuristic in Judgments of Risks and Benefits, 13 J. Behav. Decision Making 1, 8 (2000).
178. Slovic et al., The Affect Heuristic, supra note 164, at 410-11. Indeed, experiments designed to suppress affective inputs reveal that the quality of subjects' decisionmaking for certain tasks actually suffers when they are required to think systematically about the pros and cons of a decision. See, e.g., Timothy D. Wilson et al., Introspecting About Reasons Can Reduce Post-Choice Satisfaction, 19 Personality & Soc. Psychol. Bull. 331, 337-38 (1993); Timothy D. Wilson & Jonathan W. Schooler, Thinking Too Much: Introspection Can Reduce the Quality of Preferences and Decisions, 60 J. Personality & Soc. Psychol. 181, 190-91 (1991). Similarly, evidence from neuroscientist...
The foregoing research findings suggest that efforts to cordon off separate notions of "risk" and "utility" for products liability analysis may be unsuccessful or even misconceived. Rather than existing as independent, stable concepts, the attributes of "risk" and "utility" appear both to interact with each other in complex ways, and to be grounded substantially on the same underlying bed of affective reactions. The risk-utility problem therefore becomes polycentric, its variables interdependent. To be sure, one could attempt to objectify the notion of risk, in the manner that expert hazard assessment models do. But one still would face the complication that utility for hazardous products or activities is significantly affected by perceived risk. At bottom, individuals appear to care about the total bundle of attributes presented by a potential hazard. Attempts to decouple "utility" for balancing purposes therefore may not lead to especially meaningful judgments. Indeed, Slovic's research on the interaction between affect and perceptions of risk and benefit may help to explain the fact that many experimental subjects appear to resist instrumentalist risk-utility balancing altogether.

Antonio Damasio and colleagues suggests that risky decisionmaking is impaired among patients who suffer from neurological abnormalities that block affective reactions. See Damasio, supra note 172, at 34-79; Antoine Bechara et al., Deciding Advantageously Before Knowing the Advantageous Strategy, 275 Science 1293, 1293 (1997). This finding may stem in part from the fact that the level of risk aversion that an individual experiences is heavily affect-driven. See George F. Loewenstein et al., Risk as Feelings, 127 Psychol. Bull. 267, 273-74 (2001). Decisionmaking under uncertainty therefore becomes rudderless when the affective processing system is damaged, suppressed, or otherwise impaired.

179. As Slovic puts it, "the neural and psychological substrate of utility" appears to consist in no small part of affect, while affect simultaneously appears to be a strong conditioner of perceptions and evaluations of risk. Slovic et al., The Affect Heuristic, supra note 164, at 420. Consider, for instance, the fact that experimental subjects were willing to pay two times as much to insure a clock described as a beloved antique as to insure an identical, nondescript clock. Cf. Croley & Hanson, Pain-and-Suffering Damages, supra note 28, at 1814-15 (comparing utility a person derives from money, "irrespective of that individual's overall well-being, [and] the utility the individual derives from money with reference to how well off, as a general matter, that individual is").

180. Even this solution would need to grapple with the fact that results similar to those described in the text have been obtained among expert as well as lay observers. See Yoav Ganzach, Judging Risk and Return of Financial Assets, 83 Organizational Behav. & Hum. Decision Processes 353, 358-59 (2002) (stock analysts); Slovic et al., The Affect Heuristic, supra note 164, at 412 (reporting results of earlier study) (toxicologists); Paul Slovic et al., Violence Risk Assessment and Risk Communication: The Effects of Using Actual Cases, Providing Instruction, and Employing Probability Versus Frequency Formats, 24 Law & Hum. Behav. 271 (2000) (psychologists and psychiatrists).

181. See supra notes 166-170 and accompanying text.
The Reporters argue that "[n]o industrial colossus could function without a comprehensible standard for defective design." As this subsection demonstrates, however, both formulations of design defectiveness in American products liability law seem destined to result in a fair amount of uncertainty in application. In light of such vagaries, courts that retain the consumer expectations test may do so simply because they do not believe that the risk-utility test provides a clearly preferable alternative. After all, the consumer expectations test asks a largely factual question regarding the level of safety that the "ordinary consumer" expects a particular product to provide. The risk-utility test, on the other hand, contemplates a multi-factored analysis of competing product designs followed by an instrumentalist query that appears fundamentally inconsistent with the moral intuitions and cognitive processes of wide segments of the population, including many judges. Given such a choice

182. Henderson & Twerski, Politics, supra note 97, at 682. For a contrary argument that vagueness in legal rules is desirable under certain circumstances because it promotes "customized compliance," see Nicholas L. Georgakopoulos, The Vagueness of Limits and the Desired Distribution of Conducts, 32 Conn. L. Rev. 451 (2000).


184. Yet another element of uncertainty plagues the risk-utility test. As the Reporters indicate, the elimination of one product risk through a safety improvement often is accompanied by one or more new risks that are generated by the alternative design. See Restatement (Third), supra note 7, § 2 cmt. f ("It is not sufficient that the alternative design would have reduced or prevented the harm suffered by the plaintiff if it would also have introduced into the product other dangers of equal or greater magnitude."). Thus, in order to "evaluat[e] the reasonableness of a design alternative, the overall safety of the product must be considered." Id.; see also Crespo v. Chrysler Corp., 75 F. Supp. 2d 225, 228 (S.D.N.Y. 1999) (noting that risk-utility analysis requires "not simply that the manufacturer could have designed the product so that it would not have caused the victim's injuries, but also that doing so would not have rendered the product more-than-offsettingly unsafe for other relevant users"); James A. Henderson, Jr., Extending the Boundaries of Strict Products Liability: Implications of the Theory of the Second Best, 128 U. Pa. L. Rev. 1036, 1037-38 (1980) (arguing that consumers may shift to even riskier substitute products or services when products liability raises the cost of a particular activity); J. Gregg Miller, Jr., Comment, Risk Homeostasis and California Design Defect Products Liability: Rethinking the Consumer Expectations and Risk-Benefit Tests, 32 U.S.F. L. Rev. 587, 588 (1998) (discussing implications for products liability law of consumers' tendency to increase risky behavior in response to safety measures).

However, as commentators from the environmental law and risk regulation disciplines have noted, this type of risk-risk analysis is extremely costly and difficult to conduct. In order to analyze alternative product designs comprehensively, factfinders must be prepared to consider not only the new risks that may be posed by a design, but also the many other secondary effects that the design may create, including risks that are eliminated other than those that specifically harmed the plaintiff, functional advantages or disadvantages of the alternative design, and changes in the aesthetic desirability of the redesigned product. Restatement (Third), supra note 7, § 2 cmt. f. Such a comprehensive analysis is not only dauntingly complex to conduct, but also is subject to considerable manipulation by parties who strategically highlight only those ancillary effects that support their preferred outcome. Douglas A. Kysar, Some Realism About Environmental Skepticism: The Implications of Bjorn Lomborg's The Skeptical Environmentalist for Environmental Law and Policy, 30 Ecology L.Q. 223, 259–61 (2003) [hereinafter Kysar, Some Realism]; see also Richard A. Epstein, The Risks of Risk/Utility, 48 Ohio St. L.J. 469,
of imperfect doctrines, some courts simply may prefer the former brand of uncertainty to the latter.

3. An Independent Role for Consumer Expectations? — One important doctrinal reason for consumer expectations courts to object to the Third Restatement framework is that the res ipsa inference provided by section 3 seems to be merely that, an inference. Although the Restatement does not address the issue definitively, it seems likely that defendants may attempt to rebut a section 3 inference with evidence that no reasonable alternative design exists that could have avoided the product-caused harm at an acceptable cost. Under the consumer expectations test, on the other hand, such rebuttal evidence would be largely beside the point.

This objection helps to sharpen the focus of the conceptual debate between supporters and opponents of the consumer expectations test. The question of whether defendants may attempt to rebut the consumer expectations showing only becomes pressing if there is a class of cases in which the consumer expectations test would find liability while the risk-utility test would not. In other words, if the universe of compensable

476 (1987) (warning that "the ingenuity of lawyers should never be doubted," and that "[w]hat starts out as a faithful application of the utilitarian calculus ends up as an unprincipled battle of the experts").

185. To be sure, it is difficult to imagine the circumstances under which a defendant would be able to prove that, although a product failed under manifestly unreasonable circumstances, it nevertheless constituted the best design alternative available. Such a showing would essentially require proving a negative. Perhaps for this reason, the Reporters did not think it necessary to resolve whether the defendant may rebut the section 3 inference by offering proof of the type required under section 2(b)'s reasonable alternative design standard. At any rate, courts seem to equate section 3 with res ipsa loquitur in practice, given the obvious conceptual linkages between the doctrines. See Myrlak v. Port Auth. of N.Y. & N.J., 723 A.2d 45, 56-57 (N.J. 1999) (noting that "the historical antecedent to Section 3 of the Restatement is traceable to the negligence doctrine of res ipsa loquitur" and that "Section 3 of the Restatement in a products liability case does precisely what res ipsa loquitur does in a negligence context").

186. See Arena v. Owens-Corning Fiberglas Corp., 74 Cal. Rptr. 2d 580, 585 (Dist. Ct. App. 1998) (noting that a defendant may not rebut a consumer expectations showing "with evidence of the design's relative risks and benefits"); Henderson & Twerski, Closing the Frontier, supra note 20, at 1295 ("[S]ince the consumer-expectations rationale stands as an independent basis for liability separate and apart from risk-utility, the defendant would not be absolved of liability even upon establishing that an alternative design would have been more dangerous than the one actually used."). (citation omitted)); Schwartz, Foreword, supra note 4, at 472 n.217 ("Given the finality under Barker of a negative consumer expectation finding, . . . it is clear that Barker's consumer expectations test cannot be regarded as merely a res ipsa approach to risk-benefit."); Twerski, From Risk-Utility to Consumer Expectations, supra note 21, at 906 ("If, instead, the plaintiff could recover on a strict liability theory grounded on the doctrine that when a product fails in normal use, liability attaches because it disappoints consumer expectations, there would be no rebuttal on the basis of risk-utility evidence."); Twerski, Inside the Restatement, supra note 77, at 845 ("[T]here is a vast difference between utilizing the consumer expectations test as a black-letter test for defect and using it in the context of res ipsa. The former is a clear-cut liability rule, the latter is an inference of defect that the defendant can rebut.").

187. See Henderson & Twerski, Proposed Revision, supra note 10, at 1533 n.25 (noting that "[t]he acid test determining whether liability will attach based on consumer
product-caused accidents fits either the depiction of Figures 1 or 2, then whether the defendant is allowed to rebut the consumer expectations showing is irrelevant, given that no litigation outcome in theory would be altered by changing the doctrine. On the other hand, if the backdrop of products liability litigation resembles Figure 3, in which the consumer expectations test does in fact capture cases that are not reached by the risk-utility test, then courts have legitimate reason to be concerned about the practical distinction between a res ipsa inference and an independent formulation of the consumer expectations test. On this account, some normatively desirable settings for manufacturer liability would become lost if defendants were allowed to rebut the consumer expectations showing by using evidence from the altogether different category of risk-utility analysis.

Thus, putting aside the practical and symbolic interests served by treating the consumer expectations test as a nominally independent doctrine, the most fundamental question to be addressed by courts and products liability scholars is whether consumer expectations ever can result in a finding of manufacturer liability under circumstances that the risk-utility test would not (but that still would serve the normative goals of products liability). In order to answer this question, one must address an issue that courts heretofore have failed to confront with sufficient expectations alone asks whether, if the product met risk-utility norms, liability could be separately established based on failed consumer expectations.

188. But see supra Part II.C.1 (describing practical and symbolic reasons why courts may favor construction of the consumer expectations test as an independent doctrine).

189. Cf. Ray v. BIC Corp., 925 S.W.2d 527, 531 (Tenn. 1996) (noting that the consumer expectations and risk-utility tests are "neither mutually exclusive nor mutually inclusive").

190. This might be the concern of jurisdictions that have reaffirmed their allegiance to the Barker test rather than adopting the Third Restatement Formulation, particularly in light of their frequent refusal to limit application of the consumer expectations prong to simple, res ipsa-like product malfunctions. See Gen. Motors Corp. v. Farnsworth, 965 P.2d 1209, 1220-21 (Alaska 1998) (refusing manufacturer's invitation to abandon consumer expectations test or, in the alternative, to limit application of test to simple product failures); Hansen v. Baxter Healthcare Corp., 764 N.E.2d 35, 44-45 (Ill. 2002) (declining to hold that consumer expectations test was inappropriate for assessing a medical device); Jackson v. Gen. Motors Corp., 60 S.W.3d 800, 803-06 (Tenn. 2001) (refusing to hold that risk-utility factors must displace consumer expectations for certain types of product failures).

191. See supra Part II.C.1.

192. The Reporters clearly answer this question in the negative. They write: [n]o substitute exists in non-res ipsa cases for a full presentation of evidence that addresses such factors as the magnitude and probability of foreseeable risks of harm, the instructions and warnings that accompany the product, and the relative advantages and disadvantages of the product as designed and as it alternatively could have been designed.

Henderson & Twerski, Politics, supra note 97, at 678 (emphasis added); see also Keeton, supra note 4, at 304 ("[T]he only way to evaluate the design of a product is to weigh the danger inherent in the way the product was designed with the utility of that design." (emphasis added)).
clarity: What precisely are the theoretical bases of the consumer expectations test? As is well recognized, the competitor test of risk-utility analysis can be grounded firmly in economic theory.\textsuperscript{193} By measuring the marginal costs and benefits posed by alternative product designs, the risk-utility test seems to ensure that manufacturers face legal incentives to maximize consumer welfare. The consumer expectations test, on the other hand, purports to effectuate the safety expectations of the ordinary consumer, but generally fails to explain how those expectations are to be ascertained or, indeed, why they should be vested with adjudicatory significance.

The court's opinion in \textit{Potter} demonstrates this problematic indeterminacy. According to the court,

the relevant factors that a jury may consider [under the consumer expectations test] include . . . the usefulness of the product, the likelihood and severity of the danger posed by the design, the feasibility of an alternative design, the financial cost of an improved design, the ability to reduce the product's danger without impairing its usefulness or making it too expensive, and the feasibility of spreading the loss by increasing the product's price.\textsuperscript{194}

Of these factors, only the first ("the usefulness of the product") seems intuitively to be the subject of consistent consideration by consumers in their everyday market interactions. The second factor ("the likeli-
hood and severity of the danger posed by the design") also may be an item of contemplation by consumers, but generally only for cases in which the dangers posed by a product for one reason or another have become salient to consumers. In contrast, the remaining factors comprising the Potter court's consumer expectations test seem to have little if any relevance to the behaviors, beliefs, and decisionmaking processes that characterize the ordinary consumer. Rather, they seem to represent the ordinary engineer cum actuary cum economist.

One is left then with a sense that either the consumer expectations test must devolve in practice into risk-utility analysis, as the Potter opinion demonstrates, or that the area occupied independently by the consumer expectations test is, as the critics argue, so vague and indeterminate as to render continued adherence to the test outside of the res ipsa context untenable. The remainder of this Article, therefore, attempts to ascertain whether the consumer expectations test can be placed on a more solid theoretical base. Assuming, in other words, that Figure 3 does represent the appropriate conception for design defect litigation, how are courts and commentators to describe and understand the content of the consumer expectations sphere of liability? If sufficiently concrete, analytically independent substance can be identified (or placed) within that sphere, then the consumer expectations test might finally provide the important alternative to risk-utility analysis that its purveyors are struggling to identify.

III. EXISTING CONSUMER DEPICTIONS WITHIN PRODUCTS LIABILITY

The emergence of products liability law reflected a concern among judges that the interests of consumers were not receiving adequate expression in modern product markets. Similarly, the steadfast opposition of many courts to the Third Restatement design defect standard seems to reflect a concern that risk-utility analysis fails to adequately express certain significant health and safety interests of consumers. The consumer expectations standard offered as an alternative to risk-utility analysis, however, has appeared thus far as an amorphous, almost unprincipled doctrine, leaving one to wonder what exactly it is that courts are aiming to capture through its application. To begin answering that question, this Part considers several accounts of consumer behavior that have been or could be offered as conceptual foundations for the consumer expectations test. As will be seen, existing depictions of consumer behavior tend to vacillate between extremes of descriptively weak but parsimonious theoretical models, and descriptively rich but indeterminate cultural accounts, with neither approach providing a wholly satisfactory basis on

195. See Hanson & Kysar, TBSIII, supra note 28, at 324–70.
196. See supra notes 58–60 and accompanying text.
which to conduct products liability litigation. Accordingly, Part IV moves beyond these existing depictions of consumer beliefs and behaviors to identify a new, conceptually distinct role for consumer expectations analysis within products liability law, one that aspires to be both theoretically tractable and descriptively attractive.

A. Consumer as Sovereign

Perhaps the most widely influential academic account of consumer behavior has been the neoclassical economic portrayal of individuals as rational calculators seeking an optimal mix of goods and services in the marketplace. Professor Viscusi provides a concise introduction to this consumer sovereignty vision: “In idealized market situations, the unconstrained choices of consumers, coupled with the provision of goods in the marketplace by competitive firms, lead to efficient outcomes as consumers select the bundle of goods they most prefer.”

This section describes more fully the economic understanding of consumer behavior and examines its implications for the consumer expectations doctrine in products liability law.

In its strongest form, the consumer sovereignty viewpoint denies any role to regulators in product markets, assuming instead that competition will ensure the satisfaction of consumer preferences or, at least, that it will do a better job than can be accomplished by government interlopers. In the products liability arena, this robust conception of consumer sovereignty appears in the work of scholars who advocate judicial enforcement of liability disclaimers and deference to market-derived product safety standards. Indeed, deep faith in the ability of consumers to maximize their welfare counsels a fairly wholesale abandonment of products liability law.

A more cautious form of the consumer sovereignty account views government actors as market referees, intervening in markets only as necessary to ensure their structural integrity. Professor Pitofsky articulates an important expression of this view in his famous article on consumer pro-

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199. As Professors Cayne and Trebilcock write, "In few circumstances . . . should [legal] rules attempt to protect the consumer from an assumed inability to make rational purchasing decisions. . . . Controlling effect should generally be given to the will of the market participant rather than to the dictates of the legislator." David Cayne & M.J. Trebilcock, Market Considerations in the Formulation of Consumer Protection Policy, 23 U. Toronto L.J. 396, 409 (1973).
200. See Croley & Hanson, Rescuing the Revolution, supra note 20, at 715–35 (reviewing products liability scholarship of Peter Huber, Richard Epstein, George Priest, and Alan Schwartz and noting their general trust in market forces to optimally regulate consumer product safety).
201. See W. Kip Viscusi, Reforming Products Liability 63 (1991) [hereinafter Viscusi, Reforming] ("If [the] market ideal was generally applicable, there would be no need for social risk management institutions such as products liability or regulatory agencies.")
tection: "[P]rotection of consumers . . . should not be a broad, theoretical effort to achieve Truth, but rather a practical enterprise to ensure the existence of reliable data which in turn will facilitate an efficient and reliable competitive market process."202 Translated into the products liability context, courts on this account should impose liability on product manufacturers only if some significant failure in the marketplace renders consumer decisionmaking unreliable. Within law and economics literature, the most commonly cited ground for intervention by courts in product markets consists of informational failures that prevent consumers from adequately understanding and appreciating product health and safety hazards.203

A number of theoretical presuppositions lie behind this consumer sovereignty account. First, the individual, rationally pursuing self-interest through the satisfaction of ordered preferences, is taken to be the appropriate unit of theoretical analysis. One need not ask whether various forms of market activity serve the "collective good," for no such entity exists.204 In a related manner, the consumer sovereignty viewpoint holds that social welfare generally is maximized by allowing individual consumers to pursue their private preferences unimpeded by government regulation or other forms of collective control.205 Finally, the consumer sover-
eignty framework tends to treat the development, content, and integrity of consumer preferences as exogenous factors. As a result, consumer preferences appear as largely unexamined desires that enter the theoretical account of consumer behavior independent of cultural context, including the markets within which they are satisfied.\textsuperscript{206}

The foregoing analysis has a number of implications for design defect litigation. To begin with, the consumer sovereignty norm provides an aspirational focus for products liability law in general and the consumer expectations test in particular: Courts should design rules of products liability to address situations in which market forces cannot be relied on to ensure the fulfillment of consumer safety demands. The goal of products liability law therefore should be to hold manufacturers to the level of safety that consumers would demand through market choices if they were adequately informed about product risk characteristics. In this regard, the consumer expectations test can be seen as a continuation of the contractual, warranty-based tradition of products liability law. Product users are entitled to the benefit of the hypothetical safety bargains that they would have struck with manufacturers, given a more textbook market setting.\textsuperscript{207} The underlying normative claim, of course, is that bargaining, whether real or hypothetical, maximizes social welfare.

Nevertheless, despite the normative focus provided by the consumer sovereignty account, it is not clear that the construct provides a basis on which to distinguish the consumer expectations test from risk-utility analysis. In neoclassical economic theory, consumer decisionmaking generally is conceived of in a manner that closely resembles the cost-benefit balancing of the risk-utility test. Consumers are believed to assemble a "bundle of goods" by constantly trading their monetary and other economic resources for higher-valued items. Ideally, an array of offerings confronts the typical consumer within any given product category, each presenting a different blend of safety, functional, aesthetic, and price characteristics. The consumer then selects a desired combination of such characteristics in light of some personal valuation of the harm posed by

\textsuperscript{206} As Judge Irving Kaufman wrote in an antitrust decision:  
\textit{[N]o one can determine with any reasonable assurance whether one product is "superior" to another. Preference is a matter of individual taste. The only question that can be answered is whether there is sufficient demand for a particular product to make its production worthwhile, and the response, so long as the free choice of consumers is preserved, can only be inferred from the reaction of the market.}

\textsuperscript{207} See Fischer, supra note 57, at 348 ("The consumer expectations test is natural since strict liability in tort developed from the law of warranty. The law of implied warranty is vitally concerned with protecting justified expectations since this is a fundamental policy of the law of contracts."); Korzec, supra note 84, at 232 ("Historically, the consumer expectations test is the natural, logical result of strict products liability as the extension of implied warranty law.").
health and safety risks, just as the decisionmaker applying risk-utility analysis balances various benefits and costs posed by alternative product designs.

In this conception of how the "ordinary consumer" makes decisions, the two primary design defect tests in products liability again can be seen to substantially overlap. Indeed, a number of courts appear to have expressly adopted this utility-maximizing vision of consumer behavior by defining consumer expectations in a manner that explicitly requires risk-utility analysis. Furthermore, from a consumer sovereignty viewpoint, jurisdictions that apply the consumer expectations test without expressly incorporating risk-utility factors must simply assume that judges and jurors naturally will replicate welfare-maximizing market transactions.

208. See Hubbard, supra note 21, at 469-70 (emphasizing aim of "achieving the best ratio of benefits to costs for each individual" and "the proper perspective that production is to maximize choices and options in order to enrich people's lives as they desire and expect to live them"); David G. Owen, The Moral Foundations of Products Liability Law: Toward First Principles, 68 Notre Dame L. Rev. 427, 460 (1993) (describing decisionmaking process of consumers and noting that such behavior is designed "to promote the autonomy of human beings"); Shapo, The ALI Restatement Project, supra note 30, at 677 ("It is axiomatic that consumers trade off dollars against safety when acquiring the specific packages of benefits and risks we call products."). As with the "micro-balancing" approach of the reasonable alternative design test, such evaluation by consumers occurs "at the margin." Consumers are not required to state, in other words, the full value or utility that they derive from a can of soda. Rather, they simply ask whether they prefer the soda to a pocketful of change.

209. See Hoffman & O'Shea, supra note 166, at 358 n.116 (noting conceptual likenesses between individual wealth maximization and cost-benefit analysis).

210. An especially ambitious implementation of the consumer sovereignty viewpoint might require assessing manufacturer responsibility in light of the subjective expectations of the actual consumer who is injured, thereby going well beyond the risk-utility test. For a variety of reasons, however, no jurisdiction ever has adopted such a subjective test. Rather, the consumer expectations test hinges on the expectations of an "ordinary consumer." See Owen et al., supra note 133, § 5:6, at 298 ("Like most other standards of tort law, the consumer expectations test is an objective test: it is based on the average, normal, or 'ordinary' expectations of a reasonable person."). As Professor Korzec indicates, the language of the European Union's Council Directive regarding products liability law—which emphasizes the "safety which a person is entitled to expect," rather than the actual expectations of the individual consumer—helpfully distinguishes between such subjective and objective consumer expectations perspectives. See Korzec, supra note 84, at 233, 235 (referencing Council Directive 85/374 of 25 July 1985 on the Approximation of the Laws, Regulations and Administrative Provisions of the Member States Concerning Liability for Defective Products, arts. 1, 6(1), 1985 O.J. (L 210) 2, 4-5 (amended 1999), available at http://www.cebec.be/en/pdfs/1985L0374%20Cons19990604%20EN.pdf (on file with the Columbia Law Review)).

211. See supra notes 136-138 and accompanying text.

212. If, on the other hand, such an assumption does not underlie the consumer expectations test, then from a law and economics perspective the doctrine lacks a sound, identifiable normative foundation. Professor Viscusi appears to imply such a view through the following hypothetical:

Consumers may, for example, expect that a car driven into a lake will float. When cars do not perform in this way, they will fail to meet consumers' expectations. The product, however, would not necessarily be considered defective because
In either case, the account of consumer behavior that emerges from neo-classical economics fails to provide a conceptually independent role for the consumer expectations test. Rather, the consumer sovereignty norm simply demonstrates another manner in which consumer expectations seem to serve as shorthand for risk-utility analysis.213

B. Consumer as Susceptible

Even within economics, there long have been dissenters from the consumer sovereignty viewpoint. As early as 1898, Professor Veblen disparaged the neoclassical view of consumer choice as being "some generations" out of date:

The psychological and anthropological preconceptions of the economists have been those which were accepted by the psychological and social sciences some generations ago. The hedonistic conception of man is that of a lightning calculator of pleasures and pains, who oscillates like a homogeneous globule of desire of happiness under the impulse of stimuli that shift him about the area, but leave him intact.214

In contrast to this view of atomistic pleasure seeking, Veblen developed an account of preference formation that occurs within an interactive environment in which the behaviors of other actors matter significantly to consumer desires and decisionmaking.215

*these expectations are unreasonable. Ultimately, one must address the overall merits of a design change, which is the object of the risk-utility test.

Viscusi, Wading, supra note 161, at 579 n.26. This hypothetical appears to suggest that consumer expectations must either conform to risk-utility analysis or be deemed unreasonable, an account that is conceptually similar to Figures 1 and 2 above, rather than Figure 3, in which consumer expectations and risk-utility doctrines are not seen as wholly overlapping. As noted infra Part IV.A, however, one can identify a rival rationality account of consumer behavior and decisionmaking that challenges Viscusi's implicit assumption that cost-benefit balancing is the only "reasonable" way in which to think about product hazards.

213. This collapsing of the consumer expectations and risk-utility tests is evident even among scholars who advocate retention of the consumer expectations standard. Professor Korzec, for instance, argues that "consumers are entitled to an expectation that manufacturers, as experts in the field, will sell products which are as safe as possible, given technological and scientific feasibility." Korzec, supra note 84, at 236. A liability standard that requires manufacturers to produce "products which are as safe as possible" in light of "technological and scientific feasibility," however, seems to suggest that in practice consumers can expect products to be withheld only when an alternative design exists that could eliminate or reduce product safety risks cost-effectively. Thus, although the consumer expectations test purports to protect "[c]onsumer autonomy," id. at 237, it again appears to do so in a manner that is difficult to distinguish from the risk-utility test.

214. Thorstein Veblen, Why Is Economics Not an Evolutionary Science?, 12 Q.J. Econ. 373 (1898), reprinted in The Place of Science in Modern Civilisation and Other Essays 56, 73 (1919).

Economists who follow Veblen in this contextual analysis of consumer preferences frequently have been led to the conclusion that individual choice is not generally rational and utility-maximizing after all. Some thinkers, like Veblen himself, focus on the manner in which preferences are influenced by competitive relations with other consumers. In an approach more directly relevant to products liability, others claim that consumers are vulnerable to exploitation by the producers of consumer goods, given that those actors frequently are in a position to shape the informational and aesthetic environment within which economic decisionmaking occurs. In the 1920s, for instance, Professor Chamberlin argued that

selling methods which play upon the buyer’s susceptibilities, which use against him laws of psychology with which he is unfamiliar and therefore against which he cannot defend himself... all of these have nothing to do with his knowledge. They are not informative; they are manipulative. They create a new scheme of wants...  

From the economic tradition, Professor Galbraith is most famously associated with the view that consumers are subject to manipulation by the marketing ploys of manufacturers. His classic account of the "Dependence Effect" remains a challenging and influential critique of consumer sovereignty. He begins by ridiculing the conventional economic notion that declining marginal utility only applies to specific goods, while an individual’s wants in their totality remain constant and insatiable. Galbraith then advances the case that most modern consumer wants are a

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216. See, e.g., James S. Duesenberry, Income, Saving and the Theory of Consumer Behavior 28–32 (1949) (describing individuals’ drive to maintain level of consumption comparable to others of higher status); Fred Hirsch, Social Limits to Growth 6, 102–07 (1976) (describing concern with relative consumption or income as leading to various social problems); Robert H. Frank, The Demand for Unobservable and Other Nonpositional Goods, 75 Am. Econ. Rev. 101, 102–03 (1985) (providing an expanded account of relative preferences and their implications for law and policy); H. Leibenstein, Bandwagon, Snob, and Veblen Effects in the Theory of Consumers’ Demand, 64 Q.J. Econ. 183, 190–99 (1950) (describing ways in which consumers’ perception of other individuals and their desires can influence choice).


219. Galbraith’s famous passage is worth quoting at length: Were it so that a man on arising each morning was assailed by demons which instilled in him a passion sometimes for silk shirts, sometimes for kitchenware, sometimes for chamber pots, and sometimes for orange squash, there would be every reason to applaud the effort to find the goods, however odd, that quenched this flame. But should it be that his passion was the result of his first having cultivated the demons, and should it also be that his effort to allay it stirred the demons to ever greater and greater effort, there would be question as to how rational was his solution. Unless restrained by conventional attitudes, he might wonder if the solution was more goods or fewer demons.

Id. at 124–25.
creation of the system of production. He argues that an individual’s desires only remain constant amidst rising levels of affluence if some external force constantly produces new and urgent wants that are foisted upon her. To Galbraith, key elements in that process are “the institutions of modern advertising and salesmanship . . . [whose] central function is to create desires—to bring into being wants that previously did not exist.”

Although it has never achieved widespread currency among economists, at times this view of readily manipulable consumers has found acceptance among torts scholars and within products liability decisions. Indeed, one might say that to the extent the consumer expectations doctrine has rested on a coherent view of consumer behavior and decision-making at all, it has been the vision of consumer susceptibility. Observe, for instance, Justice Traynor’s often quoted passage from Escola v. Coca Cola Bottling Co.: “The consumer[‘s] . . . erstwhile vigilance has been lulled by the steady efforts of manufacturers to build up confidence by advertising and marketing devices . . . ” Likewise, in Henningsen, the court claimed that “a modern manufacturer . . . not only processes [its product] and dresses it up so as to make it appear appetizing, but he uses the newspapers, magazines, billboards, and the radio to build up the psychology to buy and consume his products.” Later, the Connecticut Supreme Court took this beleaguered consumer and reduced him finally to a gelatinous spendthrift: “[T]he customer . . . is bewitched, bewildered and bedeviled by the glittering packaging in riotous color and the alluring enticement of the products’ qualities as depicted on labels.”

220. Id. at 127.
221. See, e.g., Thomas A. Cowan, Some Policy Bases of Products Liability, 17 Stan. L. Rev. 1077, 1087 (1965) (“The combination of low quality production and high quality lying [by manufacturers] makes it impossible for those using the products of mass manufacture to distinguish good merchandise from bad . . . .”); Ellen Wertheimer, Unavoidably Unsafe Products: A Modest Proposal, 72 Chi.-Kent L. Rev. 189, 198-99 (1996) (arguing that “the manufacturer . . . decide[s] that a certain level of risk to the consumer is acceptable,” and that by designing a potentially hazardous product the “manufacturer has assigned the risk to the consumer”). Such arguments implicitly deny a strong role to consumer demand or choice in determining market outcomes. Rather, the consumer appears vulnerable to the manufacturer’s unilateral decisions about product design and risk allocation.
222. 150 P.2d 436, 443 (Cal. 1944) (Traynor, J., concurring).
224. Hamon v. Digliani, 174 A.2d 294, 297 (Conn. 1961). Similar arguments also have been entertained by courts in the fields of trademark, antitrust, and consumer protection law. The Ninth Circuit Court of Appeals, for instance, once painted a picture of almost Pavlovian consumer responses to manufacturer trademarks: “The primary value of the modern trademark lies in the ‘conditioned reflex developed in the buyer by imaginative or often purely monotonous selling of the mark itself.’ To the extent that advertising of this type succeeds, . . . economically irrational elements are introduced into consumer choices . . . .” Smith v. Chanel, Inc., 402 F.2d 562, 567 (9th Cir. 1968) (internal citations omitted). Similarly, the Second Circuit Court of Appeals upheld the FTC’s cease-and-desist order against a beauty product’s claim of age-defying qualities by noting, “[T]he
Courts have been drawn to the consumer susceptibility vision with good reason. At least initially, Galbraith's account of consumer product markets seems to provide a strong foundation both for intervening in product markets and for utilizing the liability system to ensure the satisfaction of consumer expectations. After all, to the extent that the consumer susceptibility critique is accurate, hinging manufacturer liability on the expectations of consumers would seem to introduce a self-correcting force into product market dynamics. That is, whenever a manufacturer successfully misleads consumers about the risky attributes of its products, then the expectations of ordinary consumers will bear the imprint of the manufacturer's manipulation. Such inflated expectations in turn will subject the manufacturer to liability if its product turns out to pose more danger than consumers have been led to believe. Thus, at first glance, the consumer susceptibility depiction seems to provide a sound theoretical basis for comprehending and guiding the consumer expectations doctrine.

For at least two reasons, however, the consumer susceptibility viewpoint should be rejected as a conceptual basis for the consumer expectations doctrine. First, because the doctrine is designed to respect the beliefs of the ordinary consumer, courts applying the doctrine can draw only mixed support from a positive account that views consumer expectations as fundamentally tainted by undesirable market dynamics. After all, the strong susceptibility viewpoint implies an ability by manufacturers both to lower and to raise consumer expectations of product danger. Advocates of the consumer expectations test tend to assume that product manufacturers portray their wares as being more safe and more useful than they really are. As an empirical matter, they seem to be generally correct in that assumption. In some instances, however, manufacturer shaping of consumer safety expectations instead could be used to avoid liability for a dangerous product by creating or enhancing consumer per-

average woman, conditioned by talk in magazines and over the radio of vitamins, hormones, and God knows what, might take 'rejuvenescence' to mean that this is one of the modern miracles and is something which would actually cause her youth to be restored.” Charles of the Ritz Distris. Corp. v. FTC, 143 F.2d 676, 680 (2d Cir. 1944) (internal quotations omitted); see also Roger E. Schechter, The Death of the Gullible Consumer: Towards a More Sensible Definition of Deception at the FTC, 1989 U. Ill. L. Rev. 571, 574–75 (criticizing Ritz opinion).

225. See Hanson & Kysar, TBSIII, supra note 28, at 324–70. Indeed, for intuitively understood reasons, most product manufacturers tend not to emphasize the health and safety dangers of their wares at all. Even when a manufacturer's product offers a relative safety advantage over competing offerings, emphasizing such safety attributes raises the salience of product dangers in the minds of consumers, possibly leading to an overall reduction in demand for the product category. Thus, safety advertising tends only to occur with regard to products that consumers, for one reason or another, have come to appreciate as significantly and inherently dangerous (e.g., automobiles, cigarettes, pharmaceuticals). See id.
ceptions of product hazards.\textsuperscript{226} The conditions under which such manipulation would be advantageous to the manufacturer are limited, of course, yet they seem to include important product categories such as automobiles and cigarettes, in which generic product risks have become salient to consumers over time and in which manufacturers therefore face fewer disincentives to raising product dangers in their communications to consumers.\textsuperscript{227} Thus, to the extent that the consumer susceptibility vision is accurate, hinging products liability on consumer expectations could become a double-edged sword—a possibility that appears to be underappreciated by consumer advocates, plaintiffs' representatives, and others who have argued in favor of the consumer expectations test.

A second problem with the consumer susceptibility vision is that, however rhetorically powerful its proponents have been over the years, the viewpoint remains a distinctly minority position. In particular, groundbreaking articles by Professors Stigler\textsuperscript{228} and Nelson\textsuperscript{229} have helped to establish a view of advertising that preserves the economist's depiction of the consumer as a rational agent responding to pertinent product information, despite the critique of scholars like Galbraith. On this account, trademarks, product jingles, celebrity endorsements, and other seemingly vacuous trappings of modern marketing serve an important but previously underappreciated economic function: They reduce consumer search costs for certain categories of goods by providing an outward display of the manufacturer's confidence in the quality of its products. In other words, \textit{all} advertising conveys at least some information.\textsuperscript{230} Even an unadorned product logo emblazoned across a billboard.

\textsuperscript{226} Consider, for example, the following language from R.J. Reynolds Tobacco Company's website: "There is universal awareness of the conclusions of the Surgeon General, and public health and medical officials that smoking causes serious diseases, including lung cancer and heart disease. Individuals should rely on these conclusions when making any decision regarding smoking." R.J. Reynolds Tobacco Co., Tobacco Issues: Health Issues, at http://www.rjrt.com/TI/TIHealth-Issues.asp (last visited August 8, 2003) (on file with the \textit{Columbia Law Review}). The company portrays smoking health risks as both widely known and willingly accepted by tobacco users, thereby reducing the level of safety that consumers otherwise may have expected from the product. The rub, of course, is that public appreciation of the health hazards of smoking, to the extent that it does exist, only has come about after decades of attempts by R.J. Reynolds and other tobacco manufacturers to prevent, distort, and minimize such awareness. See Hanson & Kysar, TBSII, supra note 28, at 1467-1502 (reviewing evidence uncovered during tobacco litigation establishing tobacco companies' campaigns to lower consumers' estimates of tobacco risks); Hanson & Kysar, Joint Failure, supra note 25, at 1467-1502.

\textsuperscript{227} See supra note 225.


\textsuperscript{230} Cf. R. H. Coase, Advertising and Free Speech, 6 J. Legal Stud. 1, 9 (1977) ("Any advertisement which induces people to consume a product conveys information, since the act of consumption gives more information about the properties of a product or service than could be done by the advertisement itself."); Pitofsky, supra note 202, at 668 ("Advertising substitutes for search costs by consumers by providing in a convenient and
Columbia Law Review carries the implicit assurance that the manufacturer believes in its products, at least to the extent of its advertising outlays. Consequently, consumers who respond to the bells and whistles of seemingly uninformative advertising can be seen as rationally maximizing the chance that their purchase will be a sound one. Subsequent defenders of the consumer sovereignty model have picked up on this motif, arguing for the reconception of advertising itself as a "good" that individuals "consume." Television commercials on this account, no matter how frivolous, need not be deemed uninformative and unrelated to a consumer product. They are the product. A celebrated article by Professors Becker and Stigler, for instance, conceives of households as being engaged in the maximization of utility, not just through the consumption of goods, but through consumption in connection with certain productive capacities, such as household labor, that transform the goods in some manner, or cultural knowledge, that invest the goods with a particular meaning. On this account, advertising can be explained as the provision of knowledge—"whether real or fancied"—for use in connection with a consumer good to produce an output of utility. The Marlboro Man endures, therefore, not because consumers are psychologically vulnerable to rustic, romantic imagery, but because they rationally utilize the imagery to construct their own escapist fantasies.

These are strong claims. Moreover, because Becker and Stigler's model is essentially nonfalsifiable, sympathizers of the Galbraithian viewpoint are unlikely to find it persuasive. Whatever the merits of the model, however, in contemporary policy discussions, the burden of proof tends to rest squarely on those who seek to deny the wisdom of consumer choice, rather than to assert it. Because the consumer expectations usable form information necessary for consumers to make choices among available brands, and in the process facilitates the functioning of a market economy.

231. Justice Harlan provided an early expression of this reasoning in a 1967 concurrence that addressed the supposed anticompetitive effects of Procter & Gamble's advertising advantages in the market for household bleach. Noting that "[t]he advertiser's brand name may . . . be an assurance of quality," Harlan argued that "[i]t is not the [government's] function to decide which lawful elements of the 'product' offered the consumer should be considered useful and which should be considered the symptoms of industrial 'sickness.' It is the consumer who must make that election through the exercise of his purchasing power." FTC v. Procter & Gamble Co., 386 U.S. 568, 603–04 (1967) (Harlan, J., concurring). Put differently, consumer willingness to pay premiums for branded versions of products—even chemically identical products like bleach—is not irrational if one views the brand itself as part of the product, providing its own utility in the form of reduced search costs.


234. Id. at 84.

235. Recent products liability scholarship focusing on cognitive heuristics and biases research has provided a more sophisticated theoretical account of how and why
doctrine has been under siege by academic critics for nearly four decades, courts would be unwise to rest the doctrine on controversial assertions of wholesale consumer vulnerability. Such a vision of consumer susceptibility is likely to be viewed by many as inaccurate and, to the extent that the vision nevertheless is accurate, resting liability on the expectations of consumers would raise the risk of delegating product standard setting to manufacturers who are able to shape and influence consumer expectations accordingly.

C. Consumer as Socially Situated

The common ground of both the sovereignty and susceptibility viewpoints is their construction of consumers as primarily economic beings. Under both paradigms, consumption appears simply to be the fulfillment of human needs through a purely commercial transaction. From that common starting point, the sovereignty and susceptibility camps then diverge on the question of whether consumer decisionmaking is reliable, or whether instead manufacturers manipulate consumers into unwise purchases through their superior market position. In contrast, according to cultural studies theorists, consumption should be viewed as a messy communicative act that combines pleasure seeking with elements of self-definition and social expression. Those who view consumer goods merely as vehicles for satisfying individual, unspecified desires ignore the many ways in which consumer product markets are culturally inflected. Accordingly, theorists should assume an insatiable desire, not for objects, but for the meanings, implications, and values that objects import. On manufacturer manipulation of consumer risk perception occurs. See generally Hanson & Kysar, Joint Failure, supra note 28; Hanson & Kysar, TBSIII, supra note 28; Hanson & Kysar, TBSII, supra note 28; Hanson & Kysar, TBSI, supra note 28. Nevertheless, this research also concludes that a products liability regime of true strict or enterprise liability is necessary to combat the multifarious ways in which such manipulation actually can occur.


237. As Jean Baudrillard writes, "Consumer behavior, which appears to be focused and directed at the object and at pleasure, in fact responds to quite different objectives: the metaphoric or displaced expression of desire, and the production of a code of social values through the use of differentiating signs." Jean Baudrillard, Consumer Society, in Selected Writings 29, 46 (Mark Poster ed., 1988). James Twitchell expresses a similar sentiment with considerably less jargon:

What characterizes commercial culture is that [the mythological world], our utopian otherland, has been populated by new beneficent spirits, spirits magically residing not in nature, holy books, magical signs, or chants but in objects as mundane as automobile tires, rolled-up tobacco leaves, meat patties, green beans, and sugar water.


238. See Baudrillard, supra note 237, at 45 ("[I]f we acknowledge that a need is not a need for a particular object as much as it is a 'need' for difference (the desire for social... 

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this account, consumers appear neither purely sovereign nor purely susceptible, but rather permanently engaged in a dialectical conversation with product manufacturers, marketers, regulators, and others regarding the social significance of consuming activities.

According to sociologist Don Slater, this consumer culture, in which individuals consume not simply to satisfy basic needs, but to package an identity for consumption by others, arose out of necessity. Western modernity, which orients itself around core concepts of individuality, rationality, and market relations, is characterized also by the erosion of tradition and social rigidity. The previous three centuries have seen the decline of various sources of regulation of people's lifestyles, including religious prohibitions on excess, sumptuary laws, community norms, and philosophical conceptions of a "natural" social order. Similarly, the rise of capitalist relations has contributed to the decline of productive activities as a source for cultural meaning. One's identity is no longer bound up in the craft guild to which she belongs, for much of productive labor has become anonymous and devoid of distinction. As a consequence, "[m]odern man spends less and less of life in production, and more and more in the continuous production and creation of personal needs and of personal well-being." Individuals in contemporary consumer cultures accordingly define their values, aspirations, and identities by reference to the goods they consume, the leisure activities they undertake, and the locations to which they travel. In Jean Baudrillard's terms, "consumption is social labor."

The foregoing ideas have significant implications for the underlying assumptions of both the consumer sovereignty and the consumer susceptibility models. For instance, the models' emphasis on individual choice, whether conceived as responsible, autonomous decisionmaking or as harmful, induced error, seems misplaced from the consumer culture standpoint. Individuals exercise choice primarily in the sense that they select a pattern of consumption, a way of living, from among various socially constructed alternatives. As Baudrillard writes, "[c]hoices . . . are socially controlled, and reflect the cultural model from which they are produced. We neither produce nor consume just any product: the product must have some meaning in relation to a system of values."

Additionally, the notion that preferences are exogenous to markets is incoherent from the consumer culture viewpoint. Markets consist of social relations that unavoidably affect the disposition and development
of participants. Preferences are not exogenous to markets at the very least because marketers construct sophisticated lifestyle visions that, in part, define people’s desires. Indeed, advertising and media agents must remain aware of consumers’ tendency to mediate social meaning through product markets: “In an age of overwhelming consumer choices, [individuals] look to brand names and product myths as distinguishing lifestyle markers.” Again, these habits are not autonomous, spontaneous acts of free will on the part of individual consumers. Instead, they are the product of an ongoing dialogue between and among consumers and the multitude of manufacturers and other entities who have an interest in helping to shape the identities and aspirations signified by particular modes of consumption. Put pejoratively, whether the Pepsi Generation existed before advertising aimed at the Pepsi Generation is simply not a resolvable question.

In short, the socially situated consumer cannot be extricated from her formative environment, nor can her acts of consumption be reduced to the satisfaction of stable needs and desires. The consumer sovereignty model seeks to invest the consumer with heroic stature, embodying the modernist principles of liberty, rationality, and progress through her self-determined, calculated market choices, which, collectively with other consumers, spur technological innovation and social advancement. The consumer susceptibility model, on the other hand, seeks to invest the producer with an almost demonic stature, capable of fostering false needs and illegitimate preferences in order to unload the formless fruits of its production. Neither vision seems to admit the complexity of its subject. Even the sophisticated model of Becker and Stigler, which allows consumer desires to rest on such seemingly irrational bases as advertising images, refuses to permit inspection of how or why the desires emerge. Preferences have been expanded to include myths and magic, in addition to goods and services, but they remain emphatically exogenous to the regulatory calculus. From the cultural studies viewpoint, therefore, Becker and Stigler’s model incorporates the profound indeterminacy of

243. See Samuel Bowles, Endogenous Preferences: The Cultural Consequences of Markets and Other Economic Institutions, 36 J. Econ. Literature 75, 75 (1998) (“Markets and other economic institutions do more than allocate goods and services: they also influence the evolution of values, tastes, and personalities.”).
244. Kysar, Kids & Cul-de-Sacs, supra note 236, at 892.
246. This close relationship between consumption habits and identity representation is sometimes oddly evident in the way marketers describe their customers. An advertising executive for Mazda, for instance, explains the company’s increasing efforts to target minorities this way: “It’s not just because of [increases in minority populations], but more importantly, as we worked out our psychographic target, people who have that psychographic have skewed to Hispanics and Asians.” Ira Teinowitz, Counting Change, Advertising Age, May 14, 2001, at 16, 20. The executive seems almost to believe that one is first and foremost an automobile-consumer type. Racial identities are tried on only after the fact, and they sometimes “skew” one way or another in relation to the prior vehicular persona.
consumer culture only so far as necessary to cloak the model's own preposterous determinacy.

As Professor Ramsay notes, "[v]ery little of [the cultural studies] literature has influenced legal thinking about advertising in consumer markets, or legal theories as to the power of advertising over consumer taste and behaviour."247 Instead, judicial and legal academic depictions of consumers have tended to alternate between paradigms of sovereignty and susceptibility, ignoring the ways in which such analyses fail to provide a fully satisfactory explanation of consumer behavior and motivation. Among products liability scholars, Professor Shapo has provided the most notable exception to this pattern. His well-known 1974 article, for instance, engages in an extended analysis of the consumer's decision-making environment with particular attention to packaging, advertising, and other forms of product representation.248 He also seems quite receptive to the ideas that emerge from cultural studies accounts of consumer behavior, referring to products liability law as a "cultural mirror" that reflects the deep social and psychological content of our "inner selves."249 Consumer goods on Professor Shapo's account serve far deeper and more complicated purposes than simply the satisfaction of utilitarian desires.250 In light of such socially imbued aspects of product production, marketing, and consumption, Shapo has argued for nearly thirty years that products liability law must remain attentive to the "impact of modern methods of product portrayal."251


249. Shapo, The ALI Restatement Project, supra note 30, at 638; Shapo, The Next Act, supra note 111, at 771. Professor Shapo also acknowledges the dialectical process that cultural studies accounts describe as ultimately fashioning consumer identities. See Shapo, The ALI Restatement Project, supra note 30, at 664 ("The sources of [product] meaning include sales literature, media advertisements, and even the uses to which significant numbers of consumers put the product—the last being a point picked up by advertising in what becomes a continuing, and profitable, cycle.").

250. See Shapo, The ALI Restatement Project, supra note 30, at 664 ("Products come to the consumer with an image, and a meaning, attached to them."); Marshall S. Shapo, In the Looking Glass: What Torts Scholarship Can Teach Us About the American Experience, 89 NW. U. L. Rev. 1567, 1577 (1995) (describing products liability as "an especially faithful mirror of the tensions that arise from our search for the good through goods"); Shapo, The Next Act, supra note 111, at 762 (describing the concept of defect as "a proxy for judicial responses to consumer disappointment with products in a culture in which people significantly define themselves by their possessions").

251. Shapo, The Next Act, supra note 111, at 766–67; see also Shapo, Representational Theory, supra note 21, at 1370 ("Judgments of liability for consumer product disappointment should center initially and principally on the portrayal of the product which is made, caused to be made or permitted by the seller."); Shapo, The ALI Restatement Project, supra note 30, at 664 ("[I]t would be well for any Restatement of products liability to acknowledge the pervasiveness of product promotion in consumer decision making.").
Professor Shapo's work notwithstanding, however, there is good reason for the reluctance of products liability scholars to embrace the cultural studies account of consumer behavior. Although far more descriptively rich than competing accounts of consumer behavior, the cultural studies viewpoint remains immanently less tractable. How predictably or consistently, for instance, would a consumer expectations test operate using the loose, ephemeral guidance of cultural studies accounts of consumer behavior? At what temporal point would one attempt to identify consumer expectations, given that they are constantly in flux\textsuperscript{252} How would one separate the consumer's supposed safety expectations from more complex attitudes about identity and self? Do “extreme sports” aficionados deserve less protection given their espoused desire to live on the edge, or are their purchases designed to project an image rather than a reality of risk? Do organic food purchasers deserve more protection given their apparent willingness to pay a premium for perceived safety, or are their behaviors driven by still more complex social dynamics?

In the view of many theorists from the fields of sociology and cultural studies, consumers should be seen as neither incapable of resisting social influence—including the influence of the supposed “culture industry”\textsuperscript{253} of manufacturers and marketers—nor impervious to it. Rather, consumers and the market should be seen as joined in a constant dance of definition and redefinition, a formless cultural duet in which improvisation defies attribution.\textsuperscript{254} However accurate this depiction of consumer behavior may be in theory, it is precisely this type of indeterminacy that has led commentators to denounce the consumer expectations test as being unworkable in practice. In the long run, the legitimacy of any doctrine depends in no small part on the perceived coherence of its outcomes. By providing a standard so expansive in scope, so nuanced in detail, and so liberal in interpretation as to render predictions about future consumer behavior almost meaningless, the socially situated consumer entails an intolerable level of uncertainty for use in products liability.

IV. CONSUMER AS LAY SCIENTIST: A REINVIGORATED ROLE FOR CONSUMER EXPECTATIONS

Somewhere between theoretical parsimony and descriptive vitality lies a workable compromise. Increasingly, legal scholars seeking that

\textsuperscript{252} Cf. Miller, supra note 184, at 596 (“How can a consumer expectations test provide a reliable indication of a product's design soundness when those expectations change as consumers interact with the product?”).


\textsuperscript{254} As Professors Mensch and Freeman write, “taste cannot be wholly engineered, yet it also does not exist in splendid, ahistoric exogenism.” Elizabeth Mensch & Alan Freeman, Efficiency and Image: Advertising as an Antitrust Issue, 1990 Duke L.J. 321, 354.
compromise have focused on a vision of individual perception and decisionmaking that incorporates the empirical findings of cognitive and social psychologists, behavioral economists, and other careful observers of human behavior.255 As noted in the previous Part, economists traditionally have relied on a view of human behavior in which individuals are assumed to process available information in order to maximize utility over time. In contrast, researchers who study human judgment and decisionmaking have found that individuals frequently process information and make decisions in ways that depart from the expected-utility maximizer of textbook economic accounts. Moreover, one important feature of these departures from rational utility maximization is that they are consistent and predictable—that is, they are "orderly, although not always rational."256 As such, they offer the potential to significantly enhance the descriptiveness of the economic account of human behavior, while stopping short of the radical indeterminacy implied by the cultural studies account.

This Part argues that the psychological and behavioral law and economics literatures can provide a reinvigorated understanding of the role of consumer expectations in design defect litigation. As will be seen, the standard approach to risk-utility analysis in many respects presupposes a notion of risk that is more narrow and less morally inflected than the understanding typically held by lay persons. The consumer expectations doctrine, by contrast, has the potential to provide an important avenue for the expression of lay values associated with product risks that might otherwise be ignored within products liability law.257 Such an approach would help to give effect to the populist, pro-plaintiff aspirations of products liability law without entailing the same degree of vagueness that here-tofore has been associated with the consumer expectations doctrine. In that manner, the consumer expectations test might finally offer a substantive reality worthy of its rhetoric.


257. Cf. Shapo, Tort Law and Culture, supra note 16, at 220 (noting that the consumer expectations test reflects "a viewpoint that emphasizes the particulars of the mental life of specific individuals and the concreteness, or lack of concreteness, of their understanding of particular risks").
A. Expert and Lay Conceptions of Risk

A great deal of human judgment and decisionmaking research focuses on the manner in which individuals perceive and process information regarding risks. As it turns out, the notion of "risk" for most individuals is not a purely actuarial concept involving probabilistic estimates of harm. Rather, according to proponents of the "psychometric paradigm" view of risk perception, risk is a complex, textured assessment of numerous variables that surround a given environmental, health, or safety hazard. In addition to the likelihood and severity of a harm, individuals also appear to care about a variety of qualitative attributes, such as whether a risk is voluntarily confronted by the victim, whether its potential harm is equitably distributed among the population, whether it poses a particularly dreaded form of death or illness, whether it threatens future generations, and whether the perceived source of the risk is believed to be a trustworthy actor. Such factors do not appear within the basic model of cost-benefit analysis, which tends to abstract away from qualita-


The significance of a risk . . . is not fundamentally a quantitative matter, a matter of statistical probability, and magnitude measured quantitatively. Significance depends on both gravity and salience. Determining the gravity of a risk requires evaluative and qualitative judgments—judgments about how much we should fear a particular kind of harm or harms, how much a particular harm impairs the pursuit of a normal life, how bad it would be to live with that harm, and so on. Determining the salience of a risk requires not just an appraisal of the risk's numerical probability, but also an evaluation of how prominent the risk is in comparison to the other risks of an activity, how expected it is, how gratuitous it is, and so forth.


259. Professor Slovic has organized the various qualitative determinants of risk perception into two primary categories: dread, which includes such sensations as perceived lack of control, feelings of dread, and apparent catastrophic potential, and risk of the unknown, which includes perceptions that a risk is unobservable, unknown, new, or capable of producing negative effects long into the future. See Ellen Peters & Paul Slovic, The Role of Affect and Worldviews as Orienting Dispositions in the Perception and Acceptance of Nuclear Power, 26 J. Applied Soc. Psychol. 1427, 1428 (1996).
tive characteristics in order to provide a uniform basis for assessing a wide range of health and safety risks. Thus, as cognitive psychologist Paul Slovic has put it, lay individuals’ “basic conceptualization of risk is much richer than that of the experts and reflects legitimate concerns that are typically omitted from expert risk assessments.”

Some analysts have argued against legal or regulatory acknowledgment of these perceptual differences. Professors Nichols and Zeckhauser, for instance, recognize the standard “rationale . . . that the simultaneous death of 1,000 people in the same incident is somehow worse than the isolated deaths of 1,000 otherwise identical people in separate incidents,” but explain that they “are extremely skeptical of such views.” Such a conclusion reflects the impact of a methodological individualism in which death only matters to the dead. Risks and harms undeniably connote social meanings, however, some of which demand more attention than others, irrespective of whether purely numeric body counts reach similar results. Consider, for instance, a contrast between the tragic and the tragically mundane: 2,800 people lost their lives in the collapse of the World Trade Center on September 11, 2001. By approximately 7:30 p.m. that day, the same number of people were expected to die worldwide in traffic accidents. Although both figures may be cause for concern, failure to see a distinction between these two categories of harm for purposes of regulatory decisionmaking would be, as Professor Sunstein puts it, “genuinely obtuse.” It would fail to acknowledge the myriad ways in which “social amplification of risk” can result in enormous secondary emotional, physical, and economic costs,

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260. See Gillette & Krier, supra note 258, at 1071, 1072 (referring to expert evaluations of risk as “body counts” and noting that they are typically restricted to a “function of expected mortality or morbidity”); Slovic, Perception of Risk, supra note 258, at 226 (noting that “experts appear to see riskiness as synonymous with expected annual mortality”).

261. Slovic, Perception of Risk, supra note 258, at 231.


264. According to the World Health Organization, the death toll from traffic accidents in the year 2000 was 1,260,000. World Health Org., World Health Report 2001, Annex, tbl.2 at 148. Assuming (arbitrarily) an even distribution of such deaths throughout the hours of the year, the number of deaths from traffic accidents on September 11 would have reached the World Trade Center death toll after nineteen hours and twenty-eight minutes, around the time that members of the U.S. Congress gathered on the steps of the Capitol in Washington, D.C., to condemn the attacks.


266. Roger E. Kasperson et al., The Social Amplification of Risk, 8 Risk Analysis 177 (1988), reprinted in The Perception of Risk, supra note 258, at 232, 234. The authors cite the near disaster of Three Mile Island as a dramatic example of the fact that “factors other
separate and apart from the direct tolls that figure exclusively in Nichols and Zeckhauser's calculus.

A further set of findings from the risk perception literature examines the way in which individual risk perceptions are deeply intertwined with concerns of trust and participation. Stark differences in lay reactions to the risks associated with medical versus industrial uses of radiation and chemicals seem explicable primarily by reference to different levels of trust that the public invests in the respective managers of such risks. Research by Slovic and his colleagues further demonstrates that trust is both difficult to create and easy to destroy in risk settings. This fragility seems to be driven by a number of factors: Trust-destroying events are typically dramatic and well publicized, while trust-creating events are incremental and difficult to notice; negative events are weighted by individuals as more important than positive events; sources of negative news tend to be seen as more credible than sources of positive news; and distrust is readily perpetuated through belief ossification. On the other side of the balance, evidence suggests that perceived lay or citizen participation in the risk management process increases trust. Indeed, in one study, among forty-five hypothetical news events regarding a nuclear power plant, only one was judged by subjects to increase trust substantially: "An advisory board of local citizens and environmentalists is established to monitor the plant and is given legal authority to shut the plant down if they believe it to be unsafe." Thus, lurking behind risk perceptions may be strong feelings about the distribution of power and control in society, as well as assessments of the openness, accessibility, and responsibility of risk managers.

In light of findings such as those described in this subsection, divergences between lay and expert observations of risk should not be written off as the result of mere ignorance or error on the part of lay observ-

than injury, death and property damage can impose serious costs and social repercussions." Id. at 234.

268. Id. at 320-23.
271. As Professor Shapo has argued, one also may discern the influence of such considerations in modern tort law. See Shapo, Tort Law and Culture, supra note 16, at 293-95 (describing the role of social power in rhetoric and reasoning of tort decisions); Marshall S. Shapo, Changing Frontiers in Torts: Vistas for the 70's, 22 Stan. L. Rev. 330, 333 (1970) (describing growing concern of tort law with "the abuse of power—political, economic, intellectual, as well as physical"). Consider also the related argument of Professors Blair and Stout that corporate law should remain attentive to the importance of trust and trustworthiness as influences on behavior within firms. See Margaret M. Blair & Lynn A. Stout, Trust, Trustworthiness, and the Behavioral Foundations of Corporate Law, 149 U. Pa. L. Rev. 1735 (2001).
Instead, lay and expert approaches to risk reflect rival rationalities in which "[e]ach side, expert and public, has something valid to contribute"\textsuperscript{273} to decisions about the regulation of risk. Significantly, because expert assessments utilize thinner notions of risk and relevant detail, they often understate the desirability of avoiding or preventing the imposition of a risk. That is, expert assessments typically measure only the expected quantitative level of death or bodily harm from a risk, without considering the lessons of the psychometric paradigm or other findings from the risk perception literature.\textsuperscript{274} As the World Trade Center example demonstrates, however, qualitative aspects of danger matter tremendously to our shared vision of what risks signify and how strenuously they should be avoided.

B. \textit{Giving Content to Consumer Expectations}

In contrast to the picture that is emerging from cognitive psychology, the Reporters of the \textit{Third Restatement} argue that one does not evaluate a risk; rather, one "discovers" it.\textsuperscript{275} The notion of discovery suggests a conceptual scheme in which risk occupies an objective reality capable of being described without regard to human values. Accordingly, within products liability law, the risk-utility test is heralded as focusing on relatively objective factors, while the consumer expectations test is derided as capturing only the subjective, unpredictable impressions of jurors.\textsuperscript{276} It is precisely this determination to remain "objective," however, that prevents the risk-utility test from adequately grappling with the rich, contextual manner in which lay individuals conceive of risk. As the previous subsection describes, risk is in large part a constructed concept that depends critically on the observer's prior selection of relevant variables. Because product risk is assessed under the \textit{Third Restatement} only in relation to alternative product designs, the sphere of relevant variables becomes confined to expected harm, product functionality, and other manifest physical characteristics of the product and its proffered alternatives. In that manner, the risk-utility test closely resembles the type of risk assessment associated with expert decisionmaking.

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\textsuperscript{272} See Gillette & Krier, supra note 258, at 1075.

\textsuperscript{273} See Slovic, Perception of Risk, supra note 258, at 231.

\textsuperscript{274} See Gillette & Krier, supra note 258, at 1075 ("Given that risk means more to ordinary people than a mere body count, expert assessments of the high-technology hazards so prominent in the public risk debate will commonly be understated when viewed from the popular perspective . . . "). Some recent proponents of cost-benefit analysis, including most prominently Professor Sunstein, do advocate altering quantitative assessments in some fashion to account for well-recognized qualitative risk values. See infra text accompanying note 315.

\textsuperscript{275} See Henderson & Twerski, Europe, Japan, supra note 55, at 13-14 (positing that "[o]ne 'discovers' risks, [and] one 'evaluates' whether value-based rules render a product design defective").

\textsuperscript{276} See infra note 333 and accompanying text.
By contrast, consumer expectations are poised to reflect variables that are left out of expert decisionmaking. Just as lay reactions to risk depart from those of experts, consumer expectations of product safety can be expected to depart from the standards that would be derived under a risk-utility test. Importantly, many of these departures cannot easily be dismissed as irrationalities that should be ignored in favor of more narrow instrumentalist balancing. Rather, as the previous subsection argues, many aspects of consumer beliefs and behavior can be said to represent a rival rationality that is wider in scope and richer in detail than the stark logic of risk-utility analysis. Thus, contrary to both the Reporters' argument and the manner in which courts previously have employed the doctrine in practice, consumer expectations can serve as something more than a mere surrogate for risk-utility analysis to be used in obvious cases. Rather, consumer expectations can capture the many important ways in which lay attitudes toward risk differ from the dictates of strict risk-utility analysis. The risk perception literature therefore suggests a possible independent role for consumer expectations analysis in products liability.

Consider a concrete example. In a series of cases arising out of injuries and deaths caused by the Black Talon hollow-point bullet—which was allegedly designed with "razor sharp edges" so that it would "severely rip through and mutilate body parts of the individual shot by such bullets"—courts rather reflexively rejected design defect claims against the bullet manufacturer on the ground that such products "are designed to cause injuries and are thus not unfit for their intended purpose." Such reasoning resembles the expert mode of risk analysis, in which all deaths from guns are treated as equal, thereby eliminating any basis on which to distinguish the hollow-point bullet from other types of ammunition. Lay individuals, on the other hand, care a great deal about the manner in which a death occurs, particularly when it is accompanied by pain and suffering, terror, or some other dread-inducing characteristic. Accordingly, factfinders employing a newly sensitized consumer expectations test might reasonably conclude that the hollow-point bullet was in fact defectively designed.

277. Cf. Shapo, Search for Justice, supra note 197, at 119 (stating that the judgment whether a product is defective "is one that usually embodies a determination of whether a risk is socially acceptable" (emphasis omitted)).
281. This is speculation, of course. Much would depend on the particular category of "ordinary consumer" that a court chose to identify as being determinative of liability. A purchaser of conventional ammunition, for instance, might regard hollow-point bullets as unexpectedly and inappropriately dangerous, while the purchaser of hollow-point bullets...
Consider also a hypothetical manufacturer faced with a choice of two automobile air bag designs: Design A, which will save 3,000 lives over a given time period but induce the death of 100 others who would have survived in the absence of the device; and Design B, which also will save 3,000 lives while only costing the lives of 90 others. A "macro-balancing" risk-utility test clearly approves of either design. Equally as clear, a "micro-balancing" test favors Design B over Design A, assuming that any increased production costs associated with Design B yield a "reasonable" value per life saved. Suppose, though, that the 100 lives lost by Design A are divided equally among adult men and women, while the 90 lives lost by Design B consist primarily of women.282 From the more nuanced risk perspective of cognitive and social psychology, it is no longer clear that Design B is preferable to Design A, given its disparate gender impacts.

presumably would expect the product to perform precisely in the described manner. A separate possibility altogether would be to hinge liability on the expectations of an "ordinary bystander," given the special relevance of such a perspective in the case of product-caused harm to third parties. But see Ewen v. McLean Trucking Co., 706 P.2d 929, 935 (Or. 1985) (determining that state products liability statute precluded development of an ordinary bystander ("ordinary pedestrian") version of the consumer expectations test).

282. Although purely hypothetical, these facts are not entirely implausible. See Nat'l Highway Traffic Safety Admin., U.S. Dep't of Transp., Air Bags & On-Off Switches: Information for an Informed Decision, available at http://www.nhtsa.gov/airbags/brochure/ (last visited Aug. 11, 2003) (on file with the Columbia Law Review). According to the NHTSA brochure, as of November 1, 1997, air bags had saved approximately 2,620 lives but caused approximately 87 deaths, primarily among drivers who sat too close to the steering wheel. Id. Quite possibly, these drivers sat too close because their physical stature required it. For evidence that the public might be reluctant to countenance gender disparities in automobile safety contexts, consider the case of General Motors Corp. v. Fairisworth, in which a jury awarded $5.6 million in punitive damages to a female plaintiff who was severely injured as a passenger in a 1984 GMC Jimmy truck while the male driver walked away from the accident. 965 P.2d 1209 (Alaska 1998). The plaintiff had argued to the jury that General Motors "used only a 50th percentile male dummy in testing the [truck's] restraint system," and as a result the design "only protected individuals the size of an average man or larger." Id. at 1212–13. For further suggestive evidence along these lines, see Hartford Accident & Indem. Co. v. Ins. Comm'r, 442 A.2d 382, 386 (Pa. Commw. Ct. 1982) (upholding insurance regulator's refusal to permit automobile insurers to price premiums differently based on gender); Tetlock et al., The Psychology of the Unthinkable, supra note 167, at 854 (using the phrase "forbidden base rates" to describe factors such as race or ethnicity that could provide actuarial justifications for differential insurance premiums but that are treated as unacceptable bases for distinction by experimental subjects); Frank Ackerman & Lisa Heinzerling, Pricing the Priceless: Cost-Benefit Analysis of Environmental Protection, 150 U. Pa. L. Rev. 1553, 1575 (2002) (noting that air bags might save five lives for every one death caused, but the lives lost might consist primarily of children, something that many find "troubling or unacceptable"). Finally, as Sunstein has noted, the ordinary individual's reaction to threats posed by safety devices is far more complicated than a simple exercise in expected utility maximization. See Cass R. Sunstein, Hazardous Heuristics, 70 U. Chi. L. Rev. 751, 781 (2003) [hereinafter Sunstein, Hazardous Heuristics] ("People are especially averse to risks of death that come from products designed to promote safety, so much so that people have been found to prefer a greater chance of dying, as a result of accidents from a crash, to a significantly lower chance of dying in a crash as a result of a malfunctioning air bag.").
Indeed, there is strong reason to suppose that a majority of consumers would be willing to accept the increased risk of death associated with Design A in order to impose a more equitable distribution of risk.\textsuperscript{283} Again, a properly attuned consumer expectations standard for design defect may be capable of capturing important psychological variables such as these, which tend to be left out of the standard risk-utility approach.

Tobacco products provide a further example of how the two formulations of design defect may differ importantly in their application. Under the risk-utility test, for instance, plaintiffs pursuing a design defect claim against tobacco manufacturers face the challenge of proving the existence of a reasonable alternative design for an inherently deadly product. Although cigarette companies long have conducted marketing campaigns for "filtered," "light," "low-tar," "no-additive," and other types of cigarettes designed to provide an appearance of safety, the products in actuality have provided little or no safety benefit over other cigarette designs.\textsuperscript{284} Thus, under the \textit{Third Restatement}, unless a plaintiff were able to demonstrate that cigarettes in general constitute a manifestly unreasonable product under comment e to section 2, any products liability claim based on defective design would fail.

The shortcoming of this approach is that an enormous amount of arguably undesirable market conduct by tobacco manufacturers escapes attention altogether.\textsuperscript{285} As Professor Hanson and I have demonstrated, by using an arsenal of public relations and other informational control mechanisms—including (1) establishing an industry-controlled scientific committee to generate seemingly independent research, (2) producing

\textsuperscript{283} Cf. Jonathan Baron, Judgment Misguided: Intuition and Error in Public Decision Making 51–52 (1998) (describing study in which participants favored public funding of a diagnostic test that would screen all citizens, even though the test saved fewer lives than a more reliable alternative test that could only be given to half the population); Cass R. Sunstein, Cognition and Cost-Benefit Analysis, 29 J. Legal Stud. 1059, 1087 (2000) [hereinafter Sunstein, Cognition and Cost-Benefit Analysis] (noting that distributional concerns might prompt risk regulators to devote special attention to "the spread of diseases whose incidence is concentrated among women").

\textsuperscript{284} See Hanson & Kysar, TBSII, supra note 28, at 1473–79.

\textsuperscript{285} To be sure, such conduct could be analyzed as part of a claim of misrepresentation or breach of express warranty. These causes of action, however, are limited in their ability to police manufacturer manipulation because of stringent doctrinal elements such as the justifiable reliance requirement, the puffery defense, and the requirement that representations must be sufficiently specific and fact-based to be falsifiable. See Cullen Goretzke, Comment, The Resurgence of Caveat Emptor: Puffery Undermines the Pro-Consumer Trend in Wisconsin’s Misrepresentation Doctrine, 2003 Wis. L. Rev. 171, 172–75 (criticizing Wisconsin’s puffery doctrine for holding consumers to a standard of justifiable reliance based on misguided behavioral assumptions). By contrast, introducing evidence of manufacturer marketing practices in the context of the design defect claim allows judicial inspection of manufacturer representations simultaneously with an inspection of the object of those representations, the marketed product. In that manner, the court is able to assess the product as it actually is understood and used by consumers, who do not experience advertising misrepresentations and product harms as neatly circumscribed categories.
supposedly less harmful cigarettes that actually were known by their designers to provide little or no health advantages over regular cigarettes, (3) silencing critics through tactics such as employment discharge and spurious litigation, (4) suppressing internal medical research that often was more advanced and more damning than that of government and public health authorities, and (5) utilizing marketing and public relations techniques that capitalized on consumer cognitive biases to lower cigarette risk estimates—the tobacco industry perpetrated an unparalleled campaign of misinformation on the American public.\textsuperscript{286} Such conduct bears significantly on consumer expectations regarding the safety of tobacco use, yet under the Third Restatement's comparatively narrow risk-utility test, plaintiffs are unable to introduce evidence regarding tobacco manufacturer conduct unless it can be tied to a proposed alternative product design.

This distinction is significant in light of the apparent sophistication of tobacco companies' utilization of consumer risk perception dynamics in their marketing. As noted above, research suggests that perceptions of risk and benefit not only are inversely correlated, but also are driven substantially by prior affective impressions.\textsuperscript{287} Advertisements for R.J. Reynolds's Winston brand of cigarettes appear to have targeted, consciously or unconsciously, these very aspects of human cognition in a 1970s advertising slogan.\textsuperscript{288} By reminding consumers that "[t]here's a lot of good between 'Winston ... and should,'" the manufacturer not only emphasizes the importance of the utility or "good" provided by Winston cigarettes, but also simultaneously confounds the consumer's ability to consider independently the risks of smoking or the benefits of quitting (what the consumer "should" do). More generally, a vast number of tobacco advertisements can be seen as directed toward establishing some basic association between cigarettes and a positive affect, generally in a nondeliberative, nonanalytical manner. For instance, Lorillard's slogan, "Alive with Pleasure,"\textsuperscript{289} clearly carries a much different, and much more positive, affective tag than the word "hate," which was used above as an example of how affective processing functions.\textsuperscript{290} The importance of such an association to the product manufacturer consists not only in simultaneously influencing consumer perceptions of product benefits \textit{and} risks, but also in doing so through the consumer's affective processing system, rather

\textsuperscript{286} See Hanson & Kysar, TBSII, supra note 28, at 1467–1502.
\textsuperscript{287} See supra notes 171–181 and accompanying text.
\textsuperscript{288} Advertisement for Winston Cigarettes, There's a lot of good between "Winston . . . and should," Road & Track, Apr. 1974, at 65 (on file with the Columbia Law Review).
\textsuperscript{290} See supra note 171.
than through the analytical processing system that might be better adapted to considering the health and safety risks posed by smoking.\textsuperscript{291}

Advertisements used in the late 1990s by R.J. Reynolds for its Salem Menthol cigarettes and Brown & Williamson for its Kool Natural cigarettes raise similar concerns.\textsuperscript{292} Both ad campaigns were oriented around concepts of “nature” and “natural” product attributes. A print ad for Kool Natural Lights, for instance, mentioned the word “natural” a remarkable thirteen times in an otherwise brief advertisement.\textsuperscript{293} Such attempts to link cigarettes, which generally contain hundreds of artificial additives and ingredients,\textsuperscript{294} with the imagery of nature may play into the fact that people respond more favorably to risks that they perceive as arising from nature rather than from manmade sources.\textsuperscript{295} Thus, when R.J. Reynolds tells its audience bluntly, “Menthol from nature. Created by plants, not people,”\textsuperscript{296} the company may inspire consumers to view smoking hazards less seriously than they otherwise would.

Conventional risk assessments do not distinguish between hazards posed by natural activity and those posed by human activity. Thus, under any risk-utility test that conceives of risk in a conventionally narrow fashion, no reason would exist to inspect the “natural” advertisements and consider their impact on consumer risk perceptions. Through the consumer expectations test, on the other hand, courts could target specifically such divergences in understanding between expert and lay perceptions of risk.\textsuperscript{297} As the Wisconsin Supreme Court carefully emphasized in \textit{Green v. Smith & Nephew AHP, Inc.} (and in contrast to the many courts that implicitly conflate consumer expectations with risk-utility analysis), the consumer expectations test requires a jury to consider relevant factors from the perspective of the ordinary consumer, including those factors that also may be relevant under a risk-utility test.\textsuperscript{298} “Risk” under the consumer expectations test therefore can take on a more encompassing meaning than under the risk-utility test. Specifically, it can incorporate the numerous ways in which researchers of human behavior and percep-

\begin{footnotesize}
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\item Cited Loewenstein et al., supra note 178, at 277 (noting that lottery marketers “highlight the pleasure of anticipation associated with lottery purchases with slogans such as ‘buy a dream,’” rather than emphasizing probabilistic information).
\item The two examples in this paragraph are taken from Hanson & Kysar, Joint Failure, supra note 28, at 247.
\item Advertisement for Kool Natural Lights Cigarettes, Entertainment Weekly, Oct. 16, 1998, at 43 (on file with the \textit{Columbia Law Review}).
\item See Jon D. Hanson & Kyle D. Logue, The Costs of Cigarettes: The Economic Case for Ex Post Incentive-Based Regulation, 107 Yale L.J. 1163, 1348 n.769 (1998).
\item See Gillette & Krier, supra note 258, at 1073 (noting that “the public is known to be concerned about risks . . . that are manmade as opposed to natural”).
\item Advertisement for Salem Cigarettes, Menthol from nature, Stuff@Night Mag., July 6, 1999, at 25 (on file with the \textit{Columbia Law Review}).
\item See Twerski, From Risk-Utility to Consumer Expectations, supra note 21, at 897 (arguing that “properly understood,” the consumer expectations test is “a sophisticated and delicate tool that can focus attention on the impact of marketing on product safety”).
\item 629 N.W.2d 727, 740–41, 742 (Wis. 2001).
\end{enumerate}
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tion have discovered that lay individuals uniquely process and evaluate risk information.

Finally, consumers appear to care a great deal about the process that results in a particular product design, in addition to the end form that the design itself takes.\textsuperscript{299} The cognitive psychology literature on risk perception supports this view by noting that lay attitudes concerning the acceptability of risk depend critically on the perceived source of the risk and the decisionmaking process by which it is generated. Thus, consumer expectations regarding product safety may be driven heavily by the extent to which consumers trust the manufacturer of the product, including such important variables as whether the manufacturer incorporates and responds to safety decisionmaking input from lay citizens,\textsuperscript{300} whether consumers perceive meaningful choices in the relevant market,\textsuperscript{301} and whether the manufacturer's internal cost-benefit calculations too severely depart from public values concerning life and safety.\textsuperscript{302} As Professor Davis notes, "[t]he wisdom of choices made and the process by which they were made are ignored if the focus is on 'risks vs. utility' alone."\textsuperscript{303} Thus, a further advantage to retaining and reorienting the consumer expectations test is that it seems capable of capturing important societal values regarding the scope and nature of manufacturer decisionmaking processes that result in the imposition of health and safety risks.\textsuperscript{304}

299. See Hubbard, supra note 21, at 476 ("Humans have substantive expectations concerning particular products; in addition, they have systemic expectations concerning the economic systems that manufacture and distribute products and the governmental systems which regulate economic systems and determine liability for defective products."). To be sure, courts frequently talk of products liability as focusing exclusively on the challenged product rather than the conduct of its manufacturer. However, as commentators long have noted, such a distinction is conceptually problematic. See Dickerson, supra note 21, at 802 n.5 ("In a sense, even impugning the product impugns the defendant's conduct."). The findings of cognitive psychology regarding the role of trust and process in risk perception cast further doubt on the distinction.

300. See supra text accompanying notes 269–271.

301. Cf. Twerski, From Risk-Utility to Consumer Expectations, supra note 21, at 892 (arguing that courts in design defect cases should consider "the extent to which the market was competitive and provided real choices to consumers").

302. See, e.g., Gary T. Schwartz, The Myth of the Ford Pinto Case, 43 Rutgers L. Rev. 1013, 1014 (1991) (noting that public reaction to the Ford Pinto case demonstrates "an apparent mismatch between public opinion and the assumptions underlying the risk-benefit test for design liability").

303. Davis, supra note 53, at 1271; see also Aaron D. Twerski et al., Shifting Perspectives in Products Liability: From Quality to Process Standards, 55 N.Y.U. L. Rev. 347, 358–80 (1980) (arguing that courts should focus products liability inquiry on the in-house design review process that manufacturer undertook, considering whether the review process adequately took into account the interests of those who might have been injured by the product).

304. This seems especially noteworthy in light of cases such as Jarvis v. Ford Motor Co., 69 F. Supp. 2d 582, 586-87 (S.D.N.Y. 1999), aff'd in part, vacated in part, 283 F.3d 33 (2d Cir. 2002), that hold a manufacturer cannot be found to have engaged in negligent conduct with regard to designing a product if the product itself has been deemed nondefective according to governing products liability standards. See also Romero v. Int'l
As noted above, numerous commentators have decried the consumer expectations test for capturing only the vague impressions of "quixotic lay juries" rather than direct responses to narrowly formed inquiries. However, a reinvigorated understanding of consumer expectations, premised on the findings of the risk perception literature, can lead to a test that is no more subjective, and possibly less subjective, than the risk-utility test. After all, the risk-utility test quickly enmeshes factfinders in complex engineering and economic issues, while forcing them to conduct a balancing analysis that may well conflict fundamentally with their conception of moral reasoning. In contrast, jury members are particularly well equipped to contemplate and evaluate the rival rationality identified by psychologists and other risk perception researchers, given that they constitute the precise population from which the notion of a rival rationality has been derived.

To be sure, application of the consumer expectations doctrine must not consist of the type of largely unguided, formless judgment that commentators to date have associated with it. Rather, juries should be charged with the task of determining specifically, as a factual matter, what level of safety the ordinary consumer expects, taking into account the types of factors that cognitive psychologists and other observers of human

Harvester Co., 979 F.2d 1444, 1447, 1453–54 (10th Cir. 1992) (holding that jury's verdict that defendant had "failed to exercise reasonable care" irreconcilable with jury's verdict in favor of defendant on negligent design and strict liability claims); Witt v. Norfe, Inc., 725 F.2d 1277, 1280 (11th Cir. 1984) (regarding as "irreconcilably contradictory" jury findings for the defendant on a strict liability question and for the plaintiff on the negligence question); Lambert v. Gen. Motors, 79 Cal. Rptr. 2d 657, 660–61 (Ct. App. 1998) (stating that where alleged negligence of the defendant only involves the manner in which the product is designed, inconsistent verdicts cannot stand); Halvorson v. Am. Hoist & Derrick Co., 240 N.W.2d 303, 307 (Minn. 1976) ("If a product is not dangerous and defective in the absence of safety devices, it is not negligence to manufacture it that way."); Lecy v. Bayliner Marine Corp., 973 P.2d 1110, 1116–17 (Wash. Ct. App. 1999) (holding that jury's determination that a product was not unreasonably designed precludes a finding of negligent design). But see Sharp ex rel. Gordon v. Case Corp., 595 N.W.2d 380, 388 (Wis. 1999) (determining that jury finding that a product is not unreasonably dangerous does not preclude a jury finding of negligent design).

306. See supra text accompanying notes 58–60. The Reporters, for instance, express doubt about whether the psychological characteristics of consumers could form a coherent, identifiable pattern. See Henderson & Twerski, Achieving Consensus, supra note 12, at 882–83 (noting that the consumer expectations test attempts to capture "the more subjective perspective of personal (albeit somehow collective), psychological expectations"). Likewise, the drafters of the Model Uniform Product Liability Act rejected the consumer expectations test on the ground that the test "takes subjectivity to its most extreme end. Each trier of fact is likely to have a different understanding of abstract consumer expectations." Uniform Product Liability Act, 44 Fed. Reg. 62,714, 62,724 (Oct. 31, 1979).
307. See supra notes 166–170 and accompanying text.
308. Cf. Just What You'd Expect, supra note 84, at 2381 ("Although jurors generally are not engineers or product designers, they are consumers with an innate understanding of what consumers expect.").
judgment and decisionmaking have identified as pertinent to public understanding and beliefs about risk. Expert testimony therefore should be admissible for those aspects of a product's design, manufacture, or marketing that raise issues relating to lay risk perception. More specifically, to survive a summary judgment motion, plaintiffs must demonstrate the existence of a triable question of fact concerning the extent to which consumer risk perceptions and safety expectations of the product in question differ in legitimate and significant ways from the standards derived under risk-utility analysis. In this manner, despite the longstanding complaint of products liability scholars that consumer expectations fail to provide a coherent and workable basis for design defect liability, and despite the failure of courts generally to articulate such a basis, the doctrine will provide an important complement to the spare instrumentalist balancing of risk-utility analysis.

C. Do Lay Judgments Constitute a Rival Rationality?

In a recent review of an edited collection of Slovic's work, Professor Sunstein argues against the claim that the findings of the risk perception literature collectively constitute a rival rationality. Rather, in Sunstein's view, most of the distinctive features of lay risk perception identified by the psychometric paradigm can be recharacterized as artifacts of the experimental design, undesirable instances of factual or cognitive error, or simply repetitive glosses on the same underlying cognitive

309. See Phillips, supra note 138, at 1060–63 (arguing that expert evidence regarding consumer expectations should be admissible). A significant question then becomes whether plaintiffs should be required, rather than merely permitted, to present expert testimony in this manner. On one hand, requiring expert testimony would help to ensure that the reinvigorated consumer expectations standard truly does move beyond its past role as a vague, often indecipherable basis for liability. On the other hand, requiring expert testimony also would create an evidentiary burden similar in magnitude to the one presented by the reasonable alternative design standard that has attracted criticism from consumer expectations courts. Resolution of this tradeoff is better left to the courts, which ultimately must reckon with and bear the consequences of tradeoffs between access to and administrability of justice.


311. See Sunstein, The Laws of Fear, supra note 265, at 1147 ("How do we know that ordinary people think that Slovic's qualitative factors are so important? The answer is . . . that Slovic and his fellow experimenters expressly identified these factors, set them before experimental subjects, and asked their subjects to rate certain risks along these specific dimensions." (emphasis omitted)).

312. Sunstein, The Laws of Fear, supra note 265, at 1150–52. Sunstein's account here relies heavily on Margolis's argument in Dealing with Risk, supra note 23. The basic claim is that lay minds are not attuned to thinking in terms of opportunity costs—such costs are often "off-screen"—and that, once informed about the foregone benefits that will be caused by a safety decision, lay judgments of risk often come into line with those of experts. See id. at 75–92. For other arguments that lay-expert disagreements over risks are based
phenomenon, which is best understood as "some combination of the affect heuristic and a quick, intuitive, imperfectly informed assessment of the magnitude of the relevant hazards and accompanying benefits." To be sure, Sunstein notes, the reasoning behind the psychometric paradigm is "clearly correct" to the extent that it unearthed factors such as distributive equity that seem to have a strong identifiable influence on the public's attitudes toward risk and the desirability of regulation. In his view, however, these few robust findings are better conceived of as supplemental values that should be accommodated within the dominant expert mode of thinking about risk—cost-benefit analysis—rather than as constitutive of a coherent rival rationality.

This line of objection is highly significant for the design defect test debate in products liability. If Sunstein is correct that the risk perception literature has not made the case for a fully independent conception of lay rationality, then a possible response for products liability law to that literature simply would be to incorporate its most robust findings into the risk-utility test, rather than to mobilize consumer expectations analysis as an independent vehicle for capturing lay risk judgments. After all, the Third Restatement seems to allow ample scope for additional factors to be considered under the risk-utility test. Lay juries, as the entities generally making the final assessment of whether a product should be deemed "not reasonably safe" in light of an alternative design, presumably

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313. Sunstein, The Laws of Fear, supra note 265, at 1149; see also id. (arguing that Slovic's evidence might better support the hypothesis "that people's rankings of risks reflect, in significant part, the roles of affect and crude, rough-and-ready assessments of net benefits"); id. at 1152 (stating that lay-expert perceptual divergences are explicable "not only or mostly by reference to rival rationality, but also and more fundamentally by some combination of the availability and affect heuristics and a failure, on the part of ordinary people, to put all of the effects of risks on-screen"). But see David Holtgrave & Elke Weber, Dimensions of Risk Perception for Financial and Health-and-Safety Risks, 13 Risk Analysis 553 (1993) (finding evidence that qualitative risk dimensions have explanatory power for individuals' evaluations of risk even after controlling for probabilities and outcomes).


315. See Sunstein, Cognition and Cost-Benefit Analysis, supra note 283, at 1087–88. As an example of how such modified cost-benefit analysis might occur, Sunstein endorses the Environmental Protection Agency's recent sensitivity analysis of the merits of arsenic regulation, in which the agency used a 7% increase in monetized risk to reflect the involuntary and uncontrollable nature of the health risk posed by arsenic in drinking water. See Sunstein, The Laws of Fear, supra note 265, at 1144 n.106.

316. See Restatement (Third), supra note 7, § 2 cmt. f ("A broad range of factors may be considered in determining whether an alternative design is reasonable and whether its omission renders a product not reasonably safe."); see also Henderson & Twerski, Oregon, supra note 155, at 14 ("Consumer expectations and perceptions of product safety provide important data regarding the levels of risk that inhere in product use and whether, given that level of risk, design alternatives should have been adopted.").

317. See Restatement (Third), supra note 7, § 2(b).
would be at liberty to consider variables such as the distributive impact of a product risk, the level of openness or representativeness of the decision-making process that created the risk, and the degree of dread associated with the resulting form of death or injury.

Of course, lay juries only exercise this role if the plaintiff's case first survives a summary judgment motion that is evaluated by the judge. Significantly, a chief argument offered by the Reporters in favor of their doctrinal framework has been that judges evaluating the reasonable alternative design requirement on summary judgment will be more likely to give "due respect to the importance of the very technology that brought sophisticated products to the marketplace." Thus, one reason not to simply accommodate lay risk values through an expanded set of risk-utility factors, rather than directly through a consumer expectations test, is that the policy purposes lying behind the risk-utility test seem at odds with the lessons of the risk perception literature. If a primary goal of the reasonable alternative design requirement is to ensure that litigation outcomes respect "technology as the cornerstone of rational products litigation"—and if judges are likely to comply with that exhortation through their summary judgment rulings—then an entirely independent doctrinal vehicle may be necessary to respect the various values encompassed by nontechnocratic approaches to risk.

1. Critiques of the Rival Rationality Thesis. — On close inspection, moreover, Sunstein's skepticism about the rival rationality thesis turns out to be unpersuasive, or at least premature. For instance, in response to Sunstein's contention that lay risk perception seems to reduce to a general affect-driven phenomenon, one might plausibly contend that the psychometric paradigm research itself is an attempt to particularize the type of qualitative impressions that drive individuals' affective responses to risk. On this account, Sunstein's hypothesis that "[p]eople's riskiness


319. Id. at 688–89.

320. In addition, extremely difficult pragmatic questions arise once one determines that lay risk perceptions merely require incorporation into technical risk assessment, rather than some more direct and fundamental means of incorporating public input into health and safety decisionmaking. At what conversion rate, for instance, does one monetize the negative utility associated with the involuntariness of a risk? When revising its regulations for the permissible level of arsenic in drinking water, the Environmental Protection Agency used a 7% increase in monetized risk for the involuntary and uncontrollable nature of the risk in its cost-benefit sensitivity analysis. See supra note 315. In that manner, the beliefs and attitudes of lay citizens have been converted into a willingness-to-pay value for inclusion in the cost-benefit analysis, but direct judgment on the underlying decision remains an exercise of quantification rather than deliberation. Put differently, citizens are unable to express the strength of their lay values, except inasmuch as those values can be captured by experimental willingness-to-pay methodologies. Accordingly, the characteristics that guide lay judgments about risk are accommodated, but not in a manner that respects lay judgment.
judgments might be based on overall affect" would no longer stand in
direct tension with the research on psychometric characteristics of risk
perception. The latter simply would be a more detailed rendering of
"overall affect." The benefit of this view is that it provides a concrete,
well-documented starting point to respond to Sunstein's complaint that
"we . . . need more information about why people have one or another
affect toward nuclear power, pesticides, x-rays, and the like." It may
turn out that, in risk contexts, the somewhat amorphous concept of affect
is a function of precisely the type of perceived qualitative characteristics
that Slovic and his collaborators have been studying all along.

Perhaps in anticipation of such an argument, Sunstein also critiques
some of the individual qualitative characteristics that are said by cognitive
psychologists to play a strong role in lay risk perception. He argues, for
instance, that the apparent willingness of lay observers to tolerate greater
levels of risk from natural as opposed to artificial sources appears to be
based on "a belief in the benevolence of nature." If it exists, such a
belief would be factually erroneous, as reams of scientific data on natural
hazards can attest. Thus, from a regulatory perspective, one might feel
justified ignoring public attitudes about risk to the extent that they are
based on perceptions regarding the natural or artificial nature of the
risk's source. Sunstein's analysis, however, ignores other ways in which
the natural/artificial distinction appears to be premised on valid attitudes
regarding human culpability and governmental responsibility. As Pro-
fessor Sagoff explains, the public may demand greater regulatory re-
sponse to artificial risks, as opposed to natural risks of equivalent ex-
pected physical consequence, for a variety of legitimate reasons: gov-
ernments are especially charged with monitoring human activities;
only risks created by human action can threaten individual autonomy or
bodily integrity in a socially meaningful sense; and manmade harms carry
additional losses in the form of regret, indignity, guilt, and other rea-
tions that are not as prominently associated with natural
tragedies. Thus, contrary to Sunstein's claim, lay risk perception can be seen as con-
cerned with natural/artificial distinctions for rational, as opposed to fact-
ually erroneous, reasons.

Sunstein also attempts to destabilize the voluntariness/involuntary-
ness factor in the psychometric paradigm by noting that many risks com-
monly perceived to be "involuntary" nevertheless can be avoided through
individual action. For instance, consumers concerned about pesticides

322. Id. at 1144 (emphasis omitted).
323. Id. at 1129.
324. Sunstein does briefly acknowledge that lay attitudes might "be based on a moral
judgment that the risks associated with nature should not be a source of intense human
concern." Id. at 1129 n.39.
325. See Gillette & Krier, supra note 258, at 1077-78 (discussing unpublished
manuscript later published as Mark Sagoff, Technological Risk, in The Environment in
Question 194, 207 (David E. Cooper & Joy A. Palmer eds., 1992)).
can purchase only organic produce; families worried about ambient air pollution can move to a different, less polluted location.\textsuperscript{326} Thus, Sunstein argues, "\[w\]hen a risk seems 'involuntary,' it is usually because the people who face the risk do not know about it or because it is especially difficult or costly to avoid it."\textsuperscript{327} To the extent that this argument views voluntariness/involuntariness as better described by a sliding scale, rather than a binary opposition, it clearly is correct. To the extent that the argument denies the relevance of social agreement concerning harms that legitimately may be externalized—such that victims who fail to take defensive expenditures can be said to have "voluntarily" assumed a risk—it clearly is incorrect. By common agreement, homicide victims are not believed to assume the risk of murder for failing to bribe their attackers. Similarly, society may agree that minimum air quality standards, like freedom from intentionally inflicted death, are part of basic shared assumptions regarding permissible and impermissible behavior. Failure to "contract out" of environments that violate such assumptions therefore would not be seen to constitute a voluntary assumption of risk. Social agreements of this sort regarding the limits of risk imposition are expressed in positive law, but they also are expressed in beliefs about what constitutes voluntary and involuntary behavior.\textsuperscript{328} Sunstein’s argument seems to be directed more to changing the content of those beliefs than to denying their existence.

In a similar fashion, Professor Margolis has argued that identifying “trust” as a relevant qualitative characteristic for lay risk perception is unhelpful, given that “if one party (the public) does not believe what another is saying . . . it is tautological that A does not trust B.”\textsuperscript{329} Thus, for Margolis, evidence regarding the role of trust in risk perception simply demonstrates that lay observers often do not believe factual information provided to them regarding a risk, not that they have a richer conception of what risk means or signifies. It is important to be clear, however, about what and whom individuals are said to be trusting. One may disbelieve a source of factual information, in which case lay risk perceptions simply may be driven by a different set of acceptable data than expert perceptions. But one also may not trust the perceived source of a risk itself, in which case lay perceptions may reflect some judgment about the past reliability of the source, the openness of its deliberative processes, or its willingness to consider public viewpoints, among other factors.\textsuperscript{330} In other words, if lay observers reject safety assurances about chemical pesticides

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\textsuperscript{326} Sunstein, The Laws of Fear, supra note 265, at 1154.
\textsuperscript{327} Id.
\textsuperscript{328} See Gillette & Krier, supra note 258, at 1077 (“Behind the notion of voluntariness, then, there may lurk more fundamental concerns about autonomy and equality and power among individuals in the society, for it is the pre-existence of these that lets free choice be morally interesting.”).
\textsuperscript{330} See supra text accompanying notes 267–271.
\end{flushleft}
issued by the National Academy of Sciences because they do not trust that body as a source of risk information, then Margolis's objection may be well taken. If, however, lay attitudes are premised on a lack of trust in the source of chemical pesticides themselves—if chemical manufacturers are not perceived to be historically reliable or socially responsible actors—then lay reactions may be seen as voicing legitimate public concern over perceived characteristics of the manager of a risk, separate and apart from the hazard itself.

One suspects that debates similar to the foregoing could be conducted for each of the qualitative characteristics that researchers have identified as being potentially generative of lay risk perceptions. It seems premature, then, to conclude that lay attitudes do not collectively form a rival rationality. After all, Sunstein himself has advocated the incorporation into risk-utility analysis of no less than five distinct ways in which public risk beliefs differ legitimately and importantly from those of expert risk assessment. Moreover, the incorporation approach seems to assume that cognitive psychologists have thoroughly mapped lay risk perceptions, and that another five significant aspects of lay risk attitudes are not waiting to be discovered by researchers. Even after twenty-five years of groundbreaking research, however, scientists like Slovic are continuing to identify ways in which individual risk processing is richer, thicker, and more value-laden than the cost-benefit balancing of experts. In short, at this juncture, the rival rationality thesis appears to be at least as robust as its rivals.

2. Implications for Products Liability. — Among products liability scholars, the risk-utility test generally is seen as an “objective” means of assessing design defectiveness, while the consumer expectations test is said to reflect the “subjective” idiosyncrasies of individuals. As Slovic argues, however, the objective-subjective dichotomy in risk perception is quite unstable. Once one begins to define thoroughly the concept of “objective risk,” one encounters value judgments at nearly every stage of the analysis. What level of risk aversion should be incorporated into the assessment methodology? Should all deaths be counted equally, or should decisionmakers instead focus on years of expected life lost? Should all years of expected life be counted equally, or should regulators instead make some accounting of age, race, gender, income, disability, and other factors that might appear to vest some life-years with more

331. See Slovic, Perceived Risk, supra note 267, at 317.
333. See Henderson & Twerski, Achieving Consensus, supra note 12, at 881 ("The concept of consumer expectations carries with it inescapable psychological connotations that frustrate attempts to objectify the appropriate standard."); Montgomery & Owen, supra note 53, at 844 (describing design defect inquiry as “an objective evaluation of the true costs and benefits of the product as marketed in its particular condition” (emphasis omitted)).
“utility” than others? Should health and safety risks be monetized to allow easy comparison with benefits? If so, how should regulators value life and physical well-being? Should valuations be inferred from market behavior, or does such a methodology risk enshrining undesirable distributive elements of current market equilibriums within positive law? In light of the unavoidability of questions of this nature, Slovic concludes that “there is no such thing as ‘real risk’ or ‘objective risk.’” Instead, the definition and description of risk necessarily entails an exercise in social power, an act of inclusion and exclusion that carries enormous practical and rhetorical significance for ensuing debates about environmental, health, and safety threats.

In his recent review, Sunstein attempts to discredit Slovic’s point as being “largely semantic and unhelpful, even misleading.” Before doing so, however, Sunstein first admits that there exist “different ways to describe mortality risks and the normative judgments that accompany the choice,” and that expert estimates of the magnitude and consequences of a risk “often depend on educated guesses and normative commitments, not science.” It is difficult to see how these two concessions do not compel Slovic’s conclusion. Sunstein seems to conflate a “real” threat with an “objective” one. No one doubts that hazards are real in a phenomenological sense. Rather, the dispute concerns whether social agreement as to the magnitude and meaning of such risks is so widespread as to be deemed “objective.” The very existence of rigorous debate between such luminaries as Slovic and Sunstein suggests that objectivity remains a distant, if not impossible, goal.


335. Slovic, Trust, supra note 269, at 392.

336. See Paul Slovic, Introduction and Overview, in The Perception of Risk, supra note 258, at xxii, xxxvi (“Whoever controls the definition of risk controls the rational solution to the problem at hand.”). As Gillette and Krier note, once one acknowledges that expert-lay divergence in risk perception is not merely a matter of error on the part of nonexperts, “it unarguably follows that the choice of approach is an ethical and political one that technical experts have neither the knowledge nor the authority to dictate, because the issue transcends technocratic expertise.” Gillette & Krier, supra note 258, at 1085.


338. Id.

339. Id. at 1147.

340. See id. (arguing that inability to quantify a risk or to identify a single mode of representing it “does not establish that risks are not real or that they are not objective”).

341. Slovic and Sunstein seem to agree that value judgments are unavoidable in any decision regarding whether to regulate a risk. Their debate focuses instead on whether
It therefore seems premature to conclude that the current findings of risk perception researchers, let alone the findings that remain to be discovered, simply can be incorporated within expanded notions of "risk" and "utility." Equally, it seems premature to conclude that courts simply can accommodate pertinent features of lay risk judgment within the risk-utility test, as opposed to retaining the consumer expectations test as a means for directly accessing such judgments.\textsuperscript{342} To be sure, one must acknowledge Sunstein's argument that a significant portion of lay-expert risk disagreement stems from information failures, cognitive errors, interest group distortions, and other aspects of lay risk perception that are normatively undesirable.\textsuperscript{343} Within products liability law, therefore, courts should not rely solely on a consumer expectations test to determine design defectiveness. The expectations of consumers are most helpful in product design litigation when they capture lay values that do not appear in the comparatively narrow risk-utility test. Technical analysis of product risks and benefits remains necessary, however, to ensure that product manufacturers face appropriate safety incentives whenever consumer expectations, for whatever reason, are lower than the level of safety that a risk-utility test would deem reasonable.\textsuperscript{344}

The challenge for scholars of environmental, health, and safety regulation is to identify when lay-expert divergences represent valid expressions of public values, as opposed to cognitive errors or misperceptions.\textsuperscript{345} In the meantime, however, products liability law can

342. Cf. Shapo, The ALI Restatement Project, supra note 30, at 666 (arguing that incorporating consumer expectations as a factor within the risk-utility test is insufficient because "[a] lack of recognition of the importance of product portrayal and product image leads to a lack of appropriate emphasis on the expectations that consumers reasonably develop about products"); Twerski, From Risk-Utility to Consumer Expectations, supra note 21, at 901 (stating that incorporating consumer expectations into risk-utility analysis "blunts the sharp edge of the argument that manufacturers should not escape liability for failing to meet consumer expectations").

343. Even Slovic notes that "there is wisdom as well as error in public attitudes and perceptions," and that "[l]aypeople sometimes lack certain information about hazards." Slovic, Perception of Risk, supra note 258, at 231 (emphasis added).

344. See supra text accompanying notes 64–67 (detailing how consumer expectations test can work against plaintiffs when defendant liability might further the instrumental goals of products liability law).

345. See Sunstein, The Laws of Fear, supra note 265, at 1155 ("No one . . . has sorted out the extent to which these errors, or instead qualitative judgments, underlie the relevant disagreements. There remains a large empirical agenda here.").
accommodate both possibilities by employing the Barker twin-test formulation for design defectiveness. By allowing plaintiffs to establish design defectiveness based either on traditional risk-utility analysis or on a brand of consumer expectations analysis that is sensitive to the research regarding lay risk perceptions, courts can promote both maximization of utility and respect for qualitative nuances that might be missed in purely technical analysis of product attributes. Under the risk-utility test, product manufacturers will be held liable whenever an alternative design might cost-effectively have eliminated or reduced a threat of death or bodily injury, regardless of whether consumers expected less safety from the product. On the other hand, whenever risk-utility analysis would ignore significant areas of concern to consumers—such as the distributive impact of a product risk or its perceived involuntariness—the consumer expectations test will be available to give effect to such legitimate concerns. Employment of both risk-utility and consumer expectations tests in this manner reflects the sensible view that, as Professor Moran has noted more generally in regard to risk regulation, "[t]echnocratic and populist decision-making [should] become complementary ways of balancing distinctive values, rather than mutually exclusive, antagonistic perspectives on risk."

D. Limitations and Complications

Products liability commentators rightly have criticized the consumer expectations doctrine, despite its apparent staying power. The aim of this Article therefore has not been to defend the doctrine as it is currently conceived and applied, but rather to point the way toward a more theoretically defensible formulation of it, one that attempts both to respond to the doctrine’s critics and to carve out a substantively distinct role for it to play. Accordingly, the design defect test defined and discussed in this Article should be thought of as a work in progress, subject to debate and revision in the best spirit of the common law. Along those lines, this section briefly addresses an initial assortment of potential objections to, and limitations of, the reinvigorated consumer expectations test.

1. Causation. — One argument offered by the Reporters has been that, given the relative lack of focus on technological data in the consumer expectations test, design defect litigation under such a test runs the risk of becoming "the perfect plaintiff’s tort," drastically departing from traditional tort law by collapsing defectiveness and proximate causa-

346. See text accompanying notes 68–72. Significantly, the Reporters seem not to have considered the possibility that a Barker-style doctrinal formulation would be desirable, or even possible, for the Third Restatement. See Henderson & Twerski, Politics, supra note 97, at 672 (“From the outset it was clear that in formulating a rule for design defect we had to choose between some form of risk-utility test and a test based on the disappointment of consumer expectations.”).

347. Rachel F. Moran, Fear Unbound: A Reply to Professor Sunstein, 42 Washburn L.J. 1, 8 (2002).
tion into one largely unconstrained moment of intuition by the jury.\textsuperscript{348} Conversely, the Reporters contend that a chief benefit of the reasonable alternative design requirement is that it makes products liability litigation manageable and predictable by providing a peg on which to hang the causation analysis.\textsuperscript{349}

This proposition may be true, but it proves too much: A products regime in which defective design liability was eliminated altogether would make the causation analysis more manageable still, yet that hardly seems a decisive argument in favor of such a change. The Reporters' overriding concern—"constraining design-based liability"\textsuperscript{350}—is but one judicial goal that must be considered in constructing the products liability regime. Other relevant goals include enhancing the efficiency of consumer product markets by deterring unreasonable product designs and enabling the expression of public risk values by providing a forum for judicial assessment of dangerous products. The doctrine of proximate causation seeks to accommodate numerous goals of this nature by balancing the substantive desirability of liability with its procedural administrability.\textsuperscript{351}

Admittedly, in its present amorphous and ill-defined state, the consumer expectations test does little or nothing to tailor the proximate causation question, and therefore it can be said to provide too little attention to the importance of procedural administrability.\textsuperscript{352} Indeed, as the Reporters put it, the current consumer expectations test "totally eviscerates . . . proximate causation as a discrete issue in a defective design case."\textsuperscript{353} In the more refined sense proposed by this Article, however, the consumer expectations test would depend on the identification of specific aspects of lay risk perception that would in turn preserve the proximate causation issue as an independent, administrable doctrinal element.

Recall, for instance, the Black Talon hollow-point bullet example described above, in which it was suggested that juries operating under the psychologically-enriched consumer expectations standard might view the specially designed bullet as defective in light of its particularly destructive nature.\textsuperscript{354} Significantly, such a finding would not lead to an intractable

\textsuperscript{348} Henderson & Twerski, Intuition and Technology, supra note 318, at 678–79.

\textsuperscript{349} See id. at 661; see also James A. Henderson, Jr., Why Creative Judging Won't Save the Products Liability System, 11 Hofstra L. Rev. 845, 849 (1983) (noting that an "approach [based on reasonable alternative design] would replace the open-ended social-policy question presented by the general reasonableness standard with a series of relatively discrete, fact-oriented elements that more readily lend themselves to adjudication").

\textsuperscript{350} Henderson & Twerski, Intuition and Technology, supra note 318, at 661.

\textsuperscript{351} Cf. Hanson & Kysar, TBSIII, supra note 28, at 316–23 (offering a more extensive treatment of the Reporters' proximate causation point in the context of an argument in favor of an enterprise liability standard for products liability law).

\textsuperscript{352} See, e.g., Henderson & Twerski, Intuition and Technology, supra note 318, at 681 ("The consumer expectations test is nothing more than a veiled attempt at turning all of design defect law into an intuitive, quasi-res ipsa-like case where . . . defect and causation are merged.").

\textsuperscript{353} Id. at 678.

\textsuperscript{354} See supra text accompanying notes 278–281.
causation question because the class of litigants who could recover against the manufacturer would include only plaintiffs (or their representatives) who had experienced the aspect of the product that rendered it defective under the consumer expectations test—namely, the "incomparable destructive capacity of the bullets."\(^{355}\) That is, unless the plaintiff suffered the additional pain and mutilation that the hollow-point bullet is uniquely capable of inflicting—and that makes the product arguably defective under a consumer expectations standard—she would fail to establish proximate causation.

In short, just as risk-utility-based litigation renders causation manageable by asking whether the absence of the reasonable alternative design led to the plaintiff's harm, courts proceeding under the consumer expectations test can ensure administrability by asking whether the plaintiff's harm was of the kind envisioned when the factfinder deemed the product design inconsistent with lay risk values.

2. Mixed Signals. — Given this Article's recommendation to employ both the consumer expectations and risk-utility tests to establish design defectiveness, one also might object that a manufacturer attempting to comply with a finding of defectiveness under one test then could become whipsawed if its redesigned product failed to pass muster under the other test in subsequent litigation.\(^{356}\) For instance, in the air bag example described above, it was suggested that risk-utility analysis might impose liability on a manufacturer for selecting Design A, while the consumer expectations standard might impose liability for selecting Design B.\(^{357}\) When analyzing an analogous situation in which juries could find multiple product designs defective under a loosely defined consumer expectations standard, the Reporters argue that "a manufacturer cannot rationally respond to [such a situation], short of removing its product from the market."\(^{358}\) The apparent coerciveness of this conflicting judgments scenario might strike some readers as an inappropriately interventionist (or even paternalistic) position for courts to adopt.

Several possibilities other than market withdrawal exist for the manufacturer, however. For instance, the manufacturer might respond to the liability incentives of the consumer expectations test—missing in a pure risk-utility regime—by fashioning a new Design C that attempts to limit lives lost to ninety without disparate gender impacts. Or the manufac-


\(^{356}\) Cf. Dawson v. Chrysler Corp., 630 F.2d 950, 962 (3d Cir. 1980) (noting quandary faced by product manufacturers when "juries applying varying laws in different jurisdictions" might reach inconsistent design defect determinations); James A. Henderson, Jr. & Aaron D. Twerski, Products Liability, 10 Kan. J.L. & Pub. Pol'y 21, 23 (2000) ("The consumer expectation test allows conflicting answers to a question that ought to have, at least in terms of the ideology of the law, one decent and sensible answer.").

\(^{357}\) See supra text accompanying notes 282–283.

\(^{358}\) Henderson & Twerski, Politics, supra note 97, at 674.
turer might attempt to segregate its market, such that Design B is marketed to male drivers, while Design A is targeted to females.\textsuperscript{359} Finally, if either of those options proved infeasible, the manufacturer would not necessarily remove its product from the market, but rather might continue to produce Design B while simply internalizing liability costs imposed under the consumer expectations test. If that were the case, the defective design judgments levied against the manufacturer simply would stand as an expressive indication of society's discomfort with certain gendered side effects of its technological progress—and nothing more. That is, the judgments would serve as a judicial legitimation of lay risk values that neither compels manufacturer design standards nor constrains consumer choice.

In the related risk regulation context, Professor Moran has noted that the psychological nuances embodied in public fear “can signal a need for officials to engage in a dialogue with lay people about the boundaries between protective legislation and paternalistic overreaching.”\textsuperscript{360} Unlike the regulatory system, which generally must rely on ex ante prohibitions, however, a chief benefit of the products liability system is that it is less heavy-handed in its effect, relying instead on ex post, incentive-based forms of liability.\textsuperscript{361} Manufacturers faced with liability under the consumer expectations doctrine need not withdraw their products from the market, nor even alter their designs. The fear of “paternalistic overreaching” is accordingly diminished.

3. Warnings. — Relatedly, when addressing a manufacturer's conceivable responses to consumer expectations liability, the Reporters object that under a consumer expectations test, “[a]nything short of an elaborate explanation of countervailing risks [by the product manufacturer] in its advertisements would lead to liability.”\textsuperscript{362} One initial response to this complaint is that it is not immediately clear why “elaborate explanation” by manufacturers as to the harm posed by a product is undesirable. Arguably, such an outcome would lead to information overload, ultimately undercutting the force of other, more significant product hazard warnings.\textsuperscript{363} But if the manufacturer's objective is actually to affect the content of consumer expectations (and thereby alter case outcomes under the consumer expectations test), then the manufacturer will need to overcome such problems of information overload, along with all other cognitive complications associated with risk communication. The

\textsuperscript{359} See Hanson & Kysar, TBSII, supra note 28, at 1561–64 (discussing product manufacturers' ability to segment markets); Kysar, Kids & Cul-de-Sacs, supra note 236, at 887 (describing use of census data by product manufacturers and marketers to identify and construct consumer subcategories).

\textsuperscript{360} Moran, supra note 347, at 27.

\textsuperscript{361} Cf. Hanson & Kysar, TBSII, supra note 28, at 1555–58 (comparing regulatory and incentive-based systems in enterprise liability context).

\textsuperscript{362} Henderson & Twerski, Oregon, supra note 155, at 13.

product manufacturer, operating under the discipline of market forces and the consumer expectations test, seems the best-equipped party to undertake such a task.\textsuperscript{364}

Moreover, it is not clear that product manufacturers actually would engage in "elaborate explanation" of product risks as a result of the consumer expectations test, given that the amount of liability reduced thereby may not justify the expense of explanation. Consumers may not be aware of, and therefore may not expect, a product risk that is quite remote. In light of the remoteness of the risk, however, manufacturers might be better off simply paying tort judgments under the consumer expectations standard, rather than incurring the expense of an "elaborate explanation" or risking consumer overreaction to such an explanation.\textsuperscript{365}

The point again is that product manufacturers are well situated to undertake such a calculus. Decades of experience with sophisticated advertising and marketing practices have provided manufacturers with a keen understanding of consumer perception, behavior, and choice.\textsuperscript{366} If any party is capable of weighing the costs of consumer education against product risks, that party would seem to be the manufacturers and marketers of products. Likewise, if any party is capable of devising information campaigns that actually educate consumers and motivate risk-reducing behaviors, that party would again seem to be manufacturers operating under the incentives of a competitive marketplace and the newly invigorated consumer expectations test.

4. The Future of Consumer Expectations. — This latter point creates a final, and potentially quite serious, complication for the consumer expectations test, even in the more particularized form advocated by this Article. Any standard of manufacturer liability that hinges on the psychologi-

\textsuperscript{364} Cf. Davis, supra note 55, at 1270 ("If the [product] image is misunderstood and the public is confused about what product quality means, product manufacturers should be required to correct the image or to make a product that conforms with it."); Hanson & Kysar, TBSII, supra note 28, at 1558–65 (discussing market incentives driving manufacturers to warn in enterprise liability context). For instance, as noted supra text accompanying notes 284–296, product manufacturers and marketers long have demonstrated awareness that vivid, emotionally-driven advertising is more persuasive than purely cognitive, information-based advertising. The consumer expectations standard described in this Article therefore might prompt manufacturers to employ similar sensitivity and sophistication in constructing their product warnings. Cf. Laurie Hendrickx et al., Relative Importance of Scenario and Information and Frequency Information in the Judgment of Risk, 72 Acta Psychologica 41, 58–61 (1989) (finding that health and safety warnings are more effective when linked to emotionally-driven features such as people or anecdotes than when based on statistics).

\textsuperscript{365} For instance, in a recent essay, Professor Henderson notes that product manufacturers might rationally refuse to warn about trivial or miniscule risks, even after being subjected to failure-to-warn liability, by engaging in the following reasoning: "[A]lmost all reasonable consumers would go ahead and use or consume the product, so why warn and make things unpleasant?" Henderson, Echoes, supra note 27, at 989 n.160.

\textsuperscript{366} See Hanson & Kysar, TBSII, supra note 28, at 1428–1553.
cal expectations of consumers must address a problem of potential endogeneity; that is, to what extent are consumer expectations determined by product manufacturers or, indeed, by the liability system itself? The issue here is more narrowly focused than the general dialectical relationship between producers and consumers that attracts the attention of consumer culture theorists. Likewise, it sweeps less broadly than the consumer susceptibility viewpoint, which regards manufacturers as having nearly limitless influence over consumer beliefs and behaviors. The issue here instead is a concern that by acknowledging the ability of product manufacturers to address consumer risk perceptions in response to the liability incentives of tort law, one also must admit that the very risk values sought to be effectuated by the new consumer expectations doctrine are vulnerable to long-term influence and, possibly, erasure at the hands of product manufacturers.

More concretely, this Article has described two general categories of cases in which the reinvigorated consumer expectations doctrine might be particularly relevant: first, cases such as the "natural" tobacco advertisements, in which aspects of lay risk perception are specifically targeted or manipulated by product manufacturers in a manner likely to confound consumer decisionmaking; and, second, cases such as the Black Talon hollow-point bullet example, in which a product might be deemed unreasonable according to risk values that are held by ordinary consumers, even if more technical modes of analysis failed to recognize the objectionable features of the product. The problem raised is that the existence of the former category of cases undermines one's confidence that the latter category is fully stable and independent of risk-utility criteria. That is, faced with liability for disappointing consumer expectations, manufacturers might simply go to work chiseling away at the content of those expectations, employing their demonstrated ability to influence consumer risk perceptions in ways that encourage consumers to adopt purely technocratic ways of evaluating product harms. Ultimately, then, consumers might come to "expect" only the level of product safety that would be merited by a more narrow and technical risk-utility analysis, thereby rendering moot this Article's proposed use of consumer expectations doctrine to identify and effectuate important alternative lay risk beliefs.

367. See supra notes 292–296 and accompanying text.
368. See supra notes 278–281 and accompanying text.
369. Many scholars seemingly would welcome such a development. For instance, one notable psychologist has argued in favor of citizen education programs that would be designed to break down apparent lay resistance to consequentialist thinking of the kind employed in risk-utility analysis. See Baron, supra note 283, at 196–99. In a recent paper, Sunstein introduces the possibility that such popular aversion to cost-benefit analysis does not flow from a fully developed alternative form of moral reasoning such as deontology, but rather is the result of a "crude but quite tenacious moral heuristic" that substitutes for full-blown utilitarian analysis in light of individuals' limited cognitive capacities. Cass R. Sunstein, Moral Heuristics 8 (Univ. of Chicago, John M. Olin Law & Economics Working
Whatever its likelihood, such a prospect raises significant questions concerning commercial speech and its role in a deliberative democracy, as well as longstanding philosophical and jurisprudential struggles regarding the proper role of utilitarian and nonutilitarian approaches to moral reasoning. Rather than enter such formidable, unyielding debates, it is enough for present purposes simply to observe that the world of universal utilitarianism has not yet arrived. Until it does, products liability law need not further the erosion of citizen risk values by giving effect only to technical, sterilized expectations of safety. Rather, the common law of products liability should reflect the culture within which it operates, and it should do so by acknowledging lay risk values to the extent that, and so long as, they exist.

CONCLUSION

Despite describing the risk-utility test as relying on “objective” data, the Reporters of the Third Restatement fully acknowledge that value judgments are unavoidable in design defect litigation. Indeed, the Reporters argue that the risk-utility test is preferable to consumer expect-
tations analysis precisely because it "deals more comfortably with the necessity of making cross-personal comparisons regarding consumer preferences" in design defect litigation. In other words, risk-utility analysis is believed to be superior because it provides a single, uniform rubric for assessing product risks and benefits. The Reporters’ argument, though, favors outcome uniformity and predictability, not value neutrality. After all, one must exercise normative judgment in defining the parameters of the risk-utility rubric. Peel away the layers and one will find difficult value choices at the core of any risk-utility or cost-benefit analysis. In the Third Restatement, like the standard cost-benefit analysis of risk regulation, such choices appear to express a preference for the technical expertise of engineers over the populist beliefs of consumers.

To their credit, the Reporters are forthcoming about this preference. In their view, the risk-utility test for design defect litigation is necessary to ensure that judges give "due respect to the importance of the very technology that brought sophisticated products to the marketplace." That is, because it "re[lies] on technology rather than intuition," the risk-utility test "plays an important role in constraining design-based liability." Elsewhere, the Reporters argue against the consumer expectations test by noting that “[i]t is unrealistic to believe that one can surgically separate ordinary consumer expectations from the value preferences of flesh-and-blood human beings.” Why would one want to ignore the value preferences of flesh and blood human beings? Because, in the Reporters’ view, “technology [i]s the cornerstone of rational products litigation,” and lay juries operating under a consumer expectations standard cannot be trusted to understand the nature of technology or appreciate its social significance.

The difficulty with this line of argument is that it ignores the variety of ways in which consumer expectations capture important value judgments that are absent from risk-utility analysis. The Reporters complain that “[t]he consumer expectations test is nothing more than a veiled attempt at turning all of design defect law into an intuitive, quasi-res ipsa..."
But intuition is not necessarily the ill-formed monster that the Reporters take it to be. Rather, intuitions frequently can be seen to represent the fairly well-behaved reactions of lay citizens to dimensions of product risk that fail to appear in an expert's comparatively narrow cost-benefit analysis. Thus, if the consumer expectations test were tied to concrete, robust findings from psychologists such as Slovic, as this Article argues it should be, then the test would come to represent, not a moment of unbridled intuition on the part of juries, but an important vehicle for capturing lay judgments about technology, risk, and social meaning—judgments that seem difficult to capture within risk-utility approaches to the design defect question.

The Reporters speculate that "[p]erhaps the lure of [the consumer expectations] doctrine is that it awakens in all of us nostalgia for a world in which technology was not dominant."\textsuperscript{880} Their musing, however, presupposes the answer to one of the most significant questions facing products liability law today: whether and under what conditions the value structure implied by risk-utility analysis should trump the value structure inherent in the expectations of ordinary consumers. Is technology really "dominant" or, instead, do consumers retain, and should products liability laws reflect, a contrary set of attitudes and beliefs about the proper roles of technology and risk in an advanced society? This Article has argued that allowing design defect liability to rest on the frustrated expectations of consumers provides an avenue for judicial expression of legitimate public values that are not readily captured by risk-utility analysis. Ours is "a world of incredible technological sophistication,"\textsuperscript{881} as the Reporters note, but it is not yet a world of technocratic domination.

\textsuperscript{379} Henderson & Twerski, Intuition and Technology, supra note 318, at 681.
\textsuperscript{380} Id. at 689; cf. Mary L. Lyndon, Technology and the Law: Articulating a Women's Rights Perspective, 69 St. John's L. Rev. 191, 192 (1995) ("Two basic deterministic assumptions have profoundly influenced the law's response to technology: (1) that the pattern of technical process is preordained, and not the product of human choice; and (2) that society must adapt its arrangements in response to technological developments.").
\textsuperscript{381} Henderson & Twerski, Intuition and Technology, supra note 318, at 689.