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THE BOUNDARY PROBLEMS OF ENTERPRISE LIABILITY

JAMES A. HENDERSON, JR.*

A major premise of this Symposium is that risks of injury associated with highly technological activities have increased rapidly in recent years and will continue to increase in the future. In attempting to control these risks, governments undoubtedly will adopt enterprise liability systems — that is, systems of strict liability imposed on commercial, professional and governmental enterprises for the injuries caused by those enterprises. Some of these liability systems may be established judicially. A greater number will be established legislatively. Regardless of their source, they will share a commitment to the principle that enterprises should compensate for the injuries they cause, including injuries caused by carefully and skillfully conducted activities.¹

For the enterprises singled out for the imposition of enterprise liability, strict liability will replace fault-based liability; for the rest, liability will continue to be imposed largely on the basis of fault under traditional tort principles. Moreover, traditional negligence principles will continue to govern the tort liabilities of what might be termed “non-enterprises” — that is, the noncommercial, nonprofessional, non-governmental activities of individuals and groups of individuals in our

¹. Legal writers have used the phrase “enterprise liability” in a variety of contexts. I use it here in what might be called its traditional sense. See generally Klemme, The Enterprise Liability Theory of Torts, 47 U. COLO. L. REV. 153, 158 (1976). In addition to the emphasis on compensating injured claimants on the basis of strict liability, “enterprise liability” also connotes the shifting of liability from individual actors to the larger enterprises for which those actors engage in risk-creating conduct. Thus, commentators frequently explain the rule of respondeat superior, which holds masters vicariously (and strictly) liable for the torts of their servants committed within the latters’ scope of employment, in terms of “enterprise liability.” See, e.g., W. PROSSER, HANDBOOK OF THE LAW OF TORTS 459 (4th ed. 1971); Note, Borrowed Servants and the Theory of Enterprise Liability, 67 YALE L.J. 807 (1976). Although I would exclude most systems of taxation from my definition of “enterprise liability,” because typically they are not assessed against specific enterprises or do not involve compensating the victims of accidental injuries, I do not intend to limit myself to liability imposed in a judicially implemented action to recover tort damages. I would, for example, include bureaucratically administered liability/compensation systems, such as worker compensation, within my definition of “enterprise liability.” I would also include compensation systems such as the Black Lung Benefits Act, 30 U.S.C. §§ 901-941 (1976). For a recent analysis urging bureaucratically managed enterprise liability as an alternative to tort liability, see Pierce, Encouraging Safety: The Limits of Tort Liability, 33 VAND. L. REV. 1281 (1980).
In developing systems of enterprise liability, draftsmen will be required to answer many questions. Which enterprises will be subject to this special treatment? Who will be allowed to make claims? For what elements of injury? What will be the basis for determining benefits? How will the systems be funded? Who will administer them? How will disputes be resolved? Commentators and decisionmakers have addressed these questions in the past, in a variety of contexts, and they will confront any future enterprise liability proposal. Important though these questions are, however, they are not my primary concern in this article. Instead, I wish to focus on what I shall call the "boundary problems" of enterprise liability — that is, the problems associated with the need to establish boundaries separating clusters of activities and consequences that are included within a particular strict liability system from those that are excluded. Commentators have discussed these boundary problems but never, to my knowledge, has anyone brought together and analyzed them systematically. I have two reasons for believing that these problems deserve special attention: first, they present issues that transcend the confines of enterprise liability, illuminating some implications of our legal system's general reliance on rule formality; and second, because they come close to being intractable, they may significantly influence the development of enterprise liability.

Decisions to adopt enterprise liability are likely to be premised on the assumption that strict liability is superior to traditional negligence liability in at least three respects: (1) it compensates injured victims

2. It should be observed that these "nonenterprises" will continue to be subjected only to negligence-based liability in large measure because the objectives described in the text accompanying notes 5–7 cannot be achieved by imposing strict liability on their activities. See Henderson, Extending the Boundaries of Strict Products Liability: Implications of the Theory of the Second Best, 128 U. Pa. L. Rev. 1036, 1048 (1980); cf. infra note 103 and accompanying text.


more frequently;\(^5\) (2) it more effectively deters unacceptably risky conduct, thus reducing accident costs;\(^6\) and (3) it entails comparatively lower administration costs.\(^7\) This article will not explore the legitimacy

5. Under a negligence regime, even very dangerous enterprises need not compensate those whom they injure as long as marginal investments in safety are adequate. Under strict liability, enterprises "pay for what they break" regardless of the care they take to avoid causing injuries. From a fairness perspective, commentators have justified the increased frequency of compensation on several grounds. Professor Epstein, for example, insists that the root of the claimant's right to compensation is the fact that the defendant enterprise caused him to suffer harm. See Epstein, A Theory of Strict Liability, 2 J. Legal Stud. 151, 168-69 (1973). Professor Fletcher traces the source of the claimant's right to the defendant's creation of "nonreciprocal risks," a system in which a victim has a right to recover for injuries caused by a risk greater in degree and different in order from those the victim creates and imposes on the defendant. See Fletcher, Fairness and Utility in Tort Theory, 85 Harv. L. Rev. 537, 540-42 (1972). From an efficiency perspective, commentators have justified increasing the frequency of compensation on the ground that it helps spread the primary costs of accidents, thereby reducing the secondary or dislocation, costs of those accidents. See generally G. Calabresi, supra note 4, at 39-67. For a recent analysis challenging the ethical underpinnings of strict liability, see Schwartz, The Vitality of Negligence and the Ethics of Strict Liability, 15 Ga. L. Rev. 963 (1981).

It should be observed that although moving to strict enterprise liability increases the frequency of compensation, successful claimants typically recover on a somewhat reduced compensation schedule. At least with respect to legislatively created enterprise liability systems such as worker compensation, recovery is usually restricted to the more tangible elements of loss — e.g., medical expenses, lost wages, and the like. Intangible elements of recovery, such as mental upset and pain and suffering, are typically excluded. In part, these restrictions reflect a tradeoff made in the interest of keeping total premium costs in line: as the number of successful claimants increases, the amount each receives, on average, decreases. The restrictions may also reflect a belief that intangible losses are less worthy of redress, and generate too great transaction costs in their calculation on a case-by-case basis. See generally O'Connell, A Proposal to Abolish Defendants' Payment for Pain and Suffering in Return for Payment of Claimants' Attorneys' Fees, 1981 U. Ill. L. Rev. 333.

6. Deterrence primarily relates to the objective of economic efficiency. In theory, moving from negligence to strict liability will not cause a rational enterprise to increase its investment in safety. See Posner, Strict Liability: A Comment, 2 J. Legal Stud. 205 (1973). As a practical matter, however, strict liability for accident costs which an enterprise controls may help to eliminate wasteful underinvestment in safety due to slippage — a phenomenon whereby manufacturers escape a portion of negligence liability due to plaintiff's proof problems — inhering in the negligence liability system. See Henderson, Coping With the Time Dimension in Products Liability, 69 Calif. L. Rev. 919, 932-33 (1981). In addition, strict liability for controllable costs may reduce the overconsumption of relatively risky products and services by increasing their cost to consumers and thus placing them at a disadvantage in a competitive market. Writers have referred to this objective as the "general deterrence," or "market deterrence" objective. See, e.g., G. Calabresi, supra note 4, at 27; J. O'Connell, supra note 4, at 76-80.

7. These administration costs are of concern primarily from the perspective of trying to increase the economic efficiency of the tort/compensation system. See G. Calabresi, supra note 4, at 225-26. Under traditional negligence rules, a high percentage of the liability premium dollar — by most accounts, over half — goes to pay the costs of running the liability system. See J. O'Connell, supra note 4, at 21; State of N.Y. Ins. Dep't, Automobile Insurance . . . For Whose Benefit? 34-35 (1970). The practical significance of these costs has caused their reduction to become a dominant objective of proponents of enterprise liability systems.
of these objectives, but will, for purposes of analysis, assume them to be appropriate. Nor will this article question whether and to what extent they would actually be accomplished by strict enterprise liability. Instead, attention will focus on the degree to which the boundary problems are likely to affect an enterprise liability system’s success in accomplishing these objectives. Given that “risk control” is the primary focus of this Symposium, the effects of the boundary problems on the deterrence objective will be emphasized in the following analysis.

There are two general categories of boundary problems: those problems associated with establishing and maintaining enterprise liability boundaries, and those associated with manipulative behavior of enterprises and claimants in response to the boundaries. In seeking solutions to these problems, whenever possible I shall apply my analysis to existing or proposed enterprise liability systems. In this connection I shall especially emphasize the Designated Compensable Event (DCE) Project of the American Bar Association, a recent study of a possible enterprise liability system covering medical accidents. I served as legal consultant to the DCE Project, and it was in that connection that I first was challenged by, and became intrigued with, the boundary problems of enterprise liability.

I. Establishing and Maintaining the Boundaries

A. Problems in Defining the Scope of Liability

In defining the scope of liability, the enterprise liability draftsman confronts the basic question “Which enterprises are to be responsible for which injuries?” As between the “which enterprises?” and the “which injuries?” questions, the latter is the more difficult to answer because it turns on the issue of causation. Theoretically, it ought to be possible to link enterprises with injuries in ways that promote the


9. Certainly a system could achieve the compensation objective. But whether a system would achieve the objectives of increased deterrence and decreased administrative costs is more problematic. For an interesting analysis casting doubt on the extent to which tort liability can reduce wasteful accident costs through deterrence, see Englard, The System Builders: A Critical Appraisal of Modern Tort Theory, 9 J. LEGAL STUD. 27, 33-51 (1980). Regarding the likelihood that administration costs will be reduced, experience with worker compensation systems suggests that in the long run, at least, the reductions may not be so significant as originally hoped. See generally Friedman & Ladinsky, Social Change and the Law of Industrial Accidents, 67 COLUM. L. REV. 50, 81 (1967).

10. See ABA FEASIBILITY STUDY, supra note 3.
objectives of the strict liability system. For example, enterprise liability will deter risky conduct only to the extent that it forces enterprises to bear the accident costs over which they exert meaningful control. But it is difficult to determine with any degree of certainty which costs any given enterprise can thus control. In part, the problems are evidentiary — in some cases, it will not be possible to determine the relevant facts with sufficient accuracy to describe what happened. But even when we know what happened, we may be unable to identify which of many contributing factors should be treated as the cause, or causes.

A concrete example will illustrate these problems. Assume that a government has implemented a fairly large number of enterprise liability systems that cover, in the aggregate, most goods and services commercially distributed. Our claimant-to-be, C, is walking in the upstairs hallway of his home shortly after lunch when he trips over a book on the floor, falls down the stairs, and crashes his head through the glass screen of a television receiver in the living room. Which of the following commercial enterprises, if any, should be liable for C’s injuries: The book publisher? The contractor who built the house? The subcontractor who built the stairs? The manufacturer of the television receiver? The brewing company that produced the beer C drank with lunch, rendering him less attentive?

The first reaction of someone trained in traditional tort law is likely to be: “None of them should be liable — it wasn’t their fault that C fell and injured himself.” However, we have assumed an enterprise liability regime in which commercial enterprises bear financial responsibility for the injuries they cause irrespective of fault. So the question remains: Which, if any, of the enterprises identified in our hypothetical case “caused” C’s injuries?

11. Professors Calabresi and Hirschoff refer to controllable costs as costs with respect to which the enterprise is the “cheapest avoider” — that is, the enterprise is in the best position to make the cost-benefit analysis between accident costs and avoidance costs and to act on that decision once it is made. See Calabresi & Hirschoff, Toward a Test for Strict Liability in Tort, 81 Yale L.J. 1055, 1060–61 (1972). These authors also include bribing other actors to act more safely among their list of ways that an enterprise can effectively control accident costs.

12. Professor O’Connell used a version of this hypothetical case to illustrate the same point. See J. O’Connell, supra note 4, at 71–72.

13. We will assume, for the sake of simplicity, that contributory negligence is no bar to recovery. Enterprise liability systems such as worker compensation typically do not recognize contributory fault as a defense. See generally 1 A. Larson, Workmen’s Compensation § 2.30 (1978). Efficiency theorists have argued against eliminating contributory fault as a defense on the ground that there are insufficient incentives for claimants to invest their own resources in cost effective safety measures. See, e.g., Posner, supra note 6, at 207. For an opposing view, see Walkowiak, Reconsidering Plaintiff’s Fault in Product Liability Litigation: The Proposed Conscious Design Choice Exception, 33 Vand. L. Rev. 651 (1980).
In one sense, of course, all the enumerated enterprises caused C's injuries, for all of them are linked to the accident on a but-for, cause-in-fact basis. Indeed, that is why I included them in the list of possibilities and did not include other enterprises — commercial distributors of glider aircraft, for example. But even if but-for causation is a necessary condition to liability, it includes too many consequences to serve as a meaningful guide in defining the boundaries of enterprise liability. What are required are descriptions of the risks that are unique to each enterprise in ways related to the objectives of enterprise liability. Thus, so long as deterrence remains a primary objective, we need descriptions of those risks that each enterprise can meaningfully control, so that we can allocate accident costs to those presumably better, or best, able to reduce them.

One possibility — to allocate accident costs to the enterprises that "proximately cause" them — deserves initial consideration. Even if we assume that the concept of proximate cause serves a worthwhile function in traditional negligence law, it is inadequate to guide decisions in a strict enterprise liability system. For one thing, it calls for costly, fact sensitive, largely ad hoc decisions on a case-by-case basis, thereby defeating the objective of lowering administrative costs. It also implicitly invites the decisionmaker to determine whether the enterprise was at fault, a determination inconsistent with the enterprise liability

14. The liability net cast by the but-for, cause-in-fact concept is very wide. Thus, while glider aircraft would be excluded, commercial transporters of the television receivers could be included on a but-for basis.

15. See supra note 11.

16. The proximate cause concept prevents defendants from incurring potentially crushing liability in cases where their negligence could only be expected, viewed before the fact, to cause slight injury. The marginal costs of adding the concept to the negligence analysis appear manageable. In most cases parties do not even raise the issue. In the relatively rare instances where parties do raise the issue, the additional costs of addressing it are small. The parties usually do not need additional proof, relying instead on common sense assertions based on the proof supporting the issues of fault and cause-in-fact. And only when the judge decides the case for the defendant as a matter of law does the issue have any measurable effect on the outcome. When the issue of proximate cause is given to the jury on vague instructions, there is little reason to believe it affects their decision as a consideration independent of the issue of the defendant's fault.

17. In contrast to its relatively minor role in negligence law, see supra note 16, proximate cause in a strict liability system is the controlling element in deciding whether to compensate. As one court observed in a recent decision adopting the earlier advanced concept of "the best cost avoider" for these purposes, see supra note 11 and accompanying text: "[F]ixing the best or cheapest cost avoider is more difficult than might be imagined." Union Oil Co. v. Oppen, 501 F.2d 558, 569 (9th Cir. 1974). One commentator also suggested that such a vague standard would interfere with the cost accounting necessary to achieve market deterrence. See Michelman, Book Review, 80 Yale L.J. 647, 656–57 (1971).
system's commitment to strict liability. The need to describe the compensable events accurately in order to reduce accident costs via deterrence must be balanced against the competing need to describe those events specifically in order to reduce transaction costs.

Dean Merrill has suggested a formulation that might avoid the over inclusiveness of but-for, cause-in-fact, and the vagueness of proximate cause. Arguing for holding prescription drug manufacturers strictly liable for the harm their products cause, he has urged that proof of a but-for, cause-in-fact connection between the taking of a drug and the patient's injuries should give rise to a presumption of liability, which the manufacturer can rebut only with proof of the patient's or the prescribing physician's negligence.

There are several reasons to question the efficacy of Merrill's approach. First, although the patient's role in drug-induced injuries often is passive, thus simplifying the causation analysis, in some cases the patient contributes to the risks by failing to follow directions. In such cases, the patient's contributory negligence presents difficulties. Second, although the availability of relatively formal professional standards applicable to the prescribing physician would reduce administrative costs compared with what they might be if such standards were unavailable, cases in which physicians contested manufacturers' allegations of malpractice nevertheless would be problematic. Finally, although the universe of possible intervening causes does not normally extend beyond those described by Merrill, in some cases it is possible to identify other sources contributing significantly to the plaintiff's injuries. Holding prescription drug manufacturers liable in such cases would allocate the accident costs to enterprises that do not mean-

18. In theory, of course, "proximate cause" and "the best cost avoider" are different concepts from "a negligent actor." See Calabresi & Hirschboff, supra note 11, at 1060. As a practical matter, however, lawyers and judges struggling with the former concepts are quite likely to apply the sort of cost-benefit analysis traditionally associated with the negligence concept.


20. See id. at 107-12.

21. The traditional rule in medical malpractice cases is that a court judges individual physicians against the standards of their profession. See generally McCoid, The Care Required of Medical Practitioners, 12 VAND. L. REV. 549, 558-60 (1959). In recent years courts have indicated that they may independently review the adequacy of health care procedures. See generally Pearson, The Role of Custom in Medical Malpractice Cases, 51 IND. L.J. 528, 528-29 (1976). Even if the traditional approach is retained, the so-called "medical malpractice crisis" of the mid-to-late 1970's suggests the difficulties that can arise. See authorities cited infra note 129.

22. Intervening actors whose negligence may contribute to the plaintiff/patient's injuries include: a treating physician other than the prescribing physician; the drug retailer; a member of the plaintiff/patient's family; or the plaintiff/patient's employer.
ingfully control the relevant risks, and to that extent would defeat the deterrence objectives of enterprise liability.\textsuperscript{23}

Moreover, even if we assume that Merrill's rebuttable presumption approach would prove workable in cases of prescription drug-related injuries, it is doubtful that it would provide adequately clear boundaries for other systems of enterprise liability. In other contexts, the universe of contributing causes is larger, and more frequently includes the conduct of the claimant.\textsuperscript{24} And the standards for judging the negligence of other possible contributors are vaguer — and more difficult and thus more costly — to apply.\textsuperscript{25} For example, were we assigned the task of developing a system imposing enterprise liability on building contractors for stair-related injuries of the sort encountered in our earlier hypothetical case, a rebuttable presumption approach would present decisionmakers with issues such as: "Should the book at the top of the stairs — or the television receiver at the bottom — constitute an intervening cause?"

It follows that if the boundaries of enterprise liability are to accomplish acceptably low levels of transaction costs, the draftsman must avoid vague, value-laden principles such as "reasonableness" and "proximity." Instead, he must specifically describe, in essentially empirical, rather than normative, language, the consequences for which enterprises will be held strictly accountable. Thus, from a transaction costs perspective the boundaries of enterprise liability must not be abstract and conceptual; they must be concrete boundaries, drawn specifically in terms of time and space.

Practical experience with enterprise liability systems supports this conclusion. The boundary commonly relied on to define the limits of worker compensation — "injuries arising out of and in the course of

\textsuperscript{23}. To some extent, of course, the manufacturer might be able to redesign the drug, or market it differently, to reduce the risks to the plaintiff from these examples of intervening conduct. But in the cases described supra note 22, the manufacturer's degree of control would be minimal. Of course, the compensation/cost spreading objective would be served even if the deterrence objective was not. See supra note 5.

\textsuperscript{24}. Applying Merrill's approach to durable products such as automobiles demonstrates this point. Negligence on the part of many actors other than the designer and manufacturer of the vehicle contribute to causing accidental injuries: the operator of the vehicle; operators of other vehicles; repairers of the vehicle; designers and maintainers of the roadways; and regulators of vehicular traffic, to name just a few. Given this wide array of rival hypotheses, it is difficult to see how Merrill's approach would simplify the proofs and arguments in many cases.

\textsuperscript{25}. Although courts have traditionally relied on professional custom in judging the negligence of doctors, see supra note 21, they have refused to give controlling weight to industry custom in nonmedical contexts. See, e.g., The T. J. Hooper, 60 F.2d 737 (2d Cir. 1932).
employment" — is a good example.\textsuperscript{26} In the early days of worker compensation, such statutory language was given a fairly literal meaning in the "time and space" sense described above, and administrative costs were held in check.\textsuperscript{27} Over time, however, under pressure to make worker compensation systems more responsive to injured workers' needs for compensation, courts gradually expanded earlier interpretations, extending coverage to include a variety of injuries occurring off the employment premises.\textsuperscript{28} Today, the boundaries of worker compensation in some jurisdictions have become so vague, and their applications in many cases so problematic and costly, that some commentators want to eliminate the work connection requirement in favor of around-the-clock social insurance systems.\textsuperscript{29} Implementing these proposals might solve the problem of high administrative costs, but only at the expense of all but abandoning the objective of deterring risky, socially wasteful activities by means of a civil liability system.\textsuperscript{30}

Products liability law also illustrates the unworkability of vague enterprise liability boundaries. As every student of American tort law is aware, in the 1960's courts began imposing privity-free, strict tort liability on product sellers for injuries caused by manufacturing defects.\textsuperscript{31} This judicially established enterprise liability system covering manufacturing defects has worked satisfactorily over the last several decades because the boundaries of liability are drawn specifically in terms that avoid value-laden concepts such as "reasonableness under the circumstances."\textsuperscript{32} Thus, the presence of a manufacturing defect and its causal connection with the plaintiff's injuries can be determined relatively mechanically;\textsuperscript{33} and the categories of enterprises held strictly

\textsuperscript{26} See 1 A. LARSON, supra note 13, § 6, at 3-1.
\textsuperscript{28} See generally R. Henderson, supra note 27, at 126-27.
\textsuperscript{30} Again, deterrence is achieved by imposing liability on enterprises that are able to control the relevant accident costs. \textsuperscript{See supra} notes 6 and 12. Extending worker compensation to around-the-clock social insurance would impose liability for costs that the relevant enterprises do not control.
\textsuperscript{31} The classic treatments of this movement to strict liability are Prosser, The Assault Upon the Citadel (Strict Liability to the Consumer), 69 YALE L.J. 1099 (1960); Prosser, The Fall of the Citadel (Strict Liability to the Consumer), 50 MINN. L. REV. 791 (1966).
\textsuperscript{32} The standards against which a court determines the presence of a manufacturing defect are the intended design and the intended function; such a defect causes the product to be self-defeating, and no external reasonableness standard is necessary. \textsuperscript{See generally} Henderson, Judicial Review of Manufacturer's Conscious Design Choices: The Limits of Adjudication, 73 COLUM. L. REV. 1531, 1542-50 (1973).
\textsuperscript{33} When a relatively new product dangerously fails to perform its intended function, a
liable — product sellers, lessors, and the like — are defined specifically, as a matter of law, so as to avoid costly case-by-case inquiries into whether the strict enterprise liability system does or does not obtain.34

In contrast, it has proven impossible to fashion adequate boundaries for a system of strict enterprise liability covering injuries caused by the design and marketing of products. Negligence traditionally has supported liability for unreasonably risky product design and marketing.35 However, in spite of increased pressure to move beyond negligence to strict liability36 — indeed, in spite of one influential court’s attempt to impose a products liability version of Dean Merrill’s burden-shifting approach37 — strict enterprise liability for product design and marketing has yet to be implemented.38 Strict enterprise liability would require a test for liability that did not rely on case-by-case determinations of reasonableness. However, perhaps because any test couched in more specific terms appears to exclude too many worthy claims and to include too many unworthy, none has been adopted.39

These experiences with worker compensation and strict products liability reveal the inherent antagonism between the objectives of accident cost reduction via deterrence and administrative cost reduction via

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34. See generally Henderson, supra note 2, at 142–47 (discussing enterprises generally conceded to be within strict liability boundaries).


38. Some courts and commentators have insisted that strict liability is being applied. See, e.g., Cronin v. J.B.E. Olson Corp., 8 Cal. 3d 121, 132, 501 P.2d 1153, 1162, 104 Cal. Rptr. 443, 442 (1972); Wade, On the Nature of Strict Tort Liability for Products, 44 MISS. L.J. 825 (1973). But the basic standard in most product design cases is the cost-benefit analysis from the traditional negligence cases. See generally Birnbaum, supra note 35; Henderson, Renewed Judicial Controversy Over Defective Product Design: Toward the Preservation of an Emerging Consensus, 63 MINN. L. REV. 773 (1979).

39. Limiting liability to those cases in which the designs are self-defeating — that is, in which the designs fail to perform their intended functions — strikes most courts as too exclusive an approach. See, e.g., Larsen v. General Motors Corp., 391 F.2d 495 (8th Cir. 1968). On the other hand, expanding liability to include all cases in which the product design is the cause-in-fact of injury strikes most courts as too inclusive. See, e.g., Henderson, supra note 32, at 1554. From the present perspective, what is needed is a set of formal boundaries that would allow strict enterprise liability to occupy the middle ground between these two extremes.
specification. If a draftsman specifically defines the injuries for which an enterprise is to be strictly liable in formal, "no nonsense" terms, he will avoid disputes regarding application and will minimize transaction costs. At the same time, his system inevitably will include some injuries that the enterprise cannot control, and exclude some injuries that the enterprise controls. As a result, the actual deterrence effects will not be congruent with the deterrence effects that ideally should occur, and thus not all the substantive objectives of the liability system will be achieved. But if the draftsman attempts to reduce this incongruence between the actual and the ideal by relying on vague concepts such as "reasonableness," "controllability" and "causal nexus," disputes regarding applicability will arise more frequently and the hoped-for reductions in transaction costs will not materialize. Proponents of strict enterprise liability argue that negligence law errs by relying too heavily on vague standards of decision; but the draftsman of an enterprise liability system must understand that rule specificity generates its own social costs in the form of incongruence between the results reached and the deterrence goal of the liability system. From the standpoint of efficient resource allocation, the draftsman should aim for the optimum level of rule specificity at which the sum of incongruence costs and transaction costs is minimized.

The conceptual problems associated with the causation issue are reflected in the Designated Compensable Event (DCE) Project of the American Bar Association. Building on the earlier work of Professor Ehrenzweig and, more recently, the work of Professors Havighurst and Tancredi, the A.B.A. Commission on Medical Professional Responsibility recommended in 1977 that its Innovative Alternative Subcommittee explore the possibility of implementing an enterprise liability system based on a pre-defined list of adverse outcomes arising from medical treatment. Such a system rests on the assumption that for most medical treatments and procedures it is possible to identify those adverse outcomes over which medical professionals exert significant control — that is, adverse outcomes that are usually, though not

40. See generally J. O'Connell, supra note 4, at 56-67.
41. See generally Ehrlich & Posner, supra note 4.
42. See supra note 10.
invariably, avoidable under good quality medical care. Prepared ahead of time by medical researchers and reviewed by teams of clinicians, these lists of adverse outcomes, or "designated compensable events," would form the basis of an enterprise liability system in which patients suffering listed outcomes would be paid out of the proceeds of insurance, obtained ahead of time by the relevant providers, without having to show that the providers were at fault. For outcomes on the DCE lists, the enterprise liability remedy would be exclusive; for outcomes not listed, patients would have access to the traditional tort system.

The theoretical attractiveness of such a proposal is apparent. More injured patients would receive compensation, albeit, in all likelihood, on a lower per-claim benefits schedule. By focusing on the quality of outcomes and tying the provider's insurance premium to his claim rate, the DCE system would create incentives for improving the quality of health care. Moreover, by defining the compensable events

46. This concept of general avoidability is closely akin to the premise underlying the common law tort doctrine of res ipsa loquitur, which permits an inference of negligence based upon the fact of the injury itself. See generally W. Prosser, supra note 1, at 227-28; Kaye, Probability Theory Meets Res Ista Loquitur, 77 Mich. L. Rev. 1456 (1979). As used in the enterprise liability context, the avoidability concept would be broadened somewhat to include all instances in which the rate of adverse outcomes differs significantly between good and bad medical care, regardless of whether bad care was responsible for a large majority of adverse outcomes. The basis for this more liberal approach to the controllability concept is the DCE system's formal abandonment of the fault principle—all that really matters is that strict liability imposes significantly different liability costs on good and bad medical care providers on a long run basis, regardless of the absolute likelihood in specific cases that either class of providers was negligent.

47. Barring plaintiffs' access to the traditional tort system for unlisted outcomes was felt to be unjustifiably harsh and thus politically unacceptable. Given the overlap between the DCE lists and the sorts of injuries for which recovery could be had under traditional negligence principles, see supra note 46, the DCE system would presumably eliminate a substantial proportion of the existing medical malpractice caseload; if the transaction costs associated with the cases based on unlisted outcomes were deemed unacceptable, the DCE statute might increase plaintiff's burden of proof to, e.g., clear and convincing evidence.

48. See supra note 5.

49. "Experience rating" means that each insured's premiums reflects the insured's claims experience; the more claims an insured has experienced in the past, and thus the more claims he is likely to experience during the period covered by the insurance, the higher will be his liability insurance premiums.

50. In theory, the negligence system should succeed in pressuring health care providers to invest optimally in safety. See supra note 6. For the argument that it also succeeds in practice, see Schwartz & Komisar, Doctors, Damages and Deterrence, 130 New Eng. J. Med. 1282 (1978). In practice, however, given the slippage that occurs in retroactively applying vague standards on a case-by-case basis, negligence law may create inadequate safety incentives. To that extent, moving to strict liability should produce a marginal gain in risk control. The resulting differentials in premium costs should cause some sloppy providers to "shape up," and should cause some incurably sloppy providers to "ship out"—that is, to leave the relevant health care specialty. This second possible deterrence effect rests on
specifically and making compensation fairly automatic, the system presumably would reduce transaction costs. And by eliminating findings of fault on the part of individual health care providers, it might remove much of the "sting," and the accompanying strain on provider-patient relationships, from decisions to compensate the victims of medical accidents.

Obviously, no list of compensable events can eliminate coverage disputes completely — realistically, the goal would be to reduce substantially, not to eliminate, the incidence of such disputes. To achieve this goal, the draftsman would have to link medical treatment to compensable adverse outcomes by specific temporal and spatial boundaries that would all but eliminate inquiries into whether the health care provider actually had control over the relevant risk of injury in a particular case. An example of an adverse outcome linked temporally to treatment would be "death occurring during, or within a specified period of time following, certain types of surgery." Thus, if a patient (perhaps

premises that I should make explicit: namely, that the market for health care services is competitive and that consumers of medical services are price sensitive. Given existing barriers to entry into the medical profession, together with present patterns of third party payments for much of the health care services consumed in this country, these premises may be false. If they are — if health care providers enjoy monopoly profits that more than make up for differentials in liability costs, and are able to pass on liability costs to patients and their insurers without significant penalty — then the "ship out" (market deterrence) potential of the DCE system will be much diminished. It should be observed that the "shape up" effects would persist even in the face of monopoly profits and consumer price insensitivity, since the sloppy provider could increase his monopoly profits by investing in increased safety. For an argument to this effect in an analogous context, see Fosner, Natural Monopoly and Its Regulation, 21 Stan. L. Rev. 548, 577-84 (1969).

In any event, if the underlying assumption of market competition and price sensitivity is at least partially valid, the worthwhile deterrence effects just described should be realized. On the same assumptions, adopting a DCE system might reduce the overall consumption of health care services, depending on the effects of such adoption on overall liability premium costs. If moving to a DCE system caused the overall costs of premiums to rise significantly it can be assumed that fewer units of health care services, relative to the potential patient population, would be consumed. This effect would persist even after the "shape up/ship out" effects on sloppy providers took hold, as long as the liability premium costs to the remaining "reasonably careful" providers remained relatively higher than under traditional negligence law. As a practical matter sponsors of enterprise liability systems try to avoid dramatic increases in aggregate insurance costs. See supra note 5. Theoretically, however, adoption of a DCE system might generally reduce consumption of medical services.

51. Again, the goal here is to incur optimal transaction costs. See supra note 41 and accompanying text.

52. To the extent the "sting" accompanying a negligence judgment imposes a real accident cost on the provider, it helps to accomplish the "shape up" objective of negligence law. The assumption here is that the award of money damages accomplishes all the deterrence necessary, and that the "sting" constitutes a wasteful transaction cost that the negligence system generates.

53. See supra note 41 and accompanying text.
between prescribed ages and otherwise in normal health)\(^5^4\) died during a routine appendectomy, liability would be imposed regardless of whether the surgeon in the individual case could have prevented the outcome. Often, some error on the part of the surgeon or the anesthesiologist would have been significant in causing death. Indeed, the probability of such a casual connection is essential if the liability system is to succeed in reducing the accident costs of poor quality treatment. But the DCE system would have to embrace the occasional aberration in order to avoid significant administrative problems.\(^5^5\)

Not only would the list of compensable events have to include some adverse outcomes that were beyond the control of the health care provider, but in the interests of lowering administrative costs it would also have to exclude some outcomes that were within the provider's control. In the main, these would be adverse consequences that are not discoverable until after a relatively long period following treatment. Simply abandoning a temporal cut-off would not accommodate these cases. "Death following surgery," without any time limit, would include too much. Equally clearly, "death following, and proximately caused by surgery" would entail the administrative difficulties described earlier.

One technique to avoid the extremes of overinclusion and underinclusion would be to link the injuries to the treatment in space, rather than time — that is, to describe specifically those misadventures during-treatment that could be expected to result eventually in injury or death and that are by their nature traceable to the treatment. Thus, the draftsman might describe the event causing a given patient's death as "damage to the ureter during gall bladder surgery."\(^5^6\) Even if the first symptoms of such a misadventure manifested themselves days or weeks later, while the patient was convalescing at home, it would be relatively easy to trace the patient's injuries to the earlier surgery. Admittedly,

\(^{54}\) The assumption here is that for patients in these general categories, the presenting condition is likely to cause adverse results that are beyond the control of competent providers. Some high risk patients would present conditions the risks of which are controllable, of course, and presumably they should be included in the DCE lists regardless of their high risk character. See infra note 98 and accompanying text.

\(^{55}\) Suppose, for example, that the roof of the operating room fell on the patient during surgery, killing him. Including such a result on a DCE list via a "death during surgery" description would not only avoid wasteful bickering that could be expected in other cases if exceptions were made for "mechanical failures" and the like, but also would help make clear the "no-fault" character of the liability being imposed and thus help to eliminate the "sting" to which I referred earlier. Of course, if an enterprise liability system covered the hospital and/or the building contractor, that system could be made primarily liable.

\(^{56}\) This was, in fact, an adverse outcome suggested by Professors Havighurst and Tancredi. See Havighurst & Tancredi, supra note 44, at 75–76.
the greater the reliance on spatial, as opposed to temporal, linkages, the greater the costs of determining causation are likely to be. But some adverse outcomes could be linked to medical treatment in this manner without generating unacceptable increases in administrative costs.

These techniques for avoiding errors of inclusion and exclusion have obvious limits. Adverse consequences that occur beyond the specified period of time and that cannot be traced unambiguously to a misadventure during treatment would have to be excluded from coverage. The draftsman might attempt to "fine tune" the boundaries of the DCE system by using variations of Dean Merrill's rebuttable presumption approach. But to invite inquiry into proximate causation on a case-by-case basis, even if the draftsman armed decisionmakers with presumptions of causation, would threaten the efficacy of most enterprise liability systems.

Determining the sources of claimants' injuries is most difficult in situations where exposure to toxic substances years earlier allegedly caused the claimants' injuries. The problems are not so much conceptual as evidentiary. Frequently, experts can conclude only that the chemical substances manufactured and distributed by a particular commercial enterprise contributed to the risk of injury; they cannot readily determine whether the individual claimant would have suffered the same injury had he never been exposed to those substances. If every claimant recovered fully in such cases, claimants as a class would be overcompensated; if every claimant were denied recovery, claimants as a class would be undercompensated. To avoid either result, and at the same time eliminate the high costs of case-by-case determinations of causation, the draftsman of an enterprise liability system covering such injuries might allow each claimant to recover a portion of his losses corresponding to the percentage by which the enterprise's activities increased his risks of injury. Admittedly, such an approach would not eliminate evidentiary difficulties; in many cases it would be difficult to determine the contribution of the relevant enterprise to the risk of injury. But that determination should be easier than determining the ac-

57. See Merrill, supra note 19, at 107–12. For an example of a proposed enterprise liability system that relies heavily on a rebuttable presumption approach, see Soble, supra note 3, at 796–800.

58. One commentator hopes that the enterprises will thereby be forced to divulge information otherwise unavailable to claimants. See Soble, supra note 3, at 744–47. But I believe the greatest part of the problem stems from the conceptual interdependency of the various contributing causes, not from any conspiracy to hide information.

tual causes of a particular injury in a given case.\textsuperscript{60}

One might object that this approach, even if feasible, would not provide complete justice in any case. Although it might properly treat victims as a class, on an individual basis it would undercompensate those victims who were actually injured by the enterprise in question, and would overcompensate those who were not.\textsuperscript{61} In assessing such an objection, we again must ask the ultimate question — whether these incongruence costs outweigh the transaction cost savings that the system realizes by not considering the causation issue on a case-by-case basis. In any event, if we assume that the contribution of the relevant enterprise to the risks in question is more than trivial but less than overwhelming, this "partial justice" approach seems preferable to either denying recovery altogether or allowing every claimant to recover in full.\textsuperscript{62}

In cases where a number of commercial enterprises are known to have contributed to the risks of injury from dangerous toxic substances, the draftsman might define the relevant "enterprise" to include all the commercial firms contributing to the relevant risks, and then allocate the burden of compensating victims among those firms in proportion to their contributions to the combined risks. If the toxic substances are commercially distributed products, the burdens could be allocated on the basis of various firms' market shares over the relevant time period. A recent decision by the Supreme Court of California approving such a market share approach in a class action brought against manufacturers of a generic prescription drug\textsuperscript{63} has generated considerable controversy.\textsuperscript{64} Although the California high court's handling of the boundary

\textsuperscript{60} Id. at 296–98.


\textsuperscript{62} If an enterprise's percentage contribution to the relevant risks were quite high, though less than 100% — if it were 85% for example — one might consider going ahead and awarding full recovery on the assumption that the 15% that in theory represents too severe a monetary sanction might well be offset as a practical matter by the failure of some victims to make claims. The Atomic Bomb Fallout Compensation Act of 1982, S. 1483, 97th Cong., 2d Sess. (1982), approved April 20, 1982 by the Senate Labor and Human Resources Committee, adopts an approach quite similar to the one described here. A claimant who establishes a "probability of causation" in excess of 50% between his cancer and the 1951-1962 Nevada atmospheric nuclear tests would receive compensation for 100% of his cancer-related injuries. Claimants who establish probabilities between 10% and 50% would receive a corresponding percentage of compensable damages and claimants who establish a probability of less than 10% would receive nothing.


\textsuperscript{64} For commentary approving the Sindell approach, see, e.g., Note, DES and a Proposed Theory of Enterprise Liability, 46 FORDHAM L. REV. 963, 1000–08 (1978); Note, Indus-
problems in that case leaves much to be desired, the underlying concept of market share cost allocation appears sound and could very well serve as the basis for a statutory enterprise liability system covering instances where the source of the unacceptably dangerous product that harmed a particular claimant cannot be traced.

But even if an enterprise liability system could be successfully implemented covering the products liability situations just described, it is doubtful that such a system would succeed in the critical cases involving injuries caused by discharging harmful commercial by-products into the environment. For one thing, it would be more difficult to monitor the harmful outputs of various enterprises than it would be to determine the market shares of those enterprises' products. For another, given the likelihood of synergistic effects in contexts such as air pollution, it would be more difficult to determine the extent to which any given output contributed to the risks that materialized in the claimant's injury.

These difficulties are reflected in the limited reach of the so-called Superfund legislation enacted by Congress in 1980 in response to the risks associated with hazardous substances released into the environ-


65. See generally Fischer, supra note 64, at 1658-59. Among the problems identified by Professor Fischer are the possibility that manufacturers who represent less than 100% of the market may be forced to pay 100% of the plaintiffs' damages, id. at 1645-46, and the likelihood that proof regarding the relevant shares of the market may be inadequate, id. at 1648-50.

66. A statutory scheme could presumably address the "nonjoined defendant" problem by requiring all manufacturers to contribute to the compensation fund, and could require prospective record keeping to help alleviate problems of proof. For a recent article approving of the market share principle on the assumption that each tortfeasor will be liable only for its individual contribution to the risk, see Robertson, Multiple Causation in Tort Law: Reflections on the DES Cases, 68 VA. L. REV. 713 (1982).

67. For a description of the difficulties encountered in trying to monitor outputs in the air pollution context, see generally Vickrey, Theoretical and Practical Possibilities and Limitations of a Market Mechanism Approach in Air Pollution Control (June 11, 1967) (paper presented at the annual meeting of the Air Pollution Control Association, Cleveland, Ohio), quoted in Wolozin, The Economics of Air Pollution: Central Problems, 33 LAW & CONTEMP. PROBS. 227, 236 (1968).


ment. The statute calls for a $1.6 billion Hazardous Substance Response Trust Fund, designed primarily to underwrite the cleanup of hazardous substances releases and the restoration of damaged natural resources.\(^{70}\) Taxes on petroleum products\(^ {71}\) and certain basic compounds used in the manufacture of chemical products\(^{72}\) will raise most of the $1.6 billion. General federal revenues will fund the balance.\(^{73}\) Persons found responsible for releasing hazardous substances into the environment will be held strictly liable to finance cleanup efforts and to reimburse the fund for monies already expended for that purpose.\(^{74}\) But such recoveries are not the primary source of funding.

It follows that the drafters of the Superfund legislation have avoided the boundary problems of concern in this article largely by abandoning the basic enterprise liability concept that gives rise to those problems. The main thrust of the statutory scheme is to make available immediately the funds necessary to clean up releases of hazardous substances and to effect repairs of significant harms to the natural environment. Assessing the responsible enterprises for costs of cleanup and repair is of secondary importance, and the statute does not attempt to compensate victims. I do not intend necessarily to criticize the Superfund legislation in this regard. Indeed, it may well have addressed a major social problem in workable fashion. In any event, in drafting the Superfund legislation Congress avoided the potentially intractable boundary problem described in this article by making little or no commitment to the principle of enterprise liability.

**B. Problems of Updating the Boundaries**

The time dimensions of enterprise liability raise issues that transcend the boundary problems I am considering.\(^ {75}\) Changes in circumstances will require many aspects of an enterprise liability system to be re-examined periodically. Benefit schedules that were reasonable when first implemented, for example, through time may become inadequate.\(^ {76}\) But the passage of time is especially likely to affect the boundaries that define the injuries for which the enterprise is liable. This

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71. *Id.* § 9631(b)(1)(A).
74. *Id.* § 9607.
75. See generally Henderson, *supra* note 2.
stems from the need to define those boundaries formally and specifically. Vague language such as "harms proximately caused by the enterprise" would not require periodic revision because it would invite the decisionmaker in any given case to consider a broad range of contemporaneous attitudes and circumstances surrounding the relevant events in deciding the causation issue. However, the draftsman of an enterprise liability system must avoid vague concepts such as proximate cause because they generate unacceptably high application costs. Instead, he must decide ahead of time, with relative specificity, which outcomes to include in, and which to exclude from, the system. Because such decisions leave less room for adjustment at the rule application stage, they will need to be reviewed periodically and revised to account for changes in knowledge regarding both the sources and the avoidability of the relevant risks. Without needed revision, errors of inclusion and exclusion will occur more frequently and the attendant incongruence costs will mount. In deciding how frequently to revise the boundaries, the costs of revising the boundaries must be weighed against the savings in incongruence costs.\textsuperscript{77}

The necessity for periodic review and revision of the boundaries is clearly evident in the proposed DCE system covering medical accidents. At the outset, a panel of medical experts would list as designated compensable events those adverse outcomes which are generally avoidable in the course of providing competent medical treatment. As new medical technology develops, some adverse outcomes that were unavoidable at the outset will become avoidable, necessitating revision of the DCE lists.

C. \textit{The Problem of Interest Group Manipulation of the Boundaries}

This section considers another unavoidable consequence of relying on formal enterprise liability boundaries: the necessity of protecting them from excessive interest group manipulation. When a system relies on vague concepts such as "proximate causation," it usually resolves policy issues at the rule application stage. Given the relatively low profile of such a policymaking process and the limited access of nonparties to that process, it is unlikely to become highly politicized.\textsuperscript{78}

\textsuperscript{77} And the optimal mix of revision costs and "incongruence-due-to-obsolescence" costs must in turn, be weighed against the marginal costs of case-by-case administration to determine how specifically the boundaries should be drawn. \textit{See supra} note 41 and accompanying text.

\textsuperscript{78} The statements in the text are limited to what may be referred to as "private law tort actions" brought by individual plaintiffs. So-called "public law" lawsuits, in which large classes of plaintiffs join to alter the structure of public institutions, typically are highly politicized. \textit{See generally} D. HOROWITZ, \textit{THE COURTS AND SOCIAL POLICY} (1977); Diver,
In contrast, especially with regard to the majority of enterprise liability systems that are established legislatively, the policymaking inherent in establishing and periodically revising the boundaries has a much higher profile. Indeed, the question is not whether the process of boundary establishment will become politicized — it will — but how the politics can be managed so as to maintain an appropriate balance of relevant interests.

If all the persons and groups of persons interested in the question of where the boundaries will be located were more or less equally informed and in positions to act effectively on the information, then customary parliamentary and administrative procedures presumably would achieve an acceptable balance. But such equality is rare. The majority of these liability systems will represent legislative responses to the risks generated by complex technology, and the regulated enterprises typically will possess a significant informational and strategic advantage over those whom the technology adversely affects. Either the regulatees will be allowed to establish the boundaries in the first instance, or they will be called upon to supply their expertise to the boundary draftsman. Thus, the political processes of defining and maintaining the boundaries of enterprise liability systems will be susceptible to interest group manipulation. I am not suggesting that these problems are unique to the establishment of enterprise liability. Administrative law scholars have been examining for many years the phenomena to which I refer. I merely want to emphasize the potential for abuse that inheres in drawing formal enterprise liability boundaries.

The proposed DCE system for medical accidents illustrates the potential for boundary manipulation. Presumably, the DCE lists would be drafted by medical experts who best can determine which adverse outcomes providers can generally avoid through competent medical treatment. These same experts, of course, would be affected directly by their own decisions, because those decisions would determine the pat-
terns of liability for their medical specialties. If self-interest dictated where the experts drew the boundaries, only those outcomes for which providers already were exposed to substantial liabilities under tort law would appear in the DCE lists. Providers would benefit from including those outcomes in the system because the schedules of recovery for successful claimants would, in most instances, be lower than under traditional tort law. On the other hand, providers would benefit from keeping off the lists outcomes for which they are not generally liable in tort.

How might the draftsman prevent these manipulations of the boundaries? I am not certain that he could. One's first reaction may be to suggest consumer input into the boundary establishment process; that certainly would be consistent with the recent trend in administrative law. Whether consumer input in the DCE system is feasible is open to serious doubt. Laymen almost certainly cannot undertake independent review. Medical malpractice attorneys probably could detect extremes of overreaching. They would notice, for instance, if the only outcomes included on the DCE lists were those that exposed providers to substantial liability under traditional negligence law. In addition to using this admittedly limited input from nonmedical personnel, administrators might be able to rely on "disinterested medical experts." I suspect, however, that such experts, like unicorns, are more easily described than discovered. The only way someone can gain the expertise necessary to prepare and update the DCE lists is to practice regularly in the relevant medical specialty; and anyone who practices regularly in the specialty to which the DCE system applies is hardly "disinterested."

82. See supra note 5.
83. Outcomes included on the DCE lists expose providers to strict liability. If the provider's exposure under negligence law for a particular outcome is relatively small, he will benefit by keeping it off the lists.
84. See authorities cited supra note 81.
85. Some writers have argued in favor of using impartial medical witnesses to assist judges and juries in tort actions under traditional negligence principles. See, e.g., Peck, Impartial Medical Testimony — A Way to Better and Quicker Justice, 22 F.R.D. 21 (1959); Zeisel, The New York Expert Testimony Project: Some Reflections on Legal Experiments, 8 STAN. L. REV. 730 (1956); Note, The Doctor in Court: Impartial Medical Testimony, 40 S. CAL. L. REV. 728 (1967). It should be observed that the experts in those contexts are not called upon to reach decisions that directly affect their own welfare, as they would be in the DCE context.
86. Despite these problems, it may be possible to develop procedural safeguards to insure that the lists are as reliable as possible. For example, the legislative choice of experts should involve input from responsible medical groups such as the American Medical Association that includes a statement of the individual's reliability and professional standing. Another way to remove bias at the state level is to use out-of-state experts who the state
Beyond trying to provide a proper balance of inputs in the administrative boundary establishment process, the draftsman could rely on judicial review to assure that the DCE lists conformed to the underlying objectives of the liability system. Whether and to what extent such reliance is justified are questions that are outside the scope of this article. Given the extremely technical nature of the judgments reflected in the DCE lists, I would be very surprised if courts could perform anything but a superficial review.\(^8\)

II. Coping with Potentially Counterproductive Strategic Responses to the Boundaries

The interest group activities described in the preceding section are aimed at influencing where and how the boundaries are drawn. In the situations examined in this section, claimants and enterprises accept the boundaries as given, but try to avoid their intended effects. Hopefully, many of the behavioral changes induced by the enterprise liability boundaries would be the sorts of socially beneficial changes intended by the draftsman. As the following subsections explain, however, some behavioral effects of boundary establishment would represent distortions that would tend to thwart, rather than promote, the intended objectives of enterprise liability.

A. Ex Ante Behavior by Enterprises and Their Clientele

The strategic behavior of concern in this subsection occurs before the fact of accidental injury, as both the enterprises and their clientele try to minimize the financial burdens that the liability system seeks to impose on them. These behavior patterns derive from the different financial consequences of a given accidental injury, depending on whether the injury is included in, or excluded from, the enterprise liability system.\(^8\) As long as the injuries associated with closely substitutable activities result in the same liability, the decision to include or exclude them will not influence choices among or between those activities. But if the injuries associated with closely substitutable activities are treated differently — if some are included within and some excluded from the enterprise liability system — the boundaries of enter-

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88. I should make clear that this general point applies equally well in the context of the ex post behavior of claimants described in the next section.
prise liability will influence enterprises to choose activities associated with excluded injuries over activities associated with included injuries.\textsuperscript{89} To the extent that the liability system thereby induces enterprises to engage in less risky activities, it will enhance the deterrence objectives of enterprise liability. However, if the favored activities to which enterprises turn in response to the boundaries are just as risky as the activities disfavored by the enterprise liability system, the deterrence objectives of enterprise liability will be undermined.\textsuperscript{90} Indeed, to the extent that the enterprise liability system induces enterprises to turn to substantially riskier behavior, it actually may be counterproductive.\textsuperscript{91}

A concrete example will clarify this problem. Let us return to our earlier "fall down the stairs" hypothetical. Assume that we have implemented an enterprise liability system that includes injuries caused by television receivers\textsuperscript{92} and that we have prepared a list of accidental injuries for which television receiver manufacturers are strictly liable. Included in the list of compensable events are glass breakage-related injuries of the sort our claimant, C, has suffered. Excluded from the list, due to the difficulties of establishing causation, are visual impairments associated with long-term television viewing. We previously have recognized the sorts of "incongruence costs" that would be generated by excluding television-related visual impairments, and will assume that normally it would make sense to incur those costs in order to avoid the even greater incongruence costs of including all visual impairments or the transaction costs of determining causation on a case-by-case basis.

Now let us assume, however, that the same technology that reduces the risks of glass breakage-related injuries also increases the risks of visual impairment — that is, let us assume television receiver manufacturers can guard against glass breakage-related injuries, for which the manufacturers are strictly liable, by adopting designs that cause a higher incidence of visual impairments for which the manufac-

\textsuperscript{89} At least if one assumes that the enterprises' exposures to liability are greater for included activities.

\textsuperscript{90} The injuries associated with activities favored in this manner may have been excluded from the enterprise liability system because the relevant enterprises cannot control them, or because their inclusion would generate unacceptably high transaction costs.

\textsuperscript{91} See generally Henderson, supra note 2, at 1063.

\textsuperscript{92} In actuality, an enterprise liability system covering such injuries would not be limited to television receivers, but would include a broad range of commercially distributed products.
turers are not legally responsible. On this assumption, including glass breakage-related injuries in such an enterprise liability system actually would be counterproductive if the social costs of the increased visual impairments outweighed the savings in glass breakage-related injuries.

What can the draftsman do to avoid these sorts of counterproductive substitutions? The most obvious solution would be to anticipate such responses and to treat similarly injuries caused by closely substitutable, equally risky activities. In our hypothetical liability system covering television receiver manufacturers, for example, the draftsman probably should include some of the more serious types of visual impairments even if their inclusion generates incongruence or transaction costs significant enough to justify excluding them but for the substitution effects. In the alternative, the draftsman could exclude glass breakage-related injuries from the enterprise liability boundaries — manipulations are prevented by treating substitutable modes of behavior similarly, not necessarily by including them within the enterprise liability boundaries. But given the underlying objective of requiring enterprises to pay for the harm they cause, the first-mentioned solution — including some elements of visual impairment — is probably preferable. If the costs of including visual impairment cases are simply too great, the draftsman might consider leaving glass breakage-related injuries within the system and proscribing specifically, by regulation, those alternative modes of design shown statistically to expose television viewers to unacceptably high risks of visual impairment.

The proposed DCE system covering medical injuries might cause counterproductive substitution effects whenever a health care provider is in a position to substitute for a treatment likely to cause a listed adverse outcome a treatment equally (or more) likely to cause an unlisted (and equally adverse) outcome. We could expect health care providers acting in their own interests to make such substitutions even when they increase the overall costs of treatment, so long as someone else bears those costs without objection. To prevent these sorts of substitution

93. I have no reason to believe that the factual premise of this hypothetical is true — it is used here merely as an example for the sake of discussion.


There are several reasons for believing that health care providers would, to some extent at least, be able to pass costs on in this fashion. For one thing, patients are not expert enough to second-guess the decisions of the providers, especially where the costs of alternative, unlisted treatments are nonmonetary costs. For another, third-party insurance frequently picks up the monetary costs, diffusing the negative financial effects on the individual patient. The situation may be somewhat different in the context of consumer products,
effects, the DCE draftsman would have to include within the list of compensable events some adverse outcomes that are not generally avoidable in the course of good medical care, but that are associated with modes of treatment that are closely substitutable for modes that produce controllable (and hence includable) adverse outcomes. The draftsman would have to draw the DCE lists so that they treat equally costly alternative procedures roughly the same with respect to the inclusion and exclusion of their likely outcomes. To some extent, this would cut against the general objective of including avoidable, and only avoidable, outcomes. But if the draftsman is to avoid potentially self-defeating substitution effects, he would have to reach an acceptable compromise.

The most difficult problem of this sort would arise when the health care provider decided not to treat at all because the only available treatment involved substantial risks of listed adverse outcomes. The difficulties of attempting to include the results of nontreatment on the DCE lists would force the DCE system to rely on a combination of traditional negligence liability for egregious refusals to render care, and the opportunity for the provider to charge concomitantly more for high-risk treatments. At least if one assumes that consumers of medical services are able to appreciate the implications of receiving treatment for high-risk ailments, providers specializing in high-risk cases should be able, appropriately enough, to pass on the extra costs and thus avoid being unfairly penalized.

where price differentials based on relative risks may have a more telling impact on demand for particular products. See infra notes 100–01 and accompanying text.

95. For example, a physician may confront a choice between surgery and drug therapy. If some of the major adverse effects of surgery are included on the DCE lists, and the adverse effects of drug therapy are excluded, the DCE system will create incentives for the physician to choose the latter form of treatment over the former, or at least to advise the patient to make that choice.

96. Including the results of failures to treat would be difficult for the same reasons that tracing the consequences of failures to act is generally difficult in our tort system. Every case presents hypothetical, "what would have happened if . . . ?" questions that compound the already problematic task of deciding whether the provider breached his duty to act.


98. A basic assumption underlying the DCE proposal is that consumers of health care services are to some extent price sensitive. See supra note 50. Thus, it is assumed that when providers charge significantly different fees for the same services, consumers will tend to be influenced in favor of the one who charges less. (This assumption would be bolstered if providers were required to disclose their liability premiums). This is not inconsistent with the earlier assumption in note 94 supra, that consumers are not able to make "apples and oranges" comparisons among and between various modes of treating the same ailment, nor is that earlier assumption inconsistent with the present assumption that consumers usually can appreciate the fact that they present a high-risk condition that calls for a high-cost specialist.
To this point, I have focused on enterprises' attempts to avoid their "fair share" of financial responsibility for the injuries they cause. Another potential source of distortion is the clientele's behavior in choosing enterprises from which to purchase goods and services. Even if the draftsman succeeds in blunting the efforts of regulated enterprises to avoid responsibility, the clientele of those regulated enterprises will undermine the objective of controlling the social costs of accidents if they can substitute different, unregulated enterprises as sources of relatively less expensive — but just as risky — goods and services. If the imposition of enterprise liability increases the liability costs of relatively risky enterprises,99 the prices to consumers of the goods and services those enterprises supply presumably will reflect the increased costs.100 If consumers have access to goods and services that are substitutable for the regulated goods and services, but that are supplied by enterprises not subject to strict enterprise liability, the unregulated goods and services will enjoy a price advantage in the market. To the extent that consumers tend to undervalue the insurance components of regulated goods and services,101 they will underconsume those goods and services relative to the unregulated substitutes; and to the extent that the unregulated substitutes are just as risky as their regulated counterparts, the accident cost reduction objectives of the enterprise liability system will be frustrated. Indeed, if the unregulated, and therefore overconsumed, goods and services are substantially riskier than those produced by the enterprises subject to strict enterprise liability, the imposition of enterprise liability actually may be counterproductive.102

The solution to this problem of market distortions is to subject enterprises producing equally risky goods and services that are close substitutes for one another to the same liability rules. But there are important sources of substitute goods and services that, for some reason, strict enterprise liability cannot cover. In the main, these are non-commercial, nonprofessional, "do-it-yourself" activities that a draftsman cannot, as a practical matter, subject to formal regulation.103

99. This assumption may not obtain, to the extent that the schedules of benefits are adjusted to keep total costs in line. See supra note 5.


101. This tendency may be produced by two characteristics of consumers: inability to assess the risks associated with commercially distributed goods and services, and an unwillingness to invest in adequate insurance to cover risks that they perceive. Regarding the former characteristic, see generally NATIONAL COMM'N ON PRODUCT SAFETY, FINAL REPORT 63 (1970). Regarding the latter, see generally J. O'CONNELL, supra note 4, at 73–76.

102. Cf. supra note 91 and accompanying text.

103. See supra note 2 and accompanying text.
Whenever such unregulable activities can provide substitutes for a regulable enterprise's goods and services, the draftsman should consider whether to withhold strict liability from the latter enterprises so as to avoid potentially counterproductive market distortions.104

B. Ex Post Strategic Behavior by Claimants

This section examines behavior patterns that occur after an accidental injury, as claimants try to maximize the benefits available to them from the various liability systems that arguably apply to their situations.105 Just as inclusion of an injury within the enterprise liability system impacts financially on the enterprise and its clientele in ways that may induce ex ante distortions in their behavior, so inclusion of the injury may induce ex post distortions in the injured claimant's behavior. The claimant may manipulate the relevant facts, attempting to characterize his claim in a way that brings greater benefits under either the traditional fault or the enterprise liability system; or he may combine claims under both liability systems in ways that tend to thwart the underlying objectives of enterprise liability. To some extent, of course, these problems derive from failure to define the relevant enterprise liability boundaries with sufficient specificity. But the problems transcend vagueness in the boundary definitions.

The concept of a boundary implies drawing formal distinctions between factually similar cases. When these distinctions lead to substantially different legal consequences, both claimants and enterprises have incentives to strain the labelling mechanism to achieve more favorable results. When the pressures are directed at the boundaries themselves, we may regard them as part of the "politicization" problem discussed above. When they are directed at the facts of a particular case, however, they are less political than mechanical. The enterprise liability draftsman's task is to design boundaries that discourage, or at least do not encourage, manipulations of evidence in individual cases.

The key to success in this endeavor is to draw specific boundaries in terms of objectively verifiable referents that the claimant cannot control.106 Coverage should not depend on the claimant's subjective state

104. Perhaps the clearest example in the product liability area concerns the question whether strict liability should be imposed on commercial sellers of used products, such as used automobiles. Given the existence of an active noncommercial market in such products, imposing strict liability on commercial sellers may drive purchasers into the unregulable (and possibly riskier) private market. See generally Henderson, supra note 2, at 1081–85.

105. Enterprises also engage in ex post strategic behavior. The emphasis here is on claimants because typically they take the initiative in this regard.

106. Specificity and verifiability are separate but related concepts. States of mind, for
of mind. Consider, for example, our earlier fall-down-the-stairs hypothetical. Inclusion of the case within the enterprise liability system should not depend on whether the claimant suffered mental upset. Moreover, inclusion should not depend on factors that are substantially within the claimant's control, such as whether the claimant has missed a certain number of workdays, or has incurred a certain minimum total in medical expenses.

The enterprise liability draftsman also should anticipate and try to prevent claimants bringing separate claims under the enterprise liability and the traditional negligence systems. One assumption underlying enterprise liability is that a system should provide exclusive remedies for injuries included within it. To allow several claims would undermine the objective of reducing transaction costs and would, to the extent that duplicative recovery resulted, unjustly enrich claimants and their attorneys.

Enterprise liability legislation can deal with the problem of an injured claimant initiating both a traditional tort action and an enterprise liability claim against the same enterprise in the same jurisdiction. For example, the enterprise liability statute might require claimants suffering injuries arguably covered by the enterprise liability system to initiate a claim under that system before commencing a tort action. The statute could provide further that a finding of coverage under the enterprise liability system would preclude a subsequent action in tort, leaving the enterprise liability claim as the exclusive remedy. A finding of noncoverage similarly should bind the claimant, the enterprise, and the latter's liability insurer. In this connection, it might be advisable to allow the tort liability insurer, if a separate entity from the enterprise liability insurer, to participate in the preliminary determination regard-


108. One technique to reduce incentives for claimants to generate false "losses" in this way is to pay only a reduced percentage of a claimant's losses. See R. KEETON & J. O'CONNELL, supra note 3, at 281-83.


110. Mechanically, the tort plaintiff could be required to include in his complaint an allegation that an enterprise liability claim had been made and denied.

111. Bind them to the finding, not to liability.
When more than one enterprise liability system applies to a given injury, the draftsman should provide a mechanism to determine which of the systems should contribute to the claimant's compensation. Although the enterprise liability and traditional tort systems probably should be segregated fully, several enterprise liability systems might be interfaced so that each would contribute to the claimant's recovery in instances of dual, or multiple, coverage.

Another problem that an enterprise liability draftsman should anticipate relates to the possibility that claimants will bring both enterprise liability claims against covered enterprises and collateral tort actions against defendants who are not covered by enterprise liability. A draftsman could prevent double recovery by requiring a claimant to offset recovery from one source against recovery from the other. Conceivably, either recovery could offset the other, but allowing the enterprise liability recovery as an offset against tort recovery would be more consistent with the objectives of enterprise liability.\(^{113}\) Even though such an offset would preclude the claimant's double recovery, however, it would not adequately allocate responsibilities among the relevant enterprises. For example, the enterprise held liable in tort might have a right of indemnity against the enterprise covered by the enterprise liability system. If the injured claimant succeeded in his collateral tort action, and if the tort defendant succeeded in his action for indemnity against the enterprise covered by the enterprise liability system, the covered enterprise would have lost the benefit of an enterprise liability system designed to provide an exclusive remedy.\(^ {114}\)

Several approaches to this problem are available. Denying the indemnity rights of those held collaterally liable in tort might not suffice to alleviate the problem because those held liable in tort frequently may be in a position to pass to the covered enterprises by contract a

\(^{112}\) A "vouching in" provision similar to that relied on in article 2 of the Uniform Commercial Code could be provided. See U.C.C. § 2–607(5)(a) (1976).

\(^{113}\) Given the commitment of the enterprise liability system to the principle that covered enterprises should pay for all of the harm they cause, see supra note 1 and accompanying text, arguably that system's coverage should be primary.

\(^{114}\) This is a very serious problem currently in connection with the interface between strict products liability and worker compensation. When an employee is injured while working with machinery in the workplace, and recovers from the manufacturer of the machine, may the manufacturer recover from the negligent employer who is otherwise immune from tort liability to the injured employee? For a good discussion of the problems overlapping workers' compensation and product liability, see Lambertson v. Cincinnati Corp., 312 Minn. 114, 257 N.W.2d 679 (1977); Weisgall, Product Liability in the Work Place: The Effect of Workers' Compensation on the Rights and Liabilities of Third Parties, 1977 Wis. L. REV. 1035.
major portion of the relevant liability costs. One approach to this problem would be to deny rights in tort against all tortfeasors with respect to injuries covered by at least one enterprise liability system. Perhaps the ideal solution would be for the legislature to implement separate liability systems covering the enterprises against whom a claimant is likely to bring a collateral tort action and to provide some statutory mechanism for allocating the enterprise systems' contributions to claimants' recoveries.

More difficult problems would arise when claimants initiate separate claims proceedings against the same or different enterprises in different jurisdictions. Even if the enterprise liability legislation prevents a claimant from filing separate claims within its own jurisdiction, the legislation cannot assure that its provisions will be given extraterritorial effect. Thus, a claimant might initiate an enterprise liability claim in a state recognizing such rights of recovery, and commence a tort action in another state in which traditional tort law remains the only basis of liability. Because many of the commercial enterprises likely to be subject to enterprise liability coverage conduct business in every state, the claimant could serve the defendant with process in the common law tort jurisdiction.

If the tort jurisdiction applied its own law and allowed full tort recovery, the claimant could end up being overcompensated. Moreover, the tort liability costs might, in part at least, be passed on to the covered enterprise via contract.

What, if anything, can the draftsman do to deal with these difficulties? The claimant might be required to reimburse the enterprise liabili-

115. In the example discussed in the preceding footnote, the machinery manufacturers will be able to pass on a portion of their liability costs, at least, to the employer-purchasers of new machinery.

116. In the DCE context, for example, nurses could be immune from liability in all cases where at least one physician was strictly liable. The legitimacy in principle of this approach depends on the extent to which the covered enterprises meaningfully control the risk-creating activities of the actors immunized from tort liability. See supra notes 6 and 11 and accompanying text.

117. This would be a way of coping with situations in which the relevant enterprises did not exert meaningful control over one another's risk-creating activities.

118. Under the full faith and credit clause, U.S. Const. art. IV, § 1, a state has little power to bind another state, see H. Goodrich, HANDBOOK OF THE CONFLICT OF LAWS § 204, at 389 (E. Scoles 4th ed. 1964). If enterprise liability rules are merely procedural, then they will have no extraterritorial effect. See RESTATEMENT (SECOND) OF CONFLICTS OF LAWS § 122 (1971). If viewed as substantive law, then the extraterritorial effect of the legislation will depend on which choice of law the states involved use. See H. Goodrich, supra, § 6, at 6-7.

ity insurer from any out of state tort recovery. Beyond this admittedly imperfect solution, there is little that the draftsman of an enterprise liability statute designed for enactment at the state level can do in our federal system to assure that foreign courts will recognize the exclusivity of the enterprise liability remedy. In the end, reliance must be placed on the sense of comity that may exist, or that can be fostered, in the courts and legislatures of other jurisdictions. If the legislature in the "home" state limits the application of its enterprise liability system to accidental injuries occurring within its borders, and stands ready to give comity to reasonable efforts of other states to create similar enterprise liability systems whose remedies purport to be exclusive, one ought to expect a fairly encouraging level of interstate cooperation. Indeed, a uniform state law approach to the problem might be feasible. To the extent that such comity is not forthcoming, and to the extent that the resulting duplication of claims proceedings and recoveries constitutes a serious problem, it may be necessary for the federal government to implement nationwide enterprise liability systems.

III. How the Boundary Problems Will Affect the Future of Enterprise Liability

This section will assess the likely effects of the boundary problems on the question whether, rather than how, enterprise liability will be implemented in the future. One should begin such an assessment with the general observation that, in most instances, problems associated with an endeavor reduce the probability that anyone will undertake the endeavor. On this view, the boundary problems of enterprise liability, in and of themselves, could only tend to reduce the likelihood that courts and legislatures will turn to such liability systems as methods of controlling technological risks. And yet some of the boundary problems examined in this article call for solutions involving expan-

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120. For discussions of subrogation by medical insurers against the proceeds of tort recoveries, see generally Capwell & Greenwald, Legal and Practical Problems Arising from Subrogation Clauses in Health and Accident Policies, 54 MARQ. L. REV. 255 (1971); Note, Insurance Subrogation in Personal Injury Torts, 39 OHIO ST. L.J. 621 (1978).

121. It is imperfect to the extent that it defects the objective of making the enterprise liability coverage primary. See supra note 113.

122. See authorities cited supra note 118.

123. Given the recent experience with uniform laws approaches in the torts area — for example, the failure of passage of the Uniform Product Liability Act in a single state — I am very doubtful that a uniform state law approach would succeed here.

124. Clearly there are no constitutional barriers to federal incursions into the tort/compensation area. See, e.g., Usery v. Turner Elkhorn Mining Co., 428 U.S. 1 (1976).
sions, rather than contractions, of enterprise liability. For example, the ex ante substitution effects on enterprises and their clientele might be minimized by including greater numbers of injuries within the reach of enterprise liability.125 And one solution to the problem of ex post manipulations by claimants involves extending enterprise liability to all of the actors and activities against whom the claimants might bring ancillary tort actions.126

It follows that the boundary problems addressed in this article impart something of an "all or nothing" quality to the question whether and to what extent enterprise liability will be implemented in the future. At the beginning, the boundary problems will weigh against such implementation. But once enterprise liability systems are adopted, the mood and momentum generated by boundary problems could be expected to shift to one of "since we've come this far, we should go further." On this view, boundary problems would be greatest early in the transition period between the traditional negligence system and broad implementation of enterprise liability.

Notwithstanding the tendency for boundary problems to exert pressures toward expansions of enterprise liability, sweeping implementation of such liability systems is unlikely in the foreseeable future. An important reason for my pessimism is my assumption that the American public is, and probably will remain for the indefinite future, unwilling to accept the increases in liability insurance premiums that large-scale implementation would generate.127 Whether this assumption is correct is beyond the scope of this article. If it is, the major effect of the boundary problems described in this article will be in helping to determine which enterprises, from among the many presenting difficulties under traditional negligence liability rules, are likely to be selected for strict enterprise liability treatment.

It is fairly easy to identify the areas in which negligence law is currently encountering substantial difficulties: commercial sellers' and suppliers' liability for defectively designed and marketed products;128 liability of commercial and professional providers of services, including liability of health care providers for medical malpractice;129 and liabil-

125. See supra note 95 and accompanying text.
126. See supra note 117 and accompanying text.
127. I do not have hard data to support my conclusion in this regard. Professor O'Connell shares my view. See J. O'CONNELL, supra note 4, at 73-76.
128. See generally Henderson, supra note 32.
129. See, e.g., Berkman, Alternatives to Medical Malpractice Litigation, 12 Forum 479 (1977); Schrero, Patient Compensation Funds: Legislative Responses to the Medical Malpractice Crisis, 5 New Eng. J.L. & Med. 175 (1979); Comment, An Analysis of State Legislative Responses to the Medical Malpractice Crisis, 1975 Duke L.J. 1417.
ity of commercial and governmental enterprises for environmentally harmful activities, including the improper disposal of hazardous wastes. Many of these areas require solutions to the problems arising from the adverse impacts of sophisticated technology on social welfare; in all of them, the courts are floundering in attempting to apply traditional tort law principles.

Consistent with the analysis in this article, enterprise liability is more likely to be implemented in those areas where the boundary problems are relatively less difficult, and vice versa. Thus, in the areas of products liability concerned with the design and marketing of products, new systems of enterprise liability are more likely to be implemented in connection with prescription drugs, where the causal connection between the product and the claimant's injuries can be determined without questioning whether the manufacturer was at fault. They are less likely to be implemented in connection with products such as durable goods, motor vehicles and household appliances, where resolutions of the causation issue would be more difficult. Given the significance of the boundary problems of enterprise liability in these product categories, legislatures concerned with the rising costs of accidents and accident reparation systems are more likely to rely on combinations of administrative regulation and reform of the rules governing negligence-based liability.

The implementation of enterprise liability systems covering commercial and professional providers of services will depend on the feasibility of compiling lists of specifically described adverse outcomes for which such providers could be strictly liable. The DCE Project conducted by the A.B.A. Innovative Alternatives Subcommittee suggests that in the field of medical services, at least, such lists are feasible.

130. See generally Soble, supra note 3, at 703-14 (recommending a new model of administrative compensation).
131. See generally Henderson, Expanding the Negligence Concept: Retreat From the Rule of Law, 51 IND. L.J. 467 (1976).
132. See supra notes 19-23 and accompanying text. For a description and critique of drug injury compensation systems in West Germany, Sweden, and Japan, see Fleming, supra note 8.
133. See supra notes 24-25 and accompanying text.
136. See ABA FEASIBILITY STUDY, supra note 3, at 5, 11-45.
Whether medical services are unique in this regard is not clear,\(^{137}\) nor is the answer to the question whether, even in connection with medical services, other boundary problems would prove insurmountable. At the time of this writing, the so-called "medical malpractice crisis" of the mid to late 1970’s appears to have subsided.\(^{138}\) Should that unhappy circumstance return to haunt the negligence liability system, and should the need arise to replace the negligence system with a more workable and less wasteful alternative, I strongly urge that the DCE Project be carried to the next step of pilot implementation.\(^{139}\)

As for the prospects of relying on enterprise liability as a regulatory tool for controlling environmentally harmful conduct, the analysis in this article counsels against optimism. The problems associated with trying to measure various enterprises’ contributions to claimants’ injuries — indeed, the problems associated with measuring the injuries — are probably insurmountable. Statutory schemes calling for cleanup efforts funded by taxes levied on industrial enterprises, such as the recently enacted Superfund legislation, are to be expected. But for such schemes to be workable, they must depart significantly from the principle of enterprise liability.

**CONCLUSION**

On the premise that the next several decades will bring increased reliance on strict enterprise liability as a regulatory tool for controlling the risks of injury associated with highly technological activities, I have identified a set of problems — to which I have applied the term "boundary problems" — that will confront future draftsmen of enterprise liability systems. I have divided these boundary problems into two categories: first, the problems associated with establishing and maintaining enterprise liability boundaries; and second, the problems associated with strategic behavior by enterprises and claimants in response to the boundaries after they have been established. The most significant problem in the first category derives from the necessity of describing the adverse consequences of technology for which enter-

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137. Medical procedures are relatively standardized, and the numbers of outside factors are limited. Consensus regarding the controllability of events may be attainable to an extent not attainable in connection with other less standardized activities.


139. Pilot programs could be established in connection with an organized patients’ group, such as an employees’ organization, or a prepaid medical services plan, such as a Health Maintenance Organization. In those contexts, a DCE system could be worked out via contract, without the necessity of enabling legislation. See ABA Feasibility Study, supra note 3, at 58–59.
prises will be strictly liable. A significant force behind the anticipated increase in reliance on enterprise liability will be the desire to reduce the transaction costs generated by the traditional negligence system. To reduce transaction costs, enterprise liability systems must describe specifically the injuries for which various enterprises are responsible. At the same time, in order to deter socially undesirable activities, enterprise liability systems generally must limit liability to those adverse outcomes over which the relevant enterprises exercise meaningful control. The inherent tension between the need to be specific and the need to avoid arbitrariness will, in some contexts, confront draftsmen with problems that defy solution.

Viewed philosophically, the boundary problems examined in this article present an intriguing question: Are we ready to cut back on our commitment under traditional negligence law to the principle of “tailor-made justice in every case” by adopting alternative liability systems with formal boundaries that explicitly require different cases to be treated similarly and similar cases to be treated differently? Whatever the underlying reality, the negligence system maintains the facade, at least, of adjusting its outcomes precisely to fit the facts of individual cases.\footnote{140} In contrast, enterprise liability maintains no such facade; it rubs our noses, so to speak, in the necessity of drawing lines and sticking to them. Viewed in this manner, the question whether enterprise liability will be implemented in the future involves, in part at least, the question whether we are now, or will ever be, willing to grapple face to face with the implications of drawing formal boundaries. Recent experiments with no-fault automobile accident compensation systems provide little, if any, evidence that we are ready to face the hard choices involved in implementing enterprise liability,\footnote{141} the dominant movement in liability law over the last several decades has been, if anything, \emph{away from}, rather than \emph{toward}, rule formality.\footnote{142} These philosophical

\footnote{140. Whether the underlying reality conforms to the appearances in this regard is somewhat questionable. For criticisms of recent trends in negligence law, see generally Henderson, \emph{supra} note 131; \emph{State of N.Y. Ins. Dep't, Automobile Insurance . . . for Whose Benefit?} (1970).}

\footnote{141. Many of these systems were so compromised in the legislative process as to be scarcely recognizable as “no-fault” systems. The Massachusetts system is a good example. Originally enacted primarily to hold down insurance rates, the statute contains a number of provisions that run counter to the principles of enterprise liability — e.g., the exemption from tort liability does not apply if the accident victim incurs more than $500 in medical expenses, a condition that is easily satisfied in almost every case involving nontrivial injuries. For a criticism of the auto no-fault systems, see Epstein, \emph{Automobile No-Fault Plans: A Second Look at First Principles}, 13 CREIGHTON L. REV. 769 (1980).}

\footnote{142. \textit{See generally} Henderson, \emph{supra} note 131, at 524–26 (advocating the necessity of retaining sufficient measure of formality in rules governing liability).}
considerations, together with the more practical boundary problems discussed in this article, raise doubts concerning the extent to which enterprise liability will play a dominant or even a significant role in managing technological risks in the future.