

THE CASE AGAINST STRICT LIABILITY

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Professor Schwartz identifies the foundational assumptions of strict products liability law, and argues that these assumptions are either false, not supportive of banishing free contract, or not proven on the current evidence. After showing that, on the evidence now available, strict liability cannot be shown to be more efficient than free contract, Professor Schwartz argues that the choice among legal regimes should be made by a "representative consumer"—a person who knows what is knowable about markets and who knows that he lives in a liberal state, but who does not know what position he will occupy in that state. Professor Schwartz concludes by demonstrating that such a consumer would choose a free-contract regime complemented by required disclosure.

INTRODUCTION

ONLY plaintiffs' lawyers like today's products liability law. Its rules, however, rest on assumptions about the behavior of consumers and markets that the legal community generally accepts. The law will not change substantially as long as these assumptions are retained. This Article shows that the foundational assumptions are either false or not sustainable on the evidence. Such a showing is a necessary prelude to serious reform.

It will be helpful to specify the reach of the claim made here. In theory, society could resolve the product-defect problem by regulation; in fact, resource limitations prevent the state from regulating more than a small subset of products and product warnings. The question thus is what the "legal default" should be: in the absence of regulation, should the state delegate primary responsibility for product safety to courts or to the market? Courts now reject the market in favor of the law of strict products liability. To understand just how, realize that strict liability law has two facets. The first facet holds that firms cannot contract out of liability for product defects. Respecting this facet, the Uniform Commercial Code allocates to firms the risk that products will be defective or will fail to conform to the seller's representations,¹ but permits firms to contract out.² The first facet of strict liability holds that firms cannot contract out of liability for product defects. The second facet of strict liability regulates product quality. A firm is liable for both manufactur-

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1. U.C.C. §§ 2-313, 2-314 (1991).

2. U.C.C. §§ 2-316, 2-719 (1991).

ing defects and design defects. A product has a manufacturing defect when it is less well-made than the firm intended (for example, adulterated food). A firm is liable for a manufacturing defect regardless of the degree of care the firm took. A product has a design defect when its design generates risks in excess of benefits. This liability standard closely resembles a negligence test.

Strict liability implies a rejection of the market for two related reasons. First, the market allocates risks by contract. The first facet of strict liability bans contracting about the defective product risk in favor of imposing that risk on firms. Second, and consequently, courts and juries must decide just when a product is defective. The second facet of strict liability thus regulates product quality.

This Article argues that the courts' choice of the judicial system rather than the market as the legal default was a mistake. Thus, the analysis focuses primarily on the first aspect of strict liability, which prevents private parties from allocating the defect risk by contract. If this aspect falls, then the regulatory aspect of strict liability becomes less important; contracts commonly will define the quality standard that products must meet. This article first shows that all but one of the assumptions that support the first aspect of strict liability either are false or not supportive of banishing contract, and that the truth of the remaining assumption, that consumers misestimate accident risks, has not been established.

This Article then argues that the choice between the courts or the market should be made by a "representative consumer"—a person who knows what is knowable about markets and who knows that he lives in a liberal state but who does not know what position he will occupy in it, and who respects the values of freedom and equality. Such a person would prefer the market as the legal default for assigning risk because free contracting would increase his (and every other consumer's) expected payoff from product purchases more than strict liability would, given uncertainty about how possible consumer-risk misperceptions affect market performance. The values of freedom and equality have broad appeal in our society. Thus, while reasoning from them is not a purely deductive enterprise, they are the appropriate basis from which to attempt to infer answers to basic law-reform questions. The method of deriving the legal regime that governs product-related accidents from appropriately specified values of the representative consumer is similar to the method of deriving basic legal structures from the basic values that citizens in a liberal state do and should find attractive.³

3. See generally Rawls, *Justice as Fairness: Political not Metaphysical*, 14 *Phil. & Pub. Aff.* 223 (1985) (in a constitutional democracy, the public conception of justice should be political and not based on controversial religious and moral doctrines); Rawls, *The Ideal of an Overlapping Consensus*, 7 *Oxford J. of Legal Stud.* 1 (1987) ("What is needed is a regulative political conception of justice . . . that has the 'support of an overlapping consensus' of society."). Useful critiques of the methodology these articles advocate are Hampton, *The Moral Commitments of Liberalism*, (unpublished manuscript)

Part I of this Article identifies the basic assumptions of strict liability and shows how they support modern doctrine. Part II shows that (i) most of the key assumptions should be rejected; (ii) the evidence is insufficient to establish whether a particularly important assumption—that consumers misperceive accident risks—is true; and (iii) if consumers do misperceive accident risks, whether unregulated markets would produce too little or too much safety (as measured by consumer preferences) is unknowable a priori. Part III argues, using the method just described, that strict liability should be repealed on this record in favor of a regime of free contracting supplemented by required disclosure. Part IV concludes by briefly arguing that the Federal Government should play an important role in such a legal regime. There is a question whether an argument against strict products liability comes too late in the day; courts are unlikely to abandon the doctrine any time soon. This question reflects a misunderstanding of the scholarly enterprise. Legal institutions seldom survive in free societies when people reject their basic rationales. Recent legislative interventions in the tort field that confine or limit the effect of strict liability suggest that its rationale has become controversial.⁴

I. THE BASIC ASSUMPTIONS

A. *The Assumptions*

Modern products liability law rests on six basic assumptions, some of which relate to consumer preferences and others to sources of market failure. The basic assumptions are:

A₁: Shifting accident costs from consumers to firms increases utility. This assumption actually has two aspects:

A_{1.1}: Utility is increased if a concentrated loss is removed from one person and spread broadly over a universe of persons. This function is performed by insurance.

A_{1.2}: Consumers prefer to insure with product manufacturers rather than with market insurers.

A₂: Consumers either will not or cannot read sales contracts.

A₃: Firms have monopoly power, and will use this power to degrade the "quality" of consumer contracts. This assumption also has two aspects:

A_{3.1}: Some firms have structural monopoly power, and monopolists are unresponsive to consumer preferences.

(1991) (copy on file in *Fordham Law Review*) and Neal, *Justice as Fairness: Political or Metaphysical?*, 18 Pol. Theory 24 (1990).

4. The view that courts themselves may be having second thoughts is argued in Henderson, Jr. & Eisenberg, *The Quiet Revolution in Products Liability: An Empirical Study of Legal Change*, 37 UCLA L. Rev. 479 (1990). This article's goal is to help move sentiment from controversy to rejection. Legal scholars are supposed to pursue such goals.

A_{3,2}: In markets with many firms, consumers will not search for contracts that contain desirable risk allocations. Sellers behave as monopolists toward consumers who do not search—that is, who will not exit a firm that offers a bad deal to try another firm.

A₄: Consumers prefer manufacturers to reduce accident risks. This assumption follows from two subassumptions:

A_{4,1}: Consumers prefer more safety to less.

A_{4,2}: Manufacturers have a comparative advantage at producing safety.

A₅: Consumers misestimate the risks that products pose. This assumption has three aspects:

A_{5,1}: Firms do not supply information relevant to risk; consumers cannot make correct decisions on insufficient information.

A_{5,2}: Consumers would ignore or misprocess information that firms could be made to supply because consumers would suffer from information overload or would make systematic cognitive errors.

A_{5,3}: Consumer misestimates cause consumers to purchase too many unsafe products and too little insurance coverage against product-related harms, and also induce firms to underproduce safety.

A₆: Firms use market power, when they have it, to degrade product quality (in addition to contract quality).

B. *General Legal Implications*

Every justification of strict liability makes all or some of these assumptions. This subpart shows how the assumptions underlie the doctrine of strict products liability. Assumption A₁ holds that consumers prefer to insure with manufacturers against product risks. Assumption A₂ holds that consumers either will not or cannot read sales contracts. If consumers do not read, then firms will not sell insurance. To understand why, suppose first that consumers believe that firms are supplying insurance. Then the firms will price as if they were supplying insurance, but use disclaimers; the firms, that is, will charge for a service but not provide it. Only injured consumers will find out that they are uninsured, but by then it will be too late. On the other hand, assume that consumers believe that firms are not supplying insurance; then the firms will not supply it because consumers would refuse to pay. A firm could not offer insurance and attempt to persuade consumers to pay more because consumers would not read the contract and thus would not know insurance was the reason for the higher price. Hence, A₁ and A₂ imply that courts should require firms to supply insurance—to be strictly liable for consumer injuries.

Assumption A₃ holds that firms that have structural market power, or

market power in consequence of too little consumer search, will be unresponsive to consumer preferences. In particular, such firms will not supply consumers with contracts that consumers prefer. Assumption A₁ holds that consumers prefer insurance. Because structural market power and search-induced market power are pervasive, consumer contracts thus will require firms to supply too little insurance. Hence, A₁ and A₃ also imply that courts should impose the risk of product-related harms on firms. Under this view, strict liability is justifiable even if consumers read sales contracts. In addition, assumption A₄ holds that consumers prefer safety and that firms have a comparative advantage at supplying it, and A₆ holds that firms with market power will degrade product quality. Therefore, A₄ and A₆ also imply strict liability in the many situations in which firms have market power.

Assumption A₅ holds that consumers misestimate risks in such fashion as to cause firms to undersupply insurance and safety. This assumption is particularly powerful. To see why, suppose that assumptions A₂, A₃, and A₆ are false but that A₅ is true. Then consumers will read the contracts, search across firms for contracts, and get contracts they prefer. These contracts, however, will be "wrong." They will require too little insurance because consumers think products are safer than they actually are. Also, consumer risk misestimates will induce firms to produce too little safety. Strict liability is necessary to get the right contracts and the right safety level, as measured by the preferences of well-informed consumers. Thus A₁, A₄, and A₅ also imply strict liability.

C. *The Rules*

As stated above, the legal superstructure that the strict products liability assumptions support has two related facets. First, free contracting is prohibited. Second, a firm will be held liable regardless of the care that it used. This second aspect of strict liability applies *only* to manufacturing defects—defects caused by products that fail to meet the manufacturer's own quality standards.

Products liability law would be intellectually suspect, but largely invisible to the public, if it just held firms liable for manufacturing defects and barred contracting out.⁵ Firms could partly control their exposure under these rules by using product designs with low failure rates and by using careful inspection techniques. Residual liabilities also are insurable because the defect probability is predictable.⁶ The basic assumptions im-

5. In contrast, the Contract Law rules regulating liquidated damages clauses are intellectually suspect, but not the subject of newspaper editorials.

6. This is an overstatement. Although firms know accident probabilities, they have difficulty knowing accident costs because these vary widely across consumers. Nevertheless, insurance markets have supplied products liability coverage without difficulty when the bulk of the cases concerned manufacturing defects. The application of the law became uncertain when it sought to regulate more than manufacturing defects. Legal uncertainty creates insurability problems. See Winter, *The Liability Insurance Market*, 5 J. Econ. Persp. 115, 122-23 (1991).

ply, though, that products liability law cannot be confined to manufacturing defects. A product could meet its maker's standards but those standards may be too low. For example, a car with a flawless steel dashboard lacks a manufacturing defect, but there is a case for padding the dashboard. Assumptions A_2 - A_5 imply that consumers and firms cannot be permitted to agree on how safe a product design should be because free contracting is unworkable. Courts must regulate design safety when the market cannot.

Products designs are currently regulated under a negligence test: a design is defective if, in the opinion of a jury, the design creates risks in excess of benefits. The jury thus must behave as an ad hoc administrative agency: it reviews the manufacturer's design tradeoff between cost, amenities, and safety, and holds the manufacturer liable if jurors think the tradeoff should have been made differently. Much concern with current law arises because juries are thought to do less well in reviewing product designs than administrative agencies are thought to do.

Another feature of current law deserves mention. An implicit premise of early products liability law was that consumers cannot influence safety. This premise is false in two respects. First, consumers prefer safe products to dangerous products (see A_4); when informed consumers purchase on this preference, there will be fewer accidents. Second, consumers can use products in safe ways, if they know how. Current law attempts to create incentives for consumers to reduce accidents. When a product lacks a manufacturing defect but nevertheless is dangerous—a well-made but risky drug, for example—the maker is required to warn of the danger. An adequate warning is exculpatory, so consumers have an incentive to read it. Also, if a product can be used in either a safe or a less safe way, the maker is required to give instructions as to safe use. The failure to follow appropriate instructions can result in a finding that the consumer assumed the risk or was contributorily negligent. In either case, the consumer cannot recover.

Warning doctrine also creates institutional difficulties. The law evaluates warnings with a negligence test that has two facets. First, a firm is required to warn of dangers of which it was, or should have been, aware. Second, warnings and instructions must be adequate to influence the behavior of a reasonable person. Juries assess maker-awareness and warning-adequacy. The latter inquiry requires expertise (as Part IV shows), and agencies do use experts in the few areas where warning form and content are regulated. The former inquiry seems more appropriately made by juries, but even here expertise is helpful. Juries have been more willing than regulatory agencies to find that firms should have given stronger warnings against asbestos, yet agency findings have probably been closer to the truth.⁷ Assumption A_5 nevertheless implies that firms

7. See Schwartz, *Products Liability, Corporate Structure, and Bankruptcy: Toxic Substances and the Remote Risk Relationship*, 14 J. Legal Stud. 689, 695-703 (1985). The

should warn and instruct, and that juries should review the firms' warning choices. Thus, again, the basic assumptions imply that jurors should be ad hoc regulators.

II. WHICH ASSUMPTIONS HOLD?

A. Assumptions A_1 - A_4 and A_6

The first three assumptions are incorrect.⁸ A_1 can be partitioned in this way: consumers prefer to insure with product makers against (i) non-pecuniary harms such as pain and suffering and (ii) pecuniary harms such as lost earnings and medical expenses.

The first part of Assumption A_1 is incorrect because consumers prefer not to insure against nonpecuniary harm. Consumers want to equalize their marginal utility of income in all future states; hence, they will insure against events that would increase this marginal utility and bet against events that would reduce it. Consumers behave in this way because they want more income in states when their marginal utility for money is high and less in states when their marginal utility for money is low.

Injuries lower total utility but increase marginal utility insofar as the consumer's loss is "replaceable:" victims must pay doctors, make up for lost wages, and the like; a victim thus values each marginal dollar highly because it satisfies urgent needs. When the consumer's loss is not replaceable, however, marginal utility is either reduced or not affected. A wage loss is replaceable; the consumer uses an insurance payment to substitute for the lost wages. In contrast, a nonpecuniary loss, such as pain and suffering, is not replaceable; dollars cannot erase pain. An insurance payment thus would only permit the victim to purchase substitutes that would "make up for" having incurred pain, or that would take the place of activities that the victim could no longer engage in because of the accident. People apparently prefer not to buy insurance that would support spending binges to compensate for having suffered, and commonly have a lower marginal utility for replacement activities than they would have had for those activities were they uninjured. Thus, consumers would reject insurance against pain and suffering if given the opportunity to do so.⁹

The second part of Assumption A_1 also is dubious: consumers do

difficulties of a common-law warning system are explored in greater detail in Part IV below.

8. Readers should mentally add the phrase "on the evidence that now exists" to such statements.

9. An extended version of this argument, which also summarizes prior contributions, is in Schwartz, *Proposals for Products Liability Reform: A Theoretical Synthesis*, 97 Yale L. J. 353, 362-67 (1988). For recent data, see generally Viscusi & Evans, *Utility Functions that Depend on Health Status: Estimates and Economic Implications*, 80 Amer. Econ. Rev. 353 (1990) (evaluating individuals' utility functions for good health and ill health).

want insurance against events that would cause pecuniary harm (these raise the marginal utility of income), but insurance from product sellers seems a "poor buy" in contrast to market insurance. Product sellers cannot use deductibles or precise risk classifications and have little expertise evaluating claims; hence, a dollar spent buying insurance from a product seller purchases less coverage than a dollar spent with an insurance company.¹⁰ A_1 is incorrect because when consumers want insurance, they prefer market insurance.

Assumption A_2 , that consumers do not read sales contracts, is problematic. Product-defect risks are among the most important risks that consumers face. Therefore, consumers probably are familiar with the aspects of contracts that relate to product failure. There is evidence consistent with this view. Firms often compete on warranty coverage for high-priced items. They would be unlikely to do this if consumer purchase behavior were unaffected by the defect risk allocation—if, that is, consumers do not know what the contract says. Also, the standard consumer warranty is consistent with consumer knowledge of warranty terms. This warranty imposes on firms those risks that firms could more cheaply reduce, such as the risk of harm to, or a defect in, product motors, and imposes on consumers risks that consumers could more cheaply reduce, such as the risk of harm to external trim. Such contracts maximize consumer utility by reducing purchase cost. Efficient contracts are unlikely to be exacted by persons ignorant of contract content.¹¹ Finally, strict liability is too massive a response to the problem of complex contract language. The state can require firms to write simple language. Many states have done this with "plain meaning laws." Strict liability, therefore, cannot rest on the assumption that consumers do not know what their contracts contain.

Assumptions A_3 and A_6 also seem incorrect. Firms with structural market power can raise prices, degrade contract quality, or degrade product quality. The typical response is to raise prices. Some analysts show that when consumers have heterogeneous preferences for product quality, firms may discriminate against consumers who prefer low quality, by choosing contract clauses that effectively eliminate these persons from the market; that is, firms will offer higher quality products than some consumers want.¹² When firms have market power because of in-

10. See Priest, *The Current Insurance Crisis and Modern Tort Law*, 96 Yale L.J. 1521, 1539-50 (1987); Epstein, *Products Liability as an Insurance Market*, 14 J. Legal Stud. 645, 648-50 (1985).

11. Contracts between firms and consumers allocate the risks that products will not work or will cause consequential damage similarly to the way contracts between firms allocate these risks. Because firms are familiar with contracts, this similarity suggests that manufacturers do not exploit consumers' inability or unwillingness to read. A more extensive version of the argument in this paragraph appears in Chapter 7 of the ALI Report: *Enterprise Responsibility for Personal Injury* (1991) and in A. Schwartz & R. Scott, *Commercial Law: Principles and Policies* 204-07 (2d. ed. 1991).

12. Matthews & Moore, *Monopoly Provision of Quality and Warranties: An Exploration in the Theory of Multidimensional Screening*, 55 *Econometrica* 441 (1987).

sufficient consumer search, firms seldom will offer consumers worse contracts than the consumers prefer, and seem unlikely to degrade the quality of important product attributes.¹³ The common profit-maximizing response of monopolists, according to many theorists, is to exploit consumers only in the price dimension. No empirical evidence contradicts this theory. Thus, the case for strict liability cannot rest on A_3 and A_6 , which state that firms exploit market power to degrade contract or product quality.

Assumption A_4 is partly correct. Consumers do prefer more safety to less, other things (such as price) being equal. Manufacturers often, but not always, have a comparative advantage at producing safety. If consumers do misestimate risks, the case for strict liability thus can rest on A_4 and A_5 . Does A_5 hold?¹⁴

B. Do Consumers Misestimate Risks?

1. A Framework

Assumption A_5 , which states that consumers misestimate product risks, is relevant to product safety in two ways. The first concerns safety improvements: a consumer can underestimate, overestimate, or correctly estimate the effect of a safety improvement. When consumers underestimate the effect of a safety improvement, the firm cannot capture the improvement's full cost; consumers will resist paying when they underestimate the marginal gain. Consequently, "pessimism" respecting safety improvements creates insufficient incentives for firms to improve safety. Conversely, "optimism" respecting safety improvements creates excessive incentives.

The second effect of risk misestimates concerns the level of safety that obtains at a given time: a consumer can underestimate, overestimate, or correctly estimate the safety level. When consumers underestimate the level of danger, they will buy too many unsafe products. Also, such optimism respecting risk levels implies pessimism respecting safety improvements. Consumers will pay more to reduce a risk when they perceive the

13. Schwartz & Wilde, *Imperfect Information in Markets for Contract Terms: The Examples of Warranties and Security Interests*, 69 Virginia L. Rev. 1387, 1453 (1983) [hereinafter Schwartz & Wilde, *Imperfect Information*]; Schwartz & Wilde, *Product Quality and Imperfect Information*, 52 Rev. Econ. Stud. 251, 252 (1985). For an accessible model of the monopolist's choice see Schwartz, *Unconscionability and Imperfect Information: A Research Agenda*, 1991 Canadian Bus. L.J. 437, 454-55.

14. Because consumers have a comparative advantage at reducing some accident risks, strict liability should be combined with a contributory negligence defense. The defense would create an incentive for consumers to use products safely. The law actually combines strict liability with comparative negligence. This is sensible in the case of design defects but incoherent in the case of manufacturing defects. Respecting these, the comparative negligence doctrine directs juries to compare degrees of fault, but the product regulation aspect of strict liability holds the firm liable without an inquiry into fault; hence, juries cannot know what to compare.

risk level is high than they will pay when they perceive that it is low.¹⁵ Hence, when consumers underestimate the risk level, they also will underpay for safety improvements. To the contrary, when consumers are pessimists respecting risk levels—they think products are excessively dangerous—not only will consumers purchase too many unsafe products, they may also overpay for safety improvements. The case for strict liability thus would be strongest were consumers to be optimists respecting risk levels (because consumers would purchase too many unsafe products) and pessimists respecting safety improvements (because firms would have insufficient incentives to improve those products).

There is more evidence about some aspects of A_5 than others. Consumers may misestimate risks when they lack information ($A_{5,1}$). No specific studies establish that consumers have or lack sufficient information to make optimal decisions respecting product risks. Evidence exists, however, that consumers search for information about the attributes of expensive, dangerous, and infrequently purchased products, and that markets respond by supplying this information. Consumers search when buying these products because the size of a risk correlates roughly with purchase cost (cars are more dangerous and more expensive than shoes); the larger the risk, the greater the payoff to consumers from evaluating it correctly.¹⁶ Experience probably is a good teacher respecting frequently purchased items.¹⁷ Thus, any consumer-risk misestimates probably are

15. This result follows from the diminishing marginal utility of money theory, which implies that consumers will pay more to reduce risks when their income is low than when it is high. For further explanations, see Schwartz, *supra* note 9, at 408-09; Calfee & Rubin, *Some Implications of Damage Payments for Nonpecuniary Losses*, J. Legal Studies 1992 (forthcoming) (file on copy in *Fordham Law Review*).

16. Relevant evidence through 1987 is summarized in Schwartz, *supra* note 9, at 378-80, and in Schwartz & Wilde, *Imperfect Information*, *supra* note 13, at 1432-34. A more recent article states:

When consumers perceive risk in purchasing a product, marked changes occur in their behavior. They seek out information, become brand-loyal, stick to well-known brands, and take other steps to minimize product failure. . . . Certain properties of products such as technological complexity, high price and newness as well as consumer-related factors such as inexperience with the product and importance attached to the purchase lead consumers to perceive risk.

Folkes, *The Availability Heuristic and Perceived Risk*, 15 J. Cons. Res. 13, 13 (1988). Evidence that perceived risk increases search is in Srinivasan & Ratchford, *An Empirical Test of a Model of External Search for Automobiles*, 18 J. Cons. Res. 233 (1991). Also, "attribute redundancy" is common. For example, a consumer who knows that a car is heavy also knows that the car probably is more crashworthy than lighter cars. Thus, consumers may need to know less safety related information than is often supposed. Attribute redundancy is discussed in Johnson & Katrichis, *The Existence and Perception of Redundancy in Consumer Information Environments*, 11 J. Cons. Policy 131 (1988). Finally, the result that consumers search more for expensive items implies that firms should supply more information respecting product risks for these items. Recent evidence that supports this prediction is in Laband, *An Objective Measure of Search Versus Experience Goods*, 29 Econ. Inquiry 497, 505 (1991) ("Producer supply of quality assurance signals [that is, advertising of warranties and guarantees] is significantly greater for durables than nondurables.").

17. This claim probably is overstated as applied to frequently purchased products

the result of cognitive error, not a lack of information on which to base a decision.¹⁸

2. Analysis and Data

A more precise statement of the possibilities respecting the accuracy of A_5 is helpful. In the matrices below, the letter P indicates that a consumer is pessimistic (for example, she thinks that products are more dangerous than they actually are); the letter O indicates that the consumer is optimistic (for example, she overestimates the effect of a safety improvement); the letter C indicates that the consumer's perception is correct. Consumer perceptions respecting safety improvements are in the rows (and reported first); consumer perceptions respecting risk levels are in the columns. Thus, the O,P cell asserts that consumers overestimate the effect of safety improvements but underestimate the current degree of safety that products present.

		Risk Level		
Safety Improvement		O,O	O,P	O,C
		P,O	P,P	P,C
		C,O	C,P	C,C

The weight of evidence shows that consumers do not underestimate risk levels. Initially, consumers overestimate the risks of low probability events (a product accident is a low probability event) when these risks are salient.¹⁹ More generally, there is considerable evidence that consumers overreact to negative information about products. This occurs because negative information is more vivid—that is, more easily summoned to mind.²⁰ Studies also show that consumers correctly estimate some risk

that malfunction dangerously a very small percent of the time. Cans under pressure may be an example.

18. Some researchers believe that markets now provide more information than consumers can process. The results of laboratory experiments are mixed respecting whether consumers "overload" when given considerable data. The author's view that "overload" is mythic, together with supporting data, is in Grether, Schwartz & Wilde, *The Irrelevance of Information Overload: An Analysis of Search and Disclosure*, 59 S. Cal. L. Rev. 277, 294-99 (1986). A general review of research respecting consumers' cognitive behavior, showing that recent work extends but does not substantially revise prior conclusions, is Cohen & Chakravarti, *Consumer Psychology*, 41 Ann. Rev. Psych. 243 (1990).

19. The evidence is summarized in W. Kip Viscusi, *Reforming Products Liability* 135 (1991) and in the ALI Report, *supra* note 11, at 223-29. Consumers assign a zero probability to risks of which they are unaware, but apparently do know that products can cause harm.

20. See Schwartz, *supra* note 9, at 380-81; see generally Folkes, *supra* note 16 (four studies showing that consumers remember instances of product failure more than instances of product success). Researchers have used the consumer's penchant for focusing on vivid information to devise improved product warnings. See Moorman, *The Effects of Stimulus and Consumer Characteristics on the Utilization of Nutrition Information*, 17 J. Consumer Res. 362, 363-64 (1990) (warnings that stressed "negative consequences" produced better purchase decisions); Kelley, Gaidis & Reingen, *The Use of Vivid Stimuli to Enhance Comprehension of the Content of Product Warning Messages*, 23 J. Consumer

levels.²¹ All of this evidence suggests that consumers are pessimists respecting risk levels (if they are anything systematic). The apparent penchant of consumers to put too much weight on evidence that is vivid and too little weight on statistical data most strongly supports this conclusion. That a product has been associated with accidents is a more vivid fact than the product's statistically good safety record. Because both evidence and theory imply that consumers are not optimists respecting risk levels, the first column of the matrix should be eliminated (all cells that have O as the second letter).

The anchoring phenomenon suggests that consumers could underestimate the effect of safety improvements. Consumers "anchor" when they give too little weight to evidence that contradicts a theory or view that they hold. Hence, if consumers think that a product is "just this dangerous," they may undervalue evidence that the improved version is materially safer. On the other hand, consumers may be pessimistic about risk levels, which implies that consumers will overpay for safety improvements.²² It is difficult to know whether anchoring (and perhaps a general skepticism about seller efforts to improve safety) is more significant than the effect of pessimism respecting risk levels. To make the best case for strict liability, assume that the anchoring effect is at least as important as the overpayment effect.²³ Then, the view that consumers are optimists respecting the effect of product improvements must be rejected. The first row therefore can be eliminated (all cells that have O as the first letter). This leaves four apparently plausible possibilities:

	Risk Level	
Safety	P,P	P,C
Improvement	C,P	C,C

Aff. 243, 259 (1989) (warning symbols helped people better to remember warning messages).

21. Schwartz, *supra* note 9, at 379.

22. Whether consumers over- or underestimate the effect of safety improvements, the perception of important safety improvements increases the likelihood that consumers will purchase. See McCarthy, *Consumer Demand for Vehicle Safety: An Empirical Study*, 28 Econ. Inquiry 530, 541 (1990) (that a car scores higher on crash worthiness strongly determines purchase decisions). Also, consumers exhibit "ordinal competence" when using products; that is, drivers of light cars use seat belts more than drivers of heavy cars and motorcyclists who travel more use helmets more than those who ride less often. See generally Blomquist, *Motorist Use of Safety Equipment: Expected Benefits or Risk Incompetence*, 4 J. Risk & Uncertainty 135 (1991). Thus, casual claims that consumers are uninterested in safety should be rejected.

23. Frequent users of a product tend to pay less attention to warnings and perceive less danger associated with product hazards. This "familiarity effect" will not necessarily strengthen the anchoring effect. A product improvement could restore salience to the safety risk, causing consumers to pay attention. For a general discussion of these issues, see deTurck & Goldhaber, *Effectiveness of Product Warning Labels: Effects of Consumers' Information Processing Objectives*, 23 J. Consumer Aff. 111 (1989).

(i) P,P: Consumers are pessimists respecting improvements and risk levels. The former "improvement effect" error creates an insufficient incentive for firms to improve products; the latter "risk level effect" error causes consumers to buy too few products (because they overestimate the danger). Thus, consumer errors offset (to some extent).

(ii) C,P: Consumers correctly estimate the effect of safety improvements but overestimate the risk level, so too few relatively safe products are purchased.

(iii) P,C: Consumers underestimate the effect of safety improvements but correctly estimate the risk level, so firms have an insufficient incentive to produce safe products²⁴.

(iv) C,C: Consumer estimates are correct, so the level of safety is optimal.

Only the first and fourth cells appear stable. If consumers are pessimists respecting the current risk level, but correctly perceive the effect of improvements, then over time consumer pessimism respecting the level will vanish. Therefore, the C,P cell should approach the C,C cell.²⁵ If consumers know the current risk level, but underestimate improvements in it, then over time consumers will become pessimistic respecting the level itself. To see why, realize that consumer pessimism respecting safety improvements does not imply the absence of improvements. Firms will make any improvement whose cost is below the consumers' (incorrectly low) willingness to pay. Suppose then that consumers accurately believe the current probability of a defect to be 10%, a firm lowers the probability to 7% but consumers think the probability has been reduced only to 9%. Then consumers will have become pessimists respecting the risk level; they have come to believe that the defect probability is higher than it actually is. Hence, the P,C cell should collapse into the P,P cell.²⁶

24. Certain situations that this cell describes have been analyzed, though in different terms. Commentators claim that when consumers know the average risk level that a product poses but not the risk level of a particular firm's product, firms have an insufficient incentive to produce safety. See, e.g., Shavell, *Strict Liability Versus Negligence*, 9 J. Legal Stud. 1, 1 (1980). When firm X improves its product, consumers will average the improvement over all products, including the unimproved ones. Consequently, consumers may believe that the generic "product" has not been made materially safer. If so, demand for firm X's product could increase by too little to justify incurring the cost of the safety improvement. This actually is a concrete example of the third cell, where consumers underestimate the effect of safety improvements. When a firm can distinguish its improved version from the others, the C,C cell describes reality: if consumers know the average risk level as well as individual firm efforts to reduce risk, the market will behave optimally.

25. Firms have an incentive to dispel pessimism respecting the risk level because it dampens demand. To the extent that firms are successful, the process the text describes will be accelerated.

26. This result should be qualified slightly. If (i) firms have made all improvements whose cost is lower than the consumers' willingness to pay; (ii) the state of the art respecting safety does not improve; (iii) consumers come to learn the true risk level over time; and (iv) consumers are pessimists in general respecting improvements, then the P,C cell will be restored. That all of these conditions will be met at one time seems unlikely.

The C,C cell is stable because it reflects a competitive equilibrium: firms are producing the amount of safety that informed consumers want to buy, and consequently no market actor has an incentive to alter her behavior.

To summarize, unregulated markets either will produce the optimal level of safety (the C,C cell), or they will not (the P,P cell). In the latter circumstance, each product will be less safe than it should be but fewer products will be bought than should be. Whether total accident costs are too low or too high in general is unknowable a priori. The direct evidence fails to distinguish between the relevant possibilities. If the P,P cell describes the common case, no evidence exists to show whether the improvement effect or the risk-level effect generally is the more important—that is, whether total accident costs in the United States are too high (because the improvement effect is stronger) or too low (because the risk-level effect is stronger). This analysis does not provide a conclusive case for rejecting the assumption that consumers misperceive risks. On the other hand, A₅ seems a weak foundation on which to rest the law of strict products liability. What should be done?

III. THE APPROPRIATE PUBLIC RESPONSE

A. *Analyzing the Case For Strict Liability*

A strong majority believe that strict liability is desirable. These analysts assume that consumers make systematic errors respecting product risks and that markets respond by underproducing safety. Strict liability induces firms to make safer products. More safety is desirable for two reasons. First, safety is efficient, both because price reflects cost more accurately and because accidents create externalities. When a person has a serious injury or dies, her family and others suffer; sometimes, she or they must be rescued by the state. Producers do not take these costs into account, and therefore overproduce dangerousness. Second, and independent of efficiency, compensation can be insufficient. Perhaps no amount of money can adequately compensate a person for being horribly burned over three fourths of his body. Hence, the state should reduce the likelihood and severity of accidents. This latter reason has a neo-Kantian flavor: the state would not adequately respect persons were it to permit a state of affairs to exist—the unregulated market—that would create an excessive number of awful (and hard-to-compensate) invasions of personal integrity. Therefore, a strict liability regime is justifiable.

These arguments are problematic. First, whether consumers do systematically misperceive risks is unknown. Second, the view that consumer misperceptions (if these exist) necessarily would induce unregulated markets to produce too little safety is wrong. The aggregate effect of misperceptions actually is indeterminate because the errors that

When they are, the market is statically efficient (price reflects cost) but dynamically inefficient (firms have an insufficient incentive to do safety research).

consumers are most likely to make have offsetting safety effects. As a consequence, particular markets would respond differently to consumer mistakes. For example, suppose that consumers are pessimists respecting both the risk-level and safety improvements, and that it is difficult to make a particular product safer. Medical drugs may illustrate this case. Then, that consumers would underestimate the effect of innovations that make the product safer is relatively unimportant because firms could make few such innovations. Rather, the consumer's belief that the product is more dangerous than it actually is would dominate: consumers in an unregulated market would buy too few products (and in the case of drugs there would be too much unrelieved suffering). Thus, whether there would be too few or too many accidents without strict liability (were the P,P cell to describe many cases) is context-dependent. If there would be too few, then strict liability would worsen the consumer's lot because it would further dampen demand for beneficial products.²⁷

In short, there is substantial uncertainty respecting whether consumers do misperceive risks and what the effect of likely misperceptions are. Thus, the appropriate question is what legal regime the state should adopt given uncertainty about the relevant facts. Strict liability advocates do not ask this question because they assume that they know the facts.

The case for strict liability is questionable on two other grounds. First, the neoKantian argument for strict liability set out above is dramatic but poorly developed. A respect for the autonomy of persons implies that invasions of physical integrity are unjustified unless there is consent. It was argued above that consumers prefer not to insure against nonpecuniary harm and would prefer to purchase insurance against pecuniary harm on the market rather than from firms.²⁸ These claims imply that a consumer who purchased in an unregulated legal regime would have consented to bear the risk of the harm she later incurred; she would have the product she wanted under the contract she wanted. One may respond that such a consumer is misinformed about risk. But then the neoKantian case for strict liability turns on the accuracy and effect of the assumption that consumers misperceive risks. As asked above, what should the state do when substantial uncertainty about A_3 exists?²⁹

27. In the example above, the product (a drug) would yield costs in excess of benefits in an unregulated regime, and the product could not be made very much safer. Strict liability is particularly questionable in this case because of its demand-reducing effect. Reducing the number of transactions that have positive expected utility makes consumers worse off in the aggregate.

28. *See supra* Sec. II(A)

29. There also is no distributional case for strict liability, if a distributional case means shifting wealth from richer to poorer people. Firms that are strictly liable raise prices so consumers as a group are no better off. Consumers could only be better off were strict liability efficient; then the firms' price increases would be below the cost of the risks that consumers would otherwise bear. Were preferences for safety and insurance to vary materially across consumers, however, strict liability would have a distributional impact. Whether that impact would be consistent with prevailing distributional rationales seems

The second ground on which to object to strict liability is that the efficiency case for it is weak even if consumers are uninformed. Initially, strict liability creates one information problem in the service of solving another. The new problem is that firms are required to compensate all consumer losses, but cannot estimate those losses, including nonpecuniary losses, with any degree of precision. As a consequence, strict liability probably does not induce the optimal provision of safety. This claim is strengthened when another implication of holding firms liable for nonpecuniary losses is pursued. Product prices in today's legal regime incorporate premiums that reflect the expected value of full ex post compensation, not the consumers' *ex ante* willingness to pay for safety or his willingness to insure against harm. These prices thus are "incorrect" from both safety and insurance viewpoints; they are higher than they should be. The result is excessively to dampen demand for products that could cause harm.³⁰ Whatever underproduction of safety is caused in consequence of consumer risk misperceptions is partly offset (or perhaps fully overcome) by the effect of imposing liability for nonpecuniary harm on firms.³¹

To summarize, the case for letting the market regulate product safety seems weak because consumers may be uninformed about product risks. The case for letting courts regulate product safety—the case for the first aspect of strict liability—also seems weak because consumers may be in-

difficult to know. For a further discussion, see Craswell, *Passing on the Costs of Legal Rules: Efficiency and Distribution in Buyer-Seller Relationships*, 43 *Stan. L. Rev.* 361 (1991).

30. This effect of strict liability for nonpecuniary losses is most clearly described in Calfee & Rubin, *supra* note 15. See also Schwartz, *supra* note 9, at 408-11 (criticizing strict liability for nonpecuniary harm and suggesting an alternative, imposing tort fines on firms that produce unsafe products, to strict liability).

31. A recent argument against this conclusion is that consumers often purchase first-party insurance policies that do not distinguish among types of harm-causing activities. The consumer's insurance payments thus do not increase when she purchases dangerous products. Consumers therefore would purchase too many such products were strict liability not to internalize accident costs. See Hanson & Logue, *The First Party Insurance Externality: An Economic Justification for Enterprise Liability*, 76 *Cornell L. Rev.* 129, 146-54 (1990). The empirical significance of this risk-externalization effect is unclear. It seems unimportant for products or consumer activities that could cause substantial losses for three reasons: (a) Today, first-party insurers experience rate dangerous activities and often terminate consumers who incur large losses, see Schwartz, *The Ethics and Economics of Tort Liability Insurance*, 75 *Cornell L. Rev.* 313, 320 (1990) ("there are major elements of responsiveness [to risk] in many insurance arrangements"). In these cases, consumers pay for increasing risk; (b) Insurance companies now often exercise their right of subrogation to sue companies whose products cause large losses; when this right is routinely exercised, product prices reflect expected accident costs; and (c) consumers can reduce their exposure to risk and thus the amount of first party insurance they demand by eschewing dangerous activities (a consumer who decides not to fly small planes has less need for disability insurance). Thus, consumers who purchase dangerous items do incur a loss, the additional insurance they must buy. This loss in effect reinserts accident costs in product prices. Were the law to abandon strict liability, these three market responses would be accentuated. Therefore, the "first-party insurance externality" is a coherent, but probably not a strong, argument in favor of strict liability.

formed about product risks. Also, the effect of consumer misperceptions is hard to assess. Scholars for decades have attempted to make a "first order choice" between strict liability and the market. To make a first order choice requires the resolution of uncertainty about the true state of affairs. For example, a first order case for strict liability would establish the existence and effect of imperfect information and then show why strict liability is the appropriate public response. Debate has been inconclusive in considerable part because the true state of affairs has been very hard to discover. Part III.B below attempts a second order approach. It asks what legal regime is preferable given uncertainty about the true state of affairs.

B. *A Second Order Case for the Market*

1. A Methodological Introduction

Political philosophy recently has attempted to develop a "neutral liberalism." The fundamental claim that this form of liberalism makes is that society's basic institutional structure should be derived from values that all citizens would reasonably hold or would find it unreasonable to reject.³² The most important such values are said to be freedom, equality, and tolerance. There is an unresolved tension in neutral liberalism. The basic institutional structure could be neutral as among citizens just because every person happens to hold and rank highly the central values from which the structure is derived. This way of putting the view is troublesome because it makes the social fabric contingent on what people now believe is just; the constitution should shift with the winds of intellectual fashion. Also, few values are acceptable to everyone. A person whose religious views justify a theocracy cannot be persuaded to support religious tolerance on the ground that many people do; those people, he will think, are misguided. Liberalism could avoid these difficulties by claiming that people should hold the values of freedom, equality, and tolerance because these values are objectively correct. Kantians and utilitarians do so argue, but not everyone accepts these moral philosophies. Thus, a liberalism that claimed that its central values were correct would no longer be neutral as between every conception of the state's appropriate structure that citizens may hold.³³

Participants in this unresolved debate agree that the state's ordinary business can be the product of shifting consensus and compromise. They recognize the great difficulty of achieving unanimity on concrete issues of

32. The most prominent exponent of the first formulation of the view is Rawls. See authorities cited *supra* note 3. The most prominent exponent of the second formulation is Scanlon. See Scanlon, *Contractualism and Utilitarianism*, in *Utilitarianism and Beyond* 117 (1982).

33. This tension in liberal neutrality is clearly exposed in Neal, *supra* note 3, at 36-38. See also Raz, *Facing Diversity: The Case of Epistemic Abstinence*, 19 Phil. & Pub. Aff. 3, 15 (1990) (arguing that Rawls' consensus-based ideas must be expanded to include neutral values of justice and truth).

political choice because information is hard to get and because the strength with which values are held influences the assessment of inevitably inconclusive evidence. Unanimity is essential only for matters of fundamental importance, such as society's basic institutional structure. Coercion against dissenters cannot be justified respecting this matter by the need to get on with it.

There is a level of choice that is intermediate between the constitution and the concrete legal rule. This level is illustrated by the choice considered here; that is, what legal regime should regulate a broad area such as product safety? This choice should be made in as neutral a fashion as possible, which is to say that it should be derived from the values that today are most broadly held in our society. The gain from this procedure is that the legal regime so chosen would engender the least dissent, and so would be the most stable and the easiest to administer. It also is no objection to this method that the choice of legal regime could shift with shifts in intellectual fashion. In a democracy, current law is supposed to reflect current values *given* the basic structure that is in place.

The method of neutral choice works by asking what legal regime a representative person would prefer assuming her commitment to the central values of freedom, equality, and tolerance.³⁴ To ensure neutrality, the chooser cannot have an immediate stake in the outcome. This requirement can be met in two ways: the choosing person is assumed not to know how the legal regime could affect him because he could be any (actual) one; or the choosing person should self-consciously consider the issue from all affected points of view. These differences seem more semantic than real. The policy analyst also should specify the (idealized) choosing person's attitude toward risk (the person faces uncertainty because he does not know who he will be). When choosing legal regimes within an ongoing polity rather than choosing the polity's basic institutional structure, it would be erroneous to assume that the chooser is excessively risk averse. This is because advanced societies have in place nontrivial social-safety nets.

2. The Argument

These methodological considerations imply that society's choice whether the market or the judicial system should govern the area of product defects should be considered from the viewpoint of a representative product purchaser. The commitment to freedom implies that consumers' choices should determine the legal regime; the commitment to

34. This method of moral analysis is an example of the possibility of a liberalism that does not require foundationalism; the source of the values from which conclusions are inferred "lies in the group practices which generate the beliefs and provide the criteria of their validity." Thigpen & Downing, *Liberal and Communitarian Approaches to Justification*, *The Rev. of Pol.* 533, 545 (1989). An interesting criticism of this methodology is Brudney, *Hypothetical Consent and Moral Force*, 10 *L. & Phil.* 235 (1991), but the author appears to conflate consent to bear a risk with consent to bear a sunk cost.

equality implies that the specified chooser's view should prevail if he is relevantly like everyone else (for then his choice would not systematically disadvantage any class of persons); and the commitment to tolerance seems to provide no objection to letting the majority rule on the level of political choice now at issue. The policy question is whether such a representative consumer would prefer contracts or courts. A representative consumer knows: (a) that he will make many purchases over the course of his life, but not which ones; (b) that he may be rich, middle-class, or poor; (c) that he is "ordinarily" risk averse given his income level,³⁵ and (d) that he is as uncertain about the existence and extent of consumer risk misperceptions as the analysis above shows he should be.

Such a person would choose the market because the market would make him substantially better off than would a regime of strict liability. A thought experiment shows why. Let the consumer be asked to choose among the legal regimes that are precisely described below. She knows, respecting consumer risk perceptions, that either the P,P cell or the C,C cell describes reality (always or sometimes). She also knows that her purchase choices will not affect the total level of safety that obtains; single individuals cannot influence market outcomes. The legal regimes are:

1. Free contracting: The default rule requires firms to repair or replace defective products for a reasonable time after purchase and to compensate consumers for incidental damages, but not for consequential damages (medical expenses, lost income, pain, and suffering).³⁶ Under this default contract, the consumer can insure against product accidents and purchase safety improvements as she prefers.

2. Strict liability: The consumer must buy pecuniary and nonpecuniary loss coverage from manufacturers.

A consumer who knows how to make decisions but who does not know whether the P,P or C,C cell describes reality would assume that each has an equal probability of being true.³⁷ Consequently, the consumer's preference over legal regimes is a function only of the payoffs. Suppose first that the P,P cell is true generally. In the first regime, products are inefficiently unsafe (they are improved less than fully informed consumers would prefer). The idealized choosing consumer knows that an actual consumer could mitigate this undesirable effect in two ways. First, when economies of scale to safety are absent—the firm can alter the safety of products as small sets of consumers desire—then the actual consumer could purchase as much safety as she prefers. For example, the consumer could purchase a car with an air bag or without, with anti-

35. This assumption is made to rule out risk aversion so extreme as to justify consumer choice according to the maximin criterion. This criterion tells the chooser to maximize her payoff in the worst possible state of the world, no matter how unlikely that state is to arise. See D.C. Mueller, *Public Choice II* 412-14 (1989).

36. The illustrative default rule approximates the contract respecting defect risks that informed parties use today. See *supra* note 11 and accompanying text.

37. In decision theory, this method is known as the law of least reason.

lock brakes or without. When economies of scale to safety exist—the product must be made safer for many consumers or for none—the consumer could buy market insurance and also purchase a warranty or a service contract.³⁸ Second, the idealized consumer would be an actual pessimistic consumer, who would purchase fewer dangerous products than he would actually like.

In the strict-liability regime (again assuming the P,P cell best describes reality), when economies of scale to safety exist, strict liability can make products safer. This desirable effect is offset by undesirable effects. First, when the risk-level effect is the more important, demand is already too low. Strict liability may further dampen demand to the point where desirable products become expensive,³⁹ scarce, or nonexistent. Second, strict liability requires the consumer to purchase insurance from the seller against pecuniary and nonpecuniary harm. Consumers generally prefer market insurance and only against pecuniary losses.⁴⁰ Finally, the demand-dampening effect of strict liability is exacerbated by holding firms liable for nonpecuniary harm, because the consequent price increases can be very high.⁴¹

In sum, were the P,P cell to be generally true, it is difficult to know whether a regime of free contracting would make actual consumers materially worse off relative to a strict liability regime, given the steps that actual consumers could take to protect themselves (including purchasing fewer products) and given how strict liability affects market performance.

Suppose next that the C,C cell is true generally. Then actual consumers have positive expected utility in the free-contracting regime. Products are optimally safe and the consumer can insure as she pleases. Consumers have much lower expected utility in the strict-liability regime. Strict liability forces consumers to purchase insurance they do not want and product safety they do not want, raises prices, and sometimes causes products that generate positive benefits on net not to be sold.

The ideal choosing consumer would prefer the free-contracting regime

38. The effect of economies of scale to safety on consumer preferences for contracts is explored in Schwartz, *The Myth that Promisees Prefer Supracompensatory Remedies: An Analysis of Contracting for Damage Measures*, 100 Yale L.J. 369, 398-401 (1990).

39. When demand falls, firms are less able to exploit economies of scale in production, and prices may rise in consequence.

40. The forced-insurance effect of strict liability is significant. Viscusi's study showed that:

For claims in which there is a positive pain and suffering award, the average share of pain and suffering compensation is about two-thirds. . . . [Thus] the contribution of pain and suffering is remarkably high. Noneconomic damages are not a minor after thought but are the driving force of compensation levels in situations in which the pain and suffering amounts are positive.

Viscusi, *Pain and Suffering in Products Liability Cases: Systematic Compensation or Capricious Awards?*, 8 Int. Rev. Law & Econ. 203, 208 (1988). Because the expected cost of these awards is reflected in product prices, consumers must pay for considerable insurance that they do not want.

41. Calfee & Rubin, *supra* note 15, show this in theory; for data see Viscusi, *supra* note 40.

because it generates a considerably higher payoff. If the C,C cell describes reality, free contracting yields the consumer the highest possible payoff while strict liability yields the lowest; if the P,P cell describes reality, free contracting yields the consumer a payoff that exceeds the minimum while strict liability will not raise that payoff materially. Thus, free contracting will generate greater expected utility for actual consumers unless the probability that the P,P cell is true exceeds 50% by a considerable margin. Because a consumer choosing legal regimes will assign an equal probability to the C,C and P,P outcomes, she will prefer freedom of contract.⁴²

The issue, recall, is not whether the consumer would prefer an extensive or narrow warranty, or which of these would be efficient or distributionally superior. Rather, the issue is which legal regime the consumer would prefer given that the consumer is uncertain about how aggregate consumer choices influence market outcomes. For the reasons given, the representative consumer would prefer a legal regime that permits free contracting. In this regime, consumers would pay firms to make cost-justified safety improvements, and would insure against pecuniary "residual risks" (those not worth avoiding) on the market, not in the product-sales contract. Put in the language above, the best second order moral case is for a market regime of this sort rather than for a strict-liability regime.

The set of legal regimes available to society is not limited to strict liability or to an unregulated market. The state also could provide a legal regime 3, in which free contracting is permitted only if firms make particular disclosures. The idealized choosing consumer would prefer regime 3 to the free-contracting regime.⁴³ The consumer would make this decision because the provision of warnings and instructions increases the probability that consumers will estimate and respond to risks correctly; that is, disclosure increases the probability that the C,C cell is true. Because the consumer prefers a legal regime that permits free contracting when she assigns a 50% probability to the C,C cell, she would value more highly a regime that increased that probability above 50%. There-

42. An expected utility calculation may clarify the argument in text. To capture the relative ranking among the payoffs described above, suppose that in the free-contracting regime the consumer gains twelve units if the C,C cell is true and nine units if the P,P cell is true; in the strict-liability regime, the consumer gains eight units if the C,C cell is true and ten units if the P,P cell is true. The idealized choosing consumer's expected gain from the free-contracting (G^1) and strict-liability (G^2) regimes, summed over the n transactions she will make in her life, is

$$G^1 = n[p(12) + (1-p)(9)]$$

$$G^2 = n[p(8) + (1-p)(10)]$$

Equation G^1 exceeds equation G^2 until p falls to approximately .2. The representative consumer, who is not highly risk averse, thus prefers the free-contracting regime when she supposes p to be .5.

43. Letting $[p]$ represent "preferred to," the claim is that the idealized choosing consumer's preferences over legal regimes are: regime 3 $[p]$ regime 1 $[p]$ regime 2.

fore, the representative consumer would rank regime 3 first. The "neutrality method" for choosing legal regimes according to the preferences of an ideally situated consumer thus best supports the conclusion that the state should permit free contracting supplemented by disclosure.⁴⁴

C. Summary

The state can respond to the product-defect problem primarily through its courts or through the market. It has chosen the courts on the basis of six fundamental assumptions. Four of these assumptions seem incorrect and another seems overdrawn. The truth of the last, that consumer risk misperceptions cause unregulated markets to perform poorly, is unsettled. Conventional utilitarian and autonomy-based moral notions, as instantiated in the choosing method just described, imply the repeal of strict products liability on this record. Rather, the state should rely on the market supplemented by an appropriate disclosure law.⁴⁵ The question is how best to do this.

IV. CONCLUSION: A NATIONAL WARNING SYSTEM

The foregoing discussion shows that the most normatively defensible legal regime for products is free contract with regulated disclosure. As a consequence, two public policy tasks should be undertaken. The first is to replace strict products liability with a default rule that resembles the contract that informed parties would choose. The second task is to develop a sensible system of warnings and safety instructions. The national government should play a substantial role in the latter effort. A brief discussion of warnings will show why.

A product can malfunction in several ways that cause different degrees of harm. For example, eye glasses can merely break or shatter; the possible harm from the former is trivial relative to the possible harm from the latter. Thus, a warning system should rank possible product defects ac-

44. When consumers have roughly similar preferences for insurance and safety, distributional and efficiency questions are coextensive: consumers can benefit distributionally only from efficient rules. Therefore, assuming that the representative consumer wants to maximize utility cannot generate outcomes that violate common distributional preferences. When consumers have heterogeneous preferences, efficiency and distributional analyses may diverge: in some cases, an efficient risk allocation may worsen the lot of more consumers than it improves; in other cases, an inefficient allocation may have the opposite effect. It seems difficult to know when either outcome will actually happen, or whether any such outcome will be good or bad as assessed by accepted distributional rationales. Also, the effect of consumer heterogeneity on the choice of the legal regime itself seems an unexplored topic. For these reasons, distributional consequences of the heterogeneity effect are ignored here. Issues respecting the effect of heterogeneity at the level of choice of legal rule are thoughtfully discussed in Craswell, *supra* note 29.

45. If strict liability were replaced by a market regime, there would be no "tort" basis for punitive damage awards. Under the proposed regime, firms could be liable for breach of contract or for failing to make appropriate disclosure. There would seldom be a good ground for awarding punitive damages in connection with either wrong. See Schwartz, *supra* note 38, at 369.

according to the degree of danger they create, and then match warnings to the degree of danger. Also because labels have little space, and because consumers observe only the product label, it is possible to give no more than a limited set of warnings for many products. When few warnings can be given, they should relate to major risks. In such cases, firms should not warn against slight risks at all. Further, there is a social science of risk communication; warnings should reflect the findings in this literature.⁴⁶

Such a warning system cannot emerge (and has not emerged) from common-law products liability litigation. Initially, juries see only cases where a consumer is injured in consequence of a malfunction against which the firm failed to warn or is claimed to have warned inadequately. The jury never is told of other possible malfunctions or asked to rank these by degree of danger. Rather, the jury is asked to assess the firm's performance with respect to the malfunction that actually happened. Thus, the jury cannot know whether a firm's failure to warn was correct in light of other risks that the product posed, or whether a warning that appears too pallid *ex post* actually was correct because other risks were more serious. This institutional system, therefore, creates poor incentives for firms. They may respond by warning against malfunctions that have been involved in litigation because not to do so invites punitive damage claims, although these may pose the less-serious risks. Alternatively, firms may try to warn against everything. Either response reduces the efficacy of warnings against major risks: in the former case, such warnings may not be given; in the latter, these warnings may be lost in the clutter. In addition, firms have an insufficient incentive to craft warnings with the aid of warning specialists because juries lack expertise and are supposed to evaluate warnings *de novo*; under this legal regime, a well-crafted and an "amateur" warning probably have close to an equal chance of being upheld.

These deficiencies of a jury-run disclosure system exist when each product is considered in isolation; other deficiencies appear when products are considered globally. To see why, suppose that two products each malfunction with probability .001. When one product malfunctions, consumers experience nausea and sometimes vomiting; when the other malfunctions, consumers are blinded. A warning that discloses only the odds of malfunction for these two products is inadequate. Similarly, labels on each product that contained similar warning symbols or just recited "DANGER" would be inadequate. Instead, risks should be ranked across products as well as among single products, and warnings should be appropriate given a product's "global" ranking. Common-law litigation cannot create such a system.

The need for an administrative presence is obvious. This presence

46. These and the points in the following paragraphs draw on Chapters Two and Three, Volume 2, of the ALI Report, cited *supra* note 11.

should be federal. No agency, federal or state, can regulate many products. Rather, the need is for a warning vocabulary that all firms can use. As an analogy, the Truth in Lending Law does not require the Federal Reserve Board to regulate the disclosures of individual lenders but rather creates a common disclosure format—the annual percentage rate—for disclosure of credit price information. Here, the need is for warning symbols or words that describe risk levels: the word “danger” should apply to a particular level of risk that any product may pose, and to no other level of risk. A firm’s warning should be upheld when it uses the word “danger” appropriately. Only a national agency can create such a warning vocabulary.⁴⁷ Therefore, society should rely primarily on the market supplemented with a nationally run disclosure scheme to regulate product safety.

47. The suggestion that the Federal Government should create a warning vocabulary first appears in ALI Chapter 2, cited *supra* note 11. For a somewhat similar suggestion that a “scoring system” should be developed that would permit consumers to rank the products of different firms when these products have similar attributes, see Beales, Craswell & Salop, *The Efficient Regulation of Consumer Information*, 24 J. Law & Econ. 491, 523-27 (1981).