I. MICROSCOPES AND TELESCOPES

"Mr. Justice Brandeis is . . . the master of both the microscope and the telescope."¹ So Charles Evans Hughes sought to explain Brandeis's greatness as a lawyer. The power of Hughes's observation lies in its recognition of the range of tasks that lawyers are required to perform in order to serve the interests of their clients and those of society at large. On the one hand, every lawyer must be in control of the particular facts of a given case: concepts without precepts are indeed empty. On the other, every lawyer must have an eye on the theoretical structures that make the facts relevant: precepts without underlying concepts are indeed blind. Good legal analysis turns on the ability to marry the in-depth understanding of the particular case to the overall structure of the system.

The aphorism about Brandeis does not apply only to lawyers who practice within the system. It also should influence the style of legal scholarship. By and large academic lawyers are in the business of generating theories that have greater explanatory power than their rivals. Concepts are our business. In some cases the effort is positive, to describe the law as it is; in others the effort is normative, to describe the law as it should be. In practice, of course, the lines between the positive and normative blur precisely because no one finds it easy to defend a normative theory that judges and lawyers have uniformly rejected in practice.²

This urge to do general theoretical work, both positive and normative, has led to a distinct preference for the telescope over the microscope. Most modern legal theory is system building that seeks to locate the dominant features of legal rules in comprehen-

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¹ Charles Evans Hughes, Mr. Justice Brandeis, in Felix Frankfurter, ed., Mr. Justice Brandeis 3 (1932).
sive, if not formal, models of economic thought or political theory. This recent move toward constructing wide-ranging theories represents a significant departure from the traditional mode of tort scholarship, which directed its attention to analyzing and resolving marginal cases that did not fit easily within conventional doctrines. The traditional theory of proximate causation, for example, first assumed that it was self-evident that a person was responsible only for the harm he had caused, and then asked how that insight carried over to hard cases where acts of God or the deliberate actions of third persons intervened between the defendant's conduct and the plaintiff's injury. The larger question—why there should be a causation requirement at all—was never explicitly addressed. Similarly, the traditional analysis of negligence assumed that "fault" was essential to liability and then asked the marginal questions: for example, was the anxious or inexperienced driver truly negligent or did his conduct show reasonable care, if pardonable inadvertence?

Today, on the other hand, legal scholarship primarily—and rightly—focuses on foundational issues. Both corrective justice and consequentialist theories seek to identify some central theorem to unify not only separate rules within a given branch of law but, more ambitiously, entire branches of law with each other.

In its quest for comprehensive legal theories, however, contemporary legal scholarship often neglects the necessary linkages between the telescope and the microscope. Theories of corrective justice, for example, often make very strong assumptions about the practical nature and the operation of the legal system. They tend, if only implicitly, to ignore the costs of litigation, both upon the parties and upon the courts, and they assume that the error rate in

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3 The opening words of the second edition of Gregory and Kalven read:
It is elementary policy that a defendant should not be held liable for the harm the plaintiff complains of unless the plaintiff can at least show that the defendant in fact caused the harm. The problem of connecting the defendant up with the harm is thus an approximate starting point for the study of tort law.

4 This is certainly the flavor of much of my own earlier writing, see Richard A. Epstein, A Theory of Strict Liability, 2 J. Legal Stud. 151, 203 (1973) ("[I]t is better to see the law of torts in terms of what might be called its political function. The arguments made here suggest that the first task of the law of torts is to define the boundaries of individual liberty."); but less of my more recent writing, see Richard A. Epstein, Nuisance Law: Corrective Justice and Its Utilitarian Constraints, 8 J. Legal Stud. 49, 74-102 (1979); Richard A. Epstein, The Legal and Insurance Dynamics of Mass Torts, 13 J. Legal Stud. 475, 506 (1984). For a criticism of my theory of causation, see John Borgo, Causal Paradigms in Tort Law, 8 J. Legal Stud. 419 (1979).
litigation is not only low, but unaffected by the choice of legal rule. In essence there is a often a temptation to translate a moral imperative into a legal norm, without fully addressing the question of whether the magnitude of the moral concern is large enough to warrant invoking the coercive power of the state.

The same type of naive assumptions can be found in economic inquiries that begin with the fountainhead of modern law and economics, the Coase theorem. The first part of the theorem states that in a world without transaction costs, the allocation of resources will not be dependent upon original assignment of rights. If rights are properly allocated, they will stay put. If they are not, then by a (never-ending) series of (costless) transactions they will gravitate to their highest value use. The second part of theorem is far messier and in practice far more important. It says that where transaction costs are positive, rights once assigned by the state may not be reassignable in practice by private parties, as the gains from any reassignment of rights may be less than the private costs of bringing that reassignment about. Because of the costs of reassignment, the rule of liability really does matter: initial assignments have a tendency to persist even after their usefulness is outlived. One central task of the legal system is therefore to develop a set of rules and institutions that minimize the sum of the transaction costs, if only to facilitate voluntary transactions.

Transaction costs also play a vital role in particular disputes that arise under the rules that the legal system, rightly or wrongly, has chosen to enforce. Coase originally illustrated his theorem with cases drawn from the law of torts, specifically nuisance, and it is tort theory that still provides one of the best settings in which to examine the question of how transaction costs influence the operation of the legal system, by requiring compromises between the basic norms of the system and its discrete rules of application. Curiously, the problem of transaction costs, while critical, is understudied in the formal models, which tend to give relatively small weight to the administrative costs of the system and far greater weight to the incentive structures that tort rules are designed to create.

In one notable early example, John Prather Brown formally demonstrated that rules of negligence (with or without contributory negligence) and of strict liability (but only with contributory negligence) both had identical, desirable incentive effects that led

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* See id. at 15-44.
both plaintiffs and defendants in ordinary cases to take the socially optimal level of care. The formal steps of the proof have been recounted many times and clearly follow from the formal assumptions of Brown's model. All variations are elegant permutations of one simple principle: it never pays a self-interested private party to take more or less than the socially optimal level of care.

Brown's central conclusion remains unrefuted. In a world where litigation is costless and reliable, all feasible systems of liability are identical in their allocative effects, and all are efficient. Yet the implications of this argument are quite puzzling, for how does one choose one liability rule among equals? What Brown has shown is that on the question of incentives there is little, if any,

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8 The essence of Brown's proof is as follows: Assume that there is some socially optimal level of care, defined as $X^*$. Under a negligence rule, the defendant who performs below that level of care must pay both for damages and for the expenses of care actually expended. His private losses will decrease if he moves to care level $X^*$, which when performed allows him to escape damage payments. Yet by the same token, if the defendant increases the level of care beyond $X^*$, the additional costs incurred will exceed his savings in damage payments. To minimize his private costs, the defendant again has the incentive to return to $X^*$, the social optimum. Under these austere assumptions, only those accidents that are worth preventing are prevented.

A parallel proof works under strict liability. If the defendant takes care less than $X^*$, then he can improve his position by moving to $X^*$, because the cost of additional precautions are less than his savings from reduced tort judgments. Similarly, if the defendant takes more care than $X^*$, he can make himself better off by reducing care to $X^*$: the increased liability will be more than offset by his savings on precautions. The social optimum, $X^*$, is therefore the private optimum as well.

Brown also uses these assumptions to show that it is unnecessary to regulate the plaintiff's conduct under a negligence system. His prior demonstration made it clear that the defendant had the incentive to move his care level to $X^*$, the social optimum, in order to minimize his private costs. In this austere world, the plaintiff (even without the contributory negligence defense) knows that there will be no possibility of recovery from a defendant whose conduct will as a matter of course meet the appropriate standard of care. Accordingly, the plaintiff will move his care level to some point that minimizes his own private costs. That point is exactly the level where the costs of additional care exceed the reduction in accident losses associated with it, or the applicable social optimum.

With strict liability, however, a defense of contributory negligence matters very much. Under strict liability without defenses, the plaintiff (who prima facie can always recover) does not have the right incentives to avoid harm, so that some defense of contributory negligence, based upon the plaintiff's ability to prevent costs, is necessary to prevent the plaintiff from taking unnecessary risks at the defendant's expense.

Note that Brown's proof depends upon these very austere assumptions. Once there is some question under a negligence system, for example, whether the defendant will be at $X^*$, then it is far from clear whether the plaintiff will always move to $Y^*$, with or without contributory negligence.

basis for choosing among the plausible liability rules that judges have fashioned with their far less systematic inquiries. To be sure, his proof rules out other hypothetical rules of tort liability that are wildly inferior to either negligence or strict liability rules, with or without contributory negligence. A concern with incentives, for example, is quite sufficient to block a rule of tort liability that requires the victim to compensate the aggressor, or a third party to pay for the losses created by the defendant. The divergence between private gain and social loss is so obvious in both cases that courts shied away from these results on intuitive grounds long before economic analysis was a wisp on the academic horizon.

Nonetheless, these incentive arguments do not tell us much about how to choose among the dominant common law tort rules. What does? Brown's approach is of little help in answering this question. While incentive arguments serve as an original screen for disposing of inferior rules, selection among the survivors depends on how each rule responds to other types of practical problems and costs. The only plausible method for choosing among the competing common law liability rules is to choose according to how satisfactorily they answer the second-order questions that are systematically ruled out by the austere assumptions of Brown's model.

That Brown's assumptions are austere can hardly be disputed. For example, in his model there will be personal injuries, but there never will be a case of actionable negligence by any party, for all possible defendants will move toward the optimum level of care to escape liability. Hence successful tort actions should take place only under strict liability rules. This does not square with everyday experience: ordinary human negligence under a negligence system is commonplace. This is in part because no person functions at 100 percent efficiency, and in part because there can be genuine uncer-

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* It is for the reasons articulated by Brown that the choice between negligence and strict liability does not have the broad social consequences, good or bad, that have been attributed to it. See Richard A. Epstein, The Social Consequences of Common Law Rules, 95 Harv. L. Rev. 1717, 1723-40 (1982). It would be a vast mistake, though, to assume that the world is similarly impervious to any imaginable choice of common law rules. A rule that makes victims pay aggressors would clearly be perverse, as would a contract rule that says any party who breaches a contract is entitled to recover damages from the innocent party.

10 This theme is developed in Donald Wittman, Liability for Harm or Restitution for Benefit?, 13 J. Legal Stud. 57, 62-80 (1984).

11 One approach, of course, is to assume that these second order problems and, accordingly, the choice of liability rule really do not much matter: either rule within Brown's set will do as well as the other. See generally Harold Demsetz, When Does the Rule of Liability Matter?, 1 J. Legal Stud. 13 (1972). Examining the costs that vary significantly according to the choice of liability rules reveals the weakness of Demsetz's position.
tainty about the optimum level of care and whether the defendant has complied with it. Then, too, there are many reasons why not all injured plaintiffs bring suit. A defendant may be insolvent or beyond jurisdiction, or the costs of litigation may exceed the amount to be recovered.12

The substantial role of these frictions in real-world disputes is evident enough to judges, lawyers, and clients alike. Indeed, it is the thesis of this article that within the class of rules that appear plausible on incentive and corrective justice grounds, administrative and error costs routinely should play a dominant role in the shaping of legal rules, not only of evidence and procedure, but also of substantive tort law. The telescope does not show us all the proper answers; for those we must look to the microscope.

The enterprise of figuring out how these costs influence the substantive shape of the law is of potentially enormous scope, covering virtually the entire body of tort law. To give only one example, reluctance to compensate victims for mental distress or for pure economic harms attributable to negligence stems in large part from the judicial fear that a system with such extensive protection is clearly unworkable.13 In addition, much of the law of nuisance, such as the doctrine of "live and let live," can be explained in part by the simple idea that the costs of suit are too great for everyday low-level reciprocal nuisances.14 Similarly, the decline of the law of nuisance and the rise of public intervention in environmental matters have followed largely from a conviction that private suits are simply too expensive to control the manifest types of external harm, when the number of possible defendants is great, the costs of their identification are high, and apportionment of loss among them is uncertain.

This article, however, does not range so widely. Instead, it ad-

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13 See Robins Dry Dock & Repair Co. v. Flint, 275 U.S. 303, 309 (1927). For more modern statements, see State of La. ex rel. Guste v. M/V Testbank, 752 F.2d 1019, 1032 (5th Cir. 1985) ("Denying recovery for pure economic losses is a pragmatic limitation on the doctrine of foreseeability, a limitation we find both workable and useful."); Barber Lines A/S v. M/V Donau Maru, 764 F.2d 50, 55 (1st Cir. 1985) ("These considerations, of administrability and disproportionality, offer plausible, though highly abstract, 'policy' support for the reluctance of the courts to impose tort liability for purely financial harm.").

14 See Bamford v. Turnley, 3 B. & S. 66, 83-84, 122 Eng. Rep. 27, 32-33 (1862); Epstein, 8 J. Legal Stud. at 87-89 (cited in note 4). Robert Ellickson's article, Of Coase, Cattle and Cooperation: Dispute Resolution Among Neighbors in Shasta County, 38 Stan. L. Rev. 623 (1986), indicates that the legal system is rarely resorted to in cattle trespass cases in the rural areas of Shasta County, where again the norms of reciprocity, expressed in "live and let live" terms, tend to dominate.
dresses the question of how transaction costs can and should shape legal rules within the routine, mainline business of common law courts: the ordinary actions for property damages and physical injuries. To focus the inquiry even further, I shall concentrate on one pervasive element of all legal disputes that bears heavily on the costs of running a legal system: time.

II. Time and Legal Systems

Time is an inevitable dimension to all tort actions, if only because of the prosaic observation that the actions or events that cause a harm must precede the harm itself. The direction of causation is only one part of the total picture, though, and for our purposes it is the less important one. The length of the interval between cause and effect—or more generally the length of the interval between the constellation of facts that generate tort liability and the liability itself—is critical to the operation of the system. With the passage of time, the evidence available regarding a given legal issue necessarily becomes stale. The reliability of any determination thus decreases, and with it the effectiveness of the system no matter its objectives. If factual determinations are less than 100 percent reliable, there is a loss in making social objectives operational, whether the objective is compensation or deterrence, liberty or efficiency. The signal is weakened by the noise in transmission.

The rate of decay in the signal has profound implications for the integrity of the legal system. When the signal goes wrong, the effectiveness of the system—that is, the extent to which it improves on a system of purely random decisions—is reduced to the difference between the number of right and wrong decisions. If the signal has a 10 percent error, then the effectiveness of the rules is reduced substantially, by a first approximation to 80 percent: 90 percent correct, less 10 percent wrong. If the factual determinations are only 50 percent correct, then there is no reason for the rule at all, because the effect upon primary conduct is at best random, as 50 less 50 is zero. If the determinations of the system are always wrong, then it is tantamount to having the opposite rule with perfect reliability, as 0-100=-100. Stated generally, the "reliability rate" equals \(1 - 2e\), where \(e\) is the rate of error im-

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plicit in the determination. The reliability of the system thus declines by a twofold multiple of the error rate.\textsuperscript{16}

Similar arguments can be made about the expenses of litigation. If rules were costless, it would always pay to use the ideal rule. But rules have costs, and there is little reason to adopt a rule that costs $100 to resolve a $50 dispute—at least where the moneys are invested in deciding whether the facts of a particular case conform to the rule. Although there may be a long-term social asset created by the choice of the optimal rule to govern a set of similar cases (and, correspondingly, multiplied costs from choosing the wrong rule), there is no such capital asset created by the right resolution of a particular factual issue.\textsuperscript{17} The expenses of fact determination recur with each individual case.

The passage of time is positively correlated with both of the costs just identified: the expense of litigation and the error rate. The longer the period between operative fact and legal judgment, the more likely it is that error will creep in: memories will fade, evidence will disappear or become unreliable. Uncertain outcomes are costly in that they necessarily make risk-averse persons—that is, most of us—worse off. Uncertain outcomes also increase the stakes in litigation, so that more will have to be expended before judgment or settlement is reached.

These features of litigation are perfectly general, and they lead to one conclusion: other things being equal, a legal system that compresses the scope of the temporal dimension will operate at a higher degree of effectiveness than one that fails to respond to temporal demands.

As a first approximation, it might be said that any concerns with the temporal dimension could be taken fully into account by either the statute of limitation or the general law of evidence. Statutes of limitation, typically running from the date of injury, are the most simple and obvious way to cope with the problem. It is true that pure tort theory offers no reason why the mere passage of

\textsuperscript{16} This formulation is perhaps most easily understood intuitively as the percentage improvement over a system of purely random decisions. By definition, a system of random decisions reaches the correct result 50 percent of the time, assuming simple two-party cases. A system 90 percent accurate increases the percentage of correct decisions by 40 percentage points, that is, by 80 percent over the 50 percent accuracy of the random system.

\textsuperscript{17} I put aside for now the questions of fact that prove relevant to future litigation between the same or related parties. The function of res judicata and collateral estoppel is to preserve those capital values, at least where it can be done without undermining the soundness of the original litigation.
time should alter the relationships between two individuals.\textsuperscript{18} In and of itself, the passage of time does not constitute a waiver of a cause of action, which in all cases requires a deliberate release of a known right; nor is evidence in old cases necessarily stale.

Yet every legal system has to play the odds. The passage of time is correlated with a wide variety of factors, each of which makes it less likely that a lawsuit will reach the correct outcome. The insistence upon a statute of limitation recognizes that sometimes better overall results are reached by \textit{not} making individualized inquiries into the facts of each case. In the end no manipulation of the burdens of proof, the rules of admissibility, or the discretion of the jury works as well or efficiently as a simple rule that forces a plaintiff to sue early in the process or forever hold his peace. Statutes of limitation elevate the temporal element to a categorical role.

To be sure, a statute of limitation rarely is totally determinative; there may be an exceptional event, such as the delayed discovery of injury,\textsuperscript{19} that might toll the statute’s operation. Yet the exceptions usually are constructed so that only a small fraction of cases will fall within them, and these cases in turn are often subject to an explicit limitation period, as with statutes of limitation that resume running in full force from the date of discovery. At some point the pursuit of individual justice becomes too costly to maintain case by case.

The statute of limitation is only the most obvious illustration of the way temporal pressures skew legal outcomes. Many doctrines of substantive law also seek to respond to the temporal dimension, even in cases not disposed of by the statute of limitation.

\textsuperscript{18} I develop this point, and the case for statutes of limitation generally, more fully in Epstein, 64 Wash. U. L. Q. at 662 (cited in note 15).

\textsuperscript{19} One modern exception to the point has to do with those cases in which the injury itself in some sense occurs before its discovery. Here one possible escape from the dilemma is to hold, in a manner wholly consistent with ordinary usage, that injury and its manifestation mean the same thing. See Urie v. Thompson, 337 U.S. 163, 170 (1949). Another approach is to toll the statute of limitation until the date of discovery of the injury. That approach responds to the obvious point that no plaintiff can act upon rights of which he is essentially ignorant. Yet the indefinite tolling creates serious problems because of the decay of evidence and the costs of additional suits. Moreover, if the typical statute of limitation runs between one and three years, the tolling provision could extend its operation twenty or more years. There is, I think, something to be said for a two-tiered statute of limitation that adds a fixed number of years for discovery, and then imposes an absolute ban on a cause of action, whether or not discovery has occurred. For a discussion in the related context of outside statutes of limitation, see section III-F, below, and notes 71-96 and accompanying text. For an examination of the use of two-tiered statutes in adverse possession cases, see Epstein, 64 Wash. U. L. Q. at 662 (cited in note 15).
The classical common law tort rules had a keen sense of the pervasive need for tight temporal connections. On the other hand, many modern tort doctrines have been the source of great difficulty precisely because they have underestimated the importance of time in generating appropriate legal rules.

In this article I examine a number of doctrinal choices that contain within them an implicit choice of the proper temporal dimension. The discussion begins with a number of substantive doctrines: proximate causation, the choice between negligence and strict liability as the proper standard of liability, the doctrines of contributory negligence and last clear chance, the rise of vicarious liability, the privity limitation of the classical common law, and the "open and obvious" defense. It then turns to the use of statutory and administrative standards for measuring the appropriate standard of care, and finally it examines the place of outside statutes of limitation.

I do not suggest these rules are shaped solely in response to the temporal dimension. Each of these doctrines responds to a wide range of pressures, so that its study is necessarily incomplete when the dominant focus is placed upon the temporal element. Nonetheless, it is useful to isolate a single thread that runs through many different doctrines and illuminates a wide range of institutional issues. Studying the particular legal responses to the pressures created by the passage of time is one useful way to connect, as Brandeis did, the telescope to the microscope.

III. TIME IN TORT DOCTRINES

A. Proximate Causation

One obvious place in which the temporal dimension has exerted a heavy influence on tort doctrine is in the law of proximate causation. The literal meaning of the phrase "proximate cause" is the "nearest cause," that is, nearest in both time and space. While speculations about "but for" causation often have tempted philosophical analysts to find the causes of individual harm in the remote origins of the universe, the more sober common law judges (and their Roman and civil law counterparts) have in practice started their analysis of the great chain of causation from the opposite end. They have begun with the injury itself and worked grudgingly backwards by small, discrete steps to the causally responsible conduct of other persons.

This pattern of analysis was evident in the Roman law of tort, as it developed in the Lex Aquilia, the general Roman statute for
damages inflicted upon killing a slave or draught animal. The core idea of causation was killing *corpor e corpori*, or “by the body to the body.” From that narrow definition of killing, the rules of liability expanded to cover other cases. The smallness of the steps can surprise the modern reader. Thus the Romans thought it necessary to mention that an action could be brought for killing where the deadly blow was struck with a sword or a stick held in the hand. Still a further extension of liability arose when A pushed B into C, for then a third person, whose possible conduct raised harder issues of causal intervention, stood between the plaintiff and the defendant.

More generally, the Romans recognized that actions against a wrongdoer could not be limited to cases that involved the use of force. Thus they developed—in a striking parallel to the English action on the case—the *actio in factum*, which lay not for “killing,” but for “furnishing a cause of death.” This secondary theory of liability was of great importance, for it covered the case of the man who gave poison instead of medicine for another to drink. The intervening act of the victim—ingesting the poison—took the case outside the narrow confines of the use of force. Yet the ignorance with which the poison was drunk meant that the victim’s act was not performed voluntarily in anticipation of its consequences: thus the causal connection between the druggist’s mistake and the victim’s injury was not severed.

Although the Roman theories of causation show a willingness
to run backwards, they never predicated liability upon long or complex chains of causation. Roman commentary spent virtually all of its effort developing the line between "killing" and "furnishing a cause of death," without ever probing by example or systematic inquiry the outer limits of causation. The problems with the temporal dimension thus were effectively curtailed by the narrow substantive scope given to proximate causation before it became a serious issue.

The early common law shows a similar reliance upon very tight theories of causation. The "proximate" in proximate causation typically received a practical construction echoing its literal meaning: only the nearest cause counted. *Gilbert v. Stone* illustrates how unyielding that rule was. The defendant was chased by a band of twelve armed men onto the plaintiff's land, whereupon he took the plaintiff's gelding. The defendant's plea of necessity was rejected: "This is no plea to justifie the defendant; for I may not do a trespasse to one for fear of threatenings of another, for by this means the party injured shall have no satisfaction, for he cannot have it of the party that threatened." Implicit in the last clause is an account of proximate causation that treats the coercion imposed upon an immediate trespasser as too remote. The third party cannot be sued in trespass: he did not enter the land, the defendant did. But the statement in *Gilbert* also appears to preclude all relief against the twelve attackers, including an action on the case for indirect harm.

As a matter of theory, *Gilbert* seems both correct and incorrect. It is correct to allow the action against the immediate trespasser, for it is not the plaintiff's affair that the defendant was coerced into entering his land by a third party. But it does not follow that the third party's actions are remote from the harm so that he should not be liable. Coercing the intermediate is in principle a different act, but it is an act that extends and does not break the chain of causation.

The conclusion that coerced intermediate action does not break the chain of causation is reinforced by the standard premise of liberal (or at least libertarian) theory: no person is allowed to use force or fraud against the person or property of another. The libertarian principle is capable of accounting for not only immediate trespasses but also more complex causal chains. One starts with

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25 Id.
26 As are the Roman parallels. See notes 20-23 and accompanying text above.
the harm and works backwards to all actions in the chain of human and natural connections. Where the original actor’s conduct was constrained by the force or fraud of another person, then it is proper to trace that conduct to the force or fraud. In contrast, where neither force nor fraud is present, the conduct of the original party is a “free and independent action,” and inquiry into more remote causes should cease.27

In *Gilbert*, the chain contains two actions and three persons; but the force used against the trespasser is obvious and sufficiently close to give rise to liability. The plaintiff should have the choice of suit against either the immediate trespasser or the parties who drove him to take the gelding. In any event, the trespasser, if forced to pay damages, should be allowed to pursue actions over against the band of attackers, if he can find them. The basic principle is that any person in the chain can sue those persons prior in time in the chain, while being exposed to suit by any person later in the chain. In the end the loss should settle on the original actor, unless some special defense intervenes. In practice, it is highly unlikely that the requisite constraints will be found in fact to bind more than one or two actors, although *Scott v. Shepherd*,28 with its infamous squib, involved a chain of four persons and three acts.

Thus, even in its restricted version, the theory of proximate cause tends to drive us back to the original cause much in the same way that the doctrine of first possession drives us to the original root of title.29 But the tension persists between the theoretical search for proximate cause and the practical demands of proof. The further one goes back in time to find causal connections, the less reliable the evidence. The issue then is how to strike a balance. Where the temporal connections are short, the question is not of great moment; and therefore it is a great benefit of focusing on force and fraud that such a focus tends to keep the chains short (even after the abolition of the forms of action).

Thus, for example, many nineteenth century cases, especially those of English vintage, adopted the “last wrongdoer” account of proximate cause in an effort to avoid the practical difficulties of long causal chains.30 Even that doctrine contained a good deal of

27 I have argued the point extensively. See Epstein, 2 J. Legal Stud. at 174-77 (cited in note 4). The case here falls under the paradigm “A compelled B to hit C.”
28 2 Wm. Bl. 892, 96 Eng. Rep. 525 (1773). Note that *Gilbert v. Stone* was not a trespass case according to the “immediate entry” test advocated (rightly) by Blackstone in his dissenting opinion in *Scott v. Shepherd*.
29 As Epstein notes, the full case here falls under the paradigm “A compelled B to hit C.”
30 For extensive discussion, see Epstein, 64 Wash. U. L. Q. at 662 (cited in note 15). For elaboration of the “last wrongdoer” rule, see Thomas Beven, 1 Negligence in
refinement, due to the systematic effort to reduce the causal significance of intermediate actors who were insolvent, such as infants and insane persons. There, the dominant sentiment was often to deny the "responsibility" of these actors in order to reach some more financially responsible party further back in the chain of causation. Even after the "last wrongdoer" limitation collapsed in both England and the United States, the remaining doctrines of proximate cause still constrained the temporal dimension of the ordinary tort case. Successive wrongful actions by two independent defendants usually took place within a relatively narrow compass of time, far shorter, for example, than the applicable statute of limitation. There were occasional hard cases within the system, but none that posed a fundamental challenge to its continued operation, no matter how much they delighted law professors.

B. Negligence and Strict Liability

The temporal dimension of tort law also influences the choice of liability rule for accidental harms. The question is, does negligence or strict liability tend to lead to shorter causal chains?

This issue was of some historical importance, as Holmes in The Common Law rested much of the case for a negligence test (one based upon the principle of reasonable foresight) on the ground that it prevented the indefinite extension of causal chains that seemingly was inevitable under a rigorous strict liability regime. Drawing heavily upon the influential opinion of Justice Doe in Brown v. Collins, Holmes first argued that the abolition of the forms of action made it imperative to develop a unified theory of liability encompassing both direct and indirect harms. Unification in turn required an explicit choice between the dominant negligence principle under case and the apparent strict liability principle in trespass. Holmes sought to establish the dominance of negligence by showing the absurdity of strict liability. The gist of his argument is contained in the following passages:

Now I repeat, that, if principle requires us to charge a man in trespass when his act has brought force to bear on another through a comparatively short train of intervening causes, in spite of his having used all possible care, it requires the same liability, however numerous and unexpected the events be-

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31 See notes 72-74 and accompanying text below for the construction cases.

32 53 N.H. 442 (1873).
tween the act and the result. If running a man down is a trespass when the accident can be referred to the rider’s act of spurring, why is it not a tort in every case, as was argued in Vincent v. Stinehour [7 Vt. 62 (1835)], seeing that it can always be referred more remotely to his act of mounting and taking the horse out? . . . “No case or principle can be found, or if found can be maintained, subjecting an individual to liability for an act done without fault on his part . . . . All the cases concede that an injury arising from inevitable accident, or, which in law or reason is the same thing, from an act that ordinary human care and foresight are unable to guard against, is but the misfortune of the sufferer, and lays no foundation for legal responsibility.” [Harvey v. Dunlop [1843] Hill & Den. 193 (N.Y. Sup. Ct.)] If this were not so, any act would be sufficient, however remote, which set in motion or opened the door for a series of physical sequences ending in damage; such as riding the horse, in the case of the runaway, or even coming to a place where one is seized with a fit and strikes the plaintiff in an unconscious spasm. Nay, why need the defendant have acted at all, and why is it not enough that his existence has been at the expense of the plaintiff? 33

In truth, Holmes gets the relation between negligence and strict liability backwards. He goes wrong by misapprehending the underlying theory of causation in cases involving harm caused by strangers. The logic of causation does not permit one to run backwards in time with the ease that Holmes thought possible. It is not enough to speak of actions that “opened the door” to liability. If any liberty of human action is to be maintained, then a defendant can only be held liable if it is shown that all subsequent actions or events in the chain were constrained by his acts of force or fraud (whether he acted directly on the plaintiff or on intermediate parties). The traditional categories, as well as a concern for freedom of action, thus make it quite incoherent to speak of one’s “existence” as the cause of anything, or to belittle as irrelevant the nature of acts that intervene temporally between plaintiff and defendant.

Once causation in stranger cases is so understood, it can be shown why a theory of negligence creates longer causal chains, both in time and space, than the rival theory of strict liability. Under negligence, the simple striking of another person is just an event whose coloration is obtained from surrounding circum-

33 Oliver Wendell Holmes, Jr., The Common Law 92-95 (1881).
stances. "He hit me" does not state a cause of action, but is treated as though it were an act of God. Accordingly, the inquiry must move backwards in time to find the culpable conduct that led up to the hitting: did the defendant act reasonably in preparing himself for the actions so undertaken? The rider of a horse is no longer (vicariously) liable simply in virtue of knocking down the plaintiff; everything now turns on whether it was appropriate to ride that horse at the given speed at the chosen location, as Holmes's language from *The Common Law* makes clear.

To be sure, inquiries into prior conduct are unavoidable when the conduct of multiple parties is at stake, as in cases like *Scott v. Shepherd*. There is, however, no reason to undertake any such extended inquiry when the person whose conduct led up to the injury was the defendant himself. Stated otherwise, if A so constrained B to hit C, one has to look at what A did to see if he is responsible. But where A, as it were, so constrained A to hit C, then it is sufficient to note that A hit C, for A cannot have the action over against himself. The strict liability test of the earlier common law thus eliminates many of the temporal questions that the alternative theory of negligence brings to the fore, while raising none that a theory of negligence eliminates.

Several of the classic cases illustrate the differences in time frame under the two theories. In *Bolton v. Stone*, a cricket player hit a ball that struck a woman outside the stadium. Under a theory of strict liability, the case is simple. It is necessary only to explore the interval between the time the ball left the bat and the time it hit the plaintiff, during which there were no independent acts or natural events to sever the causal connection. Even if one wants to hold the home team responsible for the wrongs of a visiting player, the best approach is to adopt a simple vicarious liability rule that makes the host landowner liable to strangers for the conduct of persons lawfully on his premises. No doctrinal innovation is required, for this rule was used from as early as 1400 in cases of damage from fire. In contrast, a negligence standard leads to solemn inquiries into the placement of the cricket pitch when the grounds were constructed some thirty-five years before, and into the frequency with which balls were hit outside the pitch during the previous thirty years.

To take a second example, *Hammontree v. Jenner* was a

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35 Beaulieu v. Finglam, Y.B. 2 Hen. IV 18, pl. 6 (1401).
36 20 Cal.App.3d 528, 97 Cal. Rptr. 739 (1971).
routine running-down case under a theory of strict liability. The defendant veered off the highway, crashed through a wall and struck the plaintiff while she was at work in her bicycle shop. What could be easier? Yet the case became transformed under negligence into an exhaustive inquiry into the medical treatment that the defendant had received some fifteen years before the accident for chronic epilepsy. The shift in emphasis came from the court's unwillingness to regard the running down of the plaintiff as constituting a prima facie case.

The same basic point arose in *Breunig v. American Family Insurance Co.* There insanity, rather than epilepsy, was urged to nullify the defendant's culpability when she crossed the midline on the highway and crashed into the plaintiff, who was traveling in the opposite direction. Under a strict liability theory, the defendant's crossing the midline and hitting the plaintiff establishes a prima facie case, without regard to what made the defendant cross the road. But the case was decided under a negligence analysis. Again, the judicial unwillingness to make immediate actions decisive on the question of liability shifted the inquiry to the prior decision on whether the defendant should have driven at all, which led to an enormous waste of administrative resources—even though the ultimate decision correctly held for the plaintiff.

Parallel arguments work in connection with plaintiff's misconduct. Several early doctrines worked to limit the temporal dimension. First, under the traditional narrow view of causation, the negligence of the plaintiff could sever the connection between the defendant's conduct and the loss, as it did under a "last wrongdoer" rule. Second, and more generally, the theory that regarded contributory negligence as an absolute bar to recovery had the effect of reducing the length of the causal chains, for except in rare cases the plaintiff's negligence occurred at or persisted until the very instant of the accident.

Third, the major exception to the absolute bar against recovery, the "last clear chance" rule, also had a temporal component that compressed the relevant causal period into a relatively narrow range. This doctrine, which imposed liability on the defendant who had the "last clear chance" to avoid the accident, survived the demise of the "last wrongdoer" rule, because the plaintiff, in order to invoke it, had to show more than simply that the defendant's negligence followed the plaintiff's in time. It had to be shown in addi-
tion that the defendant had reason to know of the particular risk that spurred the need for additional caution. This added mental element produced an uneasy but sensible cross between ordinary negligence and recklessness. Once established, the doctrine acted to sever any causal connection between the plaintiff's prior negligence and his own harm. And like so many other tort doctrines, it compressed the causal chain, this time by focusing the inquiry on the defendant's action or inaction immediately before the accident.

Recent doctrinal developments, however, have tended to expand the temporal dimension. For example, the doctrine of comparative negligence, with its rejection of "last clear chance," requires a court to assess the relative culpability of all of the defendants, including those whose negligence may have taken place far in the past.

On balance, the older, "cleaner" liability rules place fewer demands upon the operation of the system. Insofar as administrative manageability is the predominant concern, these "clean" rules are to be preferred over complex rules that seek to reach a perfectly "just" result. Nonetheless, as long as cases like Bolton, Hammon-tree, and Breunig are relatively infrequent, any expansion of liability they create usually stays within tolerable limits of adjudication (although they can be attacked or defended on other grounds). But such expansions of liability have very different implications in the world of vicarious, and especially products, liability.

C. Vicarious Liability

I believe that uneasiness with long chains of causation also has contributed to the adoption at common law of a general principle of vicarious liability. This principle, in its most common applica-

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38 Li v. Yellow Cab Co., 13 Cal.3d 804, 532 P.2d 1226, 119 Cal. Rptr. 858 (1975). Last clear chance had been regarded as a transitional doctrine under the old system where contributory negligence had been an absolute bar. See Malcolm M. MacIntyre, The Rationale of Last Clear Chance, 55 Harv. L. Rev. 1225, 1241-51 (1940).

39 See, e.g., Donald Wittman, Optimal Pricing of Sequential Inputs: Last Clear Chance, Mitigation of Damages, and Related Doctrines in the Law, 10 J. Legal Stud. 65 (1981) (defending the doctrine of last clear chance on the ground that it tends to give the right marginal incentives to both the earlier and the later actors when their inputs to the accident are sequential).

My own sense is that the incentive arguments are very unclear because neither actor in the sequence will know the applicable legal rule or that he has acted in a setting in which the rule itself might be applicable. The incentive arguments about last clear chance are plausible only if both parties have a clear indication that they are dealing with a last clear chance situation. Yet in most cases they will fear losses from other quarters, including the risk of serious personal injury or the loss of personal property.
tion, holds an employer strictly responsible for the torts of his employees committed within the scope of employment. The doctrine was the target of sustained academic attack during the nineteenth century on the ground that it made one person responsible for the wrongs of a stranger: vicarious liability was said to be no better than holding one person responsible for the debts of another. Nonetheless, the criticisms made no inroads upon the case law development of the doctrine, but only provoked an extensive search for rationales to support it. The enterprise was quite extensive and produced a profusion of arguments on behalf of the principle that have been well-summarized in Young B. Smith's impressive list of nine: control, profit, revenge, carefulness and choice, identification, evidence, indulgence, danger, and satisfaction.

The simplest explanation for the rise and tenacity of vicarious liability, notwithstanding the critique that it violates individual rights, is that the principle seems, for a wide variety of reasons (including those listed by Smith), to work a Pareto superior shift from the basic common law position under which each person is responsible only for his own actions. The ultimate question is whether, when each person sums up his personal accounts, each will be better or worse off with the doctrine in place.

The most obvious gain from a system of vicarious liability is that imposing responsibility on employers rather than employees generally increases the overall incentives to prevent accidents. Employees with insufficient resources to answer for serious harms will be tempted to skimp on cost-justified accident precautions, even if they are held legally responsible for their own misconduct. The firm, with a larger pool of assets, has the incentive to monitor all its workers. The benefits here can be quite substantial, especially when (as in large products liability cases) an outsider who has suf-

40 See, e.g., Oliver Wendell Holmes, Jr., Agency, 4 Harv. L. Rev. 345 (1891), 5 Harv. L. Rev. 1 (1891). For the most sustained attack against the doctrine, see Thomas Baty, Vicarious Liability (1916).

41 Young B. Smith, Frolic and Detour, 23 Colum. L. Rev. 444, 455 (1923). The doctrine of frolic and detour is most easily explained as an affirmative line of proof of the general denial of agency. The doctrine of vicarious liability applies only when the employee is acting within the scope of the employment. To show frolic and detour is to show that he is an independent agent, acting on his own behalf. These cases thus fall on the margins of a continuum with two clear poles. The first is where the employee is working for the employer; the second where he is off work completely.

42 One position is "Pareto superior" to another if it will improve the lot of some persons in society without making any worse off as a result. The concept is named for the Italian economist Vilfredo Pareto (1848-1923), who first formulated it as part of his studies of welfare economics.
faced harm may have no way to identify which individual person within a complex organization behaved wrongfully. Moreover, the gains are broadly distributed over the population at large; virtually every person has some connection with a business or enterprise run by others, if only through shares in a pension fund.

As befits this discussion, however, the temporal element again offers a strong argument for the doctrine, even if the incentive rationale has received greater attention in the literature. To see the point, think about how tort law would be structured in the absence of vicarious liability. The pressure by plaintiffs to reach the deep pockets of employers would be great, and this outcome could be obtained from time to time under theories of intentional misconduct or negligence. The theories of intentional wrong would stress that a defendant employer had authorized the commission of the wrong and hence should be liable under the strongest theories of agency, those applicable under criminal law. In other cases the theory might be extended to allow actions where the employer knew, but turned a blind eye to, the dangerous practices of the employee. Theories of negligence would be invoked more frequently and doubtless would involve the selection and supervision of the employee by the employer.

Under both negligence and intentional tort analyses, the refusal to follow the rule of vicarious liability invites investigation into the remote causes of individual harm, where the critical issues are likely to be those removed from plain view. The inquiry turns back in time to what and when the employer knew about the employee’s activities, and what he might have said to the employee to authorize those activities. The formidable evidentiary problems and consequent uncertainty need no elaboration.

The general doctrine of vicarious liability forestalls all these inquiries by a rule that looks solely to the question of the scope of employment. The focus under a vicarious liability system is on the general scope of employment, not on questions of knowledge or authorization that may have occurred far in the past.

To be sure, the basic principle is qualified by the “frolic and detour” limitation, with its borderline questions of liability. But adopting vicarious liability with this limitation is not simply trad-

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43 One advantage of the vicarious liability rule, therefore, is that, by ensuring recovery for the plaintiff, it obviates the temptation to adopt a market share liability rule such as that which found favor in Sindell v. Abbott Laboratories, 26 Cal.3d 588, 607 P.2d 924, 163 Cal. Rptr. 132 (1980).

44 See note 41 above.
ing in one package of temporal problems for another package of problems of equal magnitude. Frolic and detour normally involves the conduct of the servant, not the employer; these events take place at the time of the accident, not further back in time. Moreover, these facts generally are in public view, as for example with accidents that take place after working hours or far from the place where the employee's duties should have been performed. Although a few borderline cases inevitably will arise, frolic and detour is implausible as a defense in the overwhelming number of tort actions against institutional defendants.

Accordingly, the vicarious liability rule can be understood in part as a nearly conclusive presumption of causation against the employer, a presumption that eliminates the complex case-by-case inquiry into individual responsibility that otherwise would ensue. The frolic and detour exception covers those few cases in which the independence of the servant’s action makes it highly unlikely that any causal connection could be established.

The principles of vicarious liability need not apply only to cases of employees. In the law of animals (a body of law influential in Holmes’s thinking), similar difficulties over causation and liability can be avoided by a simple rule holding the owner vicariously responsible for the torts of his animals, at least until they have escaped into the wild and resumed their natural habitat. The alternative system of personal liability requires one to investigate the level of care and supervision by the owner prior to the moment that the animal kicks, gores, or bites. In most instances the court will find some way to extend some general theory of causation to permit the plaintiff to recover. For example, in Baker v. Snell, the defendant’s employee (arguably acting outside the scope of employment) incited the defendant’s dog to bite the plaintiff. The employee’s willful action was held not to sever the causal connection, and the defendant was held liable. An easier and more straightforward way to reach the same result would have been to hold the owner vicariously responsible for the bite of the animal, with an action against the employee for contribution or indemnity if the employee indeed had incited the dog. “You incited my dog to bite the plaintiff” states a good cause of action for indemnity.

At first blush, it might seem that any indemnity action against the employee will recreate the very temporal problems that the vi-

46 [1908] 2 K.B. 352, aff’d, [1908] 2 K.B. 825.
carious liability rules foreclose. While that possibility cannot be dismissed categorically, the temporal difficulties encountered in the indemnity action should be far less severe than those in the basic tort case. The question of the employee’s exposure to indemnity by the employer is nearly always a matter for contractual negotiations between the two parties in which the difficulties and benefits of such actions can be properly assessed.

As ever, however, the scope for implied terms is quite massive, given that indemnity contracts often are not made. Even so, some rough strokes can lend a measure of order to the field. In cases like *Baker v. Snell*, for example, the case for an implied right of indemnification is strong because of the willful, or at least reckless, nature of the servant’s conduct. Not only does the intent inquiry tend to focus on facts occurring just before the servant’s wrong took place, but in addition, whatever temporal problems exist pale in comparison with the need to control strongly antisocial behavior.

In contrast, temporal problems might be more acute with cases of ordinary servant’s negligence. One possible legal approach is to assume that the servant as the primary responsible actor must indemnify the employer, at least if the employer’s liability is wholly vicarious, once the innocent third party has been paid off. However, the utter infrequency of employer suits for indemnity tells a very different tale. The ability of the employer to obtain comprehensive insurance for these accidents, coupled with the other sanctions (e.g., firm discipline, docking pay) that may be used to supervise employee misconduct, suggest that both employer and employee will benefit ex ante if liability is not shifted back onto the employee. As an operating assumption, the practice with large enterprises is that the indemnity action is not maintainable unless it is expressly preserved. As a result, the temporal problems controlled by the doctrine of vicarious liability are not reintroduced by a massive spate of actions for contribution and indemnity.

Vicarious liability principles also emerge in the early fire cases, which made the landowner strictly responsible for fires set by any

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47 See, e.g., *Lister v. Romford Ice Co.*, [1957] A.C. 555, in which the House of Lords held that such a right of indemnity did exist. The case occasioned much protest and resulted in the formation of a special committee by the Ministry of Labour to consider legislation to overturn the decision. That committee decided against drafting legislation only because it concluded that insurance companies generally had agreed not to exercise their right to indemnification. See O. Kahn-Freund, Comparative Law as an Academic Subject, 82 L. Quart. Rev. 40, 57-58 (1966).
person lawfully on the premises. There, too, the rule of imputation eliminated the need to examine the potentially remote causal connections between doer and owner. As yet another example, the general rule that holds an owner of land responsible for damages caused by the activities of independent contractors on the premises also clearly imposes liability upon a defendant while bypassing the causal problems raised in suits premised upon negligence in supervision, selection, and control. The courts have been unwilling, however, to extend this rule of vicarious liability beyond damages on the premises, and with good reason: the independent contractor works for so many separate parties that it is not possible to draw tight causal connections to any one of them, except for the landowner. In Bolton v. Stone, the need to inquire into the poor design of the playing field could have been obviated completely by a rule holding the landowner strictly and vicariously liable for the actions of persons lawfully on his premises.

In sum, the basic intuition of vicarious liability extends beyond the employment context to any situation in which selection, supervision, and control are possible and expected, but proof thereof is difficult and uncertain. All these rules shorten the inquiry into causal chains and, I believe, improve the overall strength of the legal system.

This discussion lends additional support to the thesis developed at the outset of this article: the rules of vicarious liability are needed only in a second-best world. It is imperfection that drives the system. If there were perfect knowledge of who did what, and if each person could be held costlessly to answer for his wrongs in full, then a system of individual responsibility would work as well as any system of vicarious liability. Steven Shavell has argued that the imperfections of the system of common law have led in many instances to direct statutory regulation. I have made the same argument in connection with the law of nuisance.

48 "I shall answer to my neighbour for him who enters my house by my leave or knowledge, where he is guest to me or my servant, if he acts, or either of them acts, in such a way with the candle or other things that my neighbour's house is burned." Beaulieu v. Finglam, Y.B. 2 Hen. IV 18, pl. 6 (Markham, J.), translated in Beven, 1 Negligence in Law at 487 (cited in note 30).


51 Epstein, 8 J. Legal Stud. at 98-102 (cited in note 4).
D. The Privity Limitation

The common law privity limitation also reflects, among other things, the importance of the temporal dimension in the law of products liability. The gist of the privity limitation is that an injured party may sue only that person next in the chain of distribution and cannot maintain a direct action, in tort or otherwise, against more remote suppliers. Although subject to significant exceptions, the privity limitation was of enormous importance in the nineteenth-century law of products liability, for it insulated the original manufacturer from potentially large exposure to liability.

There is one obvious contrast between the privity limitation and vicarious liability: vicarious liability tends to expand liability while privity works to contract it. Consequently, the parallel developments may seem a historical oddity, as both doctrines received their decisive elaborations over roughly the same period, from 1840 to 1900. Nonetheless, when one considers the temporal dimension, the two doctrines appear consistent. Both results seem to implement a single response to the pressures that the passage of time places upon ordinary common law adjudication.

For our purposes, the important feature of the privity doctrine was that it tended to direct legal action against the parties in possession of the dangerous instrumentality at the time it caused injury. The rule therefore had great importance for workplace accidents, where it institutionalized the preference for employer's liability over manufacturer's liability.\(^5\) One obvious justification for focusing liability on the employer is that such a focus shortens the length of time between the tortfeasor's wrongful action and the plaintiff's injury; it no longer is necessary or possible to look behind the employer's responsibility in order to see what, if anything, the manufacturer (or group of manufacturers) have done incorrectly. So stated, the privity limitation has a close affinity to the doctrine of proximate cause, with which it on occasion has been erroneously identified.\(^5\)

The importance of the temporal dimension in the privity doctrine also was revealed by the doctrine's exceptions. With certain refinements, these exceptions generally meant that liability could be imposed without privity if the product in question was shown to

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contain a latent defect, imminently hazardous to life or limb, which existed in the product at the time it was placed into the stream of commerce, and which then caused damage when in its original condition while in ordinary use.\textsuperscript{54} These exceptions identified a class of cases where the passage of time was least likely to impair the causal connection between the plaintiff’s injury and the defendant’s wrong, or the quality of proof available to establish the connection. To demand of a product that it have been in its original condition when it caused the harm sued upon necessarily excludes the possibility that it was altered either by a conscious third-party act or by ordinary wear and tear. As long as that condition holds, the passage of time is less likely to degrade the quality of evidence, because the past is not cluttered by intervening events whose causal significance must be evaluated on a case-by-case basis. That this point was well understood by the common law courts is evidenced by their greater willingness to impose liability upon manufacturers of products in sealed containers, and by their repeated insistence that the retailer was often a “mere conduit” through whose hands the product passed to the ultimate consumer.\textsuperscript{55}

Once the privity limitation is combined with its exceptions, it amounts to a rule that fits well within the general theory of causation developed here. Cases of latent defect are cases of implicit misrepresentation, so that traditional products liability cases are in essence actions on the case in which the acts of intervening parties (including the plaintiff) do not sever the causal connection, because those acts were undertaken in ignorance of the facts that made them dangerous. Taken with its exceptions, the privity rule looks less like an anomalous deviation from the general principles of tort liability, and more like a sensible application of them.

E. Modern Products Liability Law

The passing of the privity limitation does not necessarily mean that the legal system has no second tier of responses to the temporal problem. Quite the contrary, so long as substantive rules can respond to the temporal pressures, it becomes quite misleading


\textsuperscript{55} See, for instance, Escola v. Coca-Cola Bottling Co., 24 Cal.2d 453, 468, 150 P.2d 436, 444 (1944) (majority opinion) (“Certainly there is greater reason to impose liability on the manufacturer than on the retailer who is but a conduit of a product that he is not himself able to test.”).
to characterize the law of products liability solely by the negative observation that privity has been abandoned. One way to stress the differences between products liability law in the two periods between, say, 1920 to 1968 and after 1968 is to show the very different responses to the temporal question in the two periods.66

Between 1920 and 1968, privity was rejected on the ground that it was "foreseeable" that dangerous conditions created by the manufacturer would damage the ultimate consumer.5 The foresight test championed by Holmes thus was used to expand the length of causal connections, not to compress them. Yet the initial passing of the privity rule did little to expand the scope of tort liability from 1920 to 1968. What happened instead was that the nineteenth-century exceptions to the old privity limitation were recast as a general rule holding the manufacturer strictly liable for products with latent defects that caused harm in ordinary use. Nonetheless, before 1968 the substantive law of products liability continued to place very sharp temporal limitations upon the scope of liability.

Justice Traynor's famous formulation of strict liability in Greenman v. Yuba Power Products, Inc. illustrates the narrow scope of recovery that was permitted as late as 1962: "A manufacturer is strictly liable in tort when an article he places on the market, knowing that it is to be used without inspection for defects, proves to have a defect that causes injury to a human being."58 The requirement of inspection for defects ensured that very little change could take place in the law of products liability as applied to most workplace injuries. Employers' liability may have yielded to workers' compensation, but products liability actions by workers against manufacturers remained rare events before 1970. Industrial

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66 I choose 1968 as the date because it marks the first major extensions of tort liability beyond their traditional contours. In particular, two cases seem like clear turning points: Larsen v. General Motors Corp., 391 F.2d 495 (8th Cir. 1968), which ushered in the crashworthiness cases, ostensibly on the basis of ordinary negligence principles; and Davis v. Wyeth Laboratories, Inc., 399 F.2d 121 (9th Cir. 1968), which was the first of the "duty to warn" vaccine cases. Section 402A of the Restatement (Second) of Torts was to my mind a far less important transition, given that its strict liability principles did nothing to expand the threshold concept of "defect" that determines the size of the product liability area. See Epstein, Modern Products Liability Law at ch. 6 (cited in note 53).

67 Judge Sanborn says, for example, that the contractor who builds a bridge, or the manufacturer who builds a car, cannot ordinarily foresee injury to other persons than the owner as the probable result... We take a different view. We think that injury to others is to be foreseen not merely as a possible, but as an almost inevitable result.” MacPherson v. Buick Motor Co., 217 N.Y. 382, 392, 111 N.E. 1050, 1054 (1916), referring to Sanborn's opinion from Huset, 120 F. at 867.
equipment is subject to constant inspection, maintenance, and repair, so that the conscientious application of the inspection requirement precluded, for example, any liability in the long line of punchpress cases associated with products customized to the local shops. More dramatically, it is doubtful that any of the asbestos or other toxic products liability cases, starting with Borel v. Fibreboard Paper Products Corp., could have survived if the inspection and control requirements contemplated by the Greenman formulation had retained their original vigor. Similarly, the “open and obvious” rule of Campo v. Scofield, barring recovery for plaintiffs injured by open and obvious defects, usually made any determination of liability turn on the conditions as they existed just before the moment of injury.

The removal of these two substantive barriers to recovery, coupled with the decline of the “normal and proper” or “intended” use limitations of the earlier decisions, dramatically shifted the temporal focus of products liability cases backwards along the causal chain. The result was an increase in the complexity and hence the general costs of litigation, as well as increased error and uncertainty in verdicts.

Other features of modern products liability have had the same effect upon the temporal issues. The early development of products liability law centered on those defects of construction, design, and warning that the manufacturer generally could control by routine inspections or by quality control procedures undertaken before the product was marketed. In the cases dealing with construction defects, almost any given level of product safety could be achieved with the appropriate inputs of inspection and quality control. Even in the early design and warning cases, firms could go a long way to reduce liability by taking the right steps in advance of sale. In design cases, the “intended” or “normal” use limitations protected firms whose products could do the things that the manufacturers said they could do. If, as in Greenman, a firm said that a lathe it sold could handle heavy wood, then the firm could design away any defects that prevented the product from meeting its own performance specifications. Parallel arguments apply in warning cases.

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60 493 F.2d 1076 (5th Cir. 1973).
The cost-benefit formulations of product defects popularized by Professor John Wade, however, significantly transformed the question “is this product defective?” The insistence that Wade’s seven factors be balanced against one another in passing on liability has led to an indeterminacy of outcome that makes categorical judgments about defects in any product difficult, if not impossible, to sustain. In addition, this approach necessarily reduces the importance attached to prior regulatory approval of a product’s design or warnings. The temporal difficulties in drug cases would be handled rather simply had modern law adopted the position that once the FDA approved a drug warning, liability would attach only to the failure to use the stipulated warning. The level of compliance by firms would be high if only because the sanctions imposed for failure to follow FDA regulations would be grave: removal of the product from the marketplace or heavy fines. Accordingly, there would be few, if any, tort cases where the passage of time could cloud the causal portions of the case. By adhering to the traditional rules, the legal system could have followed the example of land title recording statutes, a system that renders the law of adverse possession a comparative backwater in the modern law of real property.

Precautions ex ante would be so pervasive that

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63 The seven factors are:
(1) The usefulness and desirability of the product—its utility to the user and to the public as a whole.
(2) The safety aspects of the product—the likelihood that it will cause injury, and the probable seriousness of the injury.
(3) The availability of a substitute product that would meet the same need and not be as unsafe.
(4) The manufacturer's ability to eliminate the unsafe character of the product without impairing its usefulness or making it too expensive to maintain its utility.
(5) The user's ability to avoid danger by the exercise of care in the use of the product.
(6) The user's anticipated awareness of the dangers inherent in the product and their avoidability, because of general public knowledge of the obvious condition of the product, or of the existence of suitable warnings or instructions.
(7) The feasibility, on the part of the manufacturer, of spreading the loss in setting the price of the product or by carrying liability insurance.
Id. at 837-38 (footnote omitted).
64 To give one illustration, it is an open question whether an automobile manufacturer can obtain a summary judgment stating that its cars were not defective at common law because they were not equipped with airbags at a time when these were not required by statute and were not in general commercial production.
65 For one clear statement that the modern law has not adopted such a position, see Stevens v. Parke, Davis & Co., 9 Cal.3d 51, 507 P.2d 653, 107 Cal. Rptr. 45 (1973).
66 For a discussion of this issue, see Epstein, 64 Wash. U. L. Q. at 662 (cited in note 15).
there would be infrequent need for litigation ex post.

The cost of not following this path is that temporal problems loom large in modern products liability litigation. By treating government standards and industry practices only as evidence (even prima facie evidence) of a safe product, the modern law has effectively transformed the operation of the system. Both firms and consumers may desire some device to establish a safe harbor ex ante for their products, but it has become impossible to provide them with one. Without some clear rule, the dam has burst. The allocation of burdens of proof and other such trial devices raise strictly second-order questions.

What matters in the modern products liability case is that a jury (whose discretion, de jure and de facto, is broad) may routinely disapprove of the warning given or the design adopted. The jury need not rewrite the warning or redesign the product. No one can say with confidence what warning or design would be sufficient unto the day to ward off liability. Admittedly therefore, if an ex ante approach such as government certification of products is tried, it is sure to have significant failures. But these failures usually will be common-mode failures with mass-produced or generic products. As a result, when litigation strikes, be it with DES, asbestos, Agent Orange, or the Dalkon Shield (the strongest case for liability among the recent mass torts\textsuperscript{67}), the entire product line is engulfed, not just a single unit.

On the other hand, giving so much discretion to the jury (as the current system does) puts the brunt of the burden on the second tier of legal responses to temporal problems. In the context of modern products liability law, this second tier has proved sadly unfit for the task—a failure manifest in the largely unsuccessful search for appropriate standards for liability. In mass tort cases, finding the appropriate ex post standard for liability is tricky business indeed. One could use a strict liability standard, but it becomes quite meaningless under certain circumstances: no one knows what it means for an automobile to be absolutely crash-

\textsuperscript{67} See In re A. H. Robins Co., 681 P.2d 540 (Colo. Ct. App. 1984). Briefly, the Dalkon Shield contained a number of serious structural defects. Fins prevented its expulsion or removal in event of infection, and a tailpiece string (designed to aid in the location of the device and its removal) served as a host for infection resulting in serious injury to the mother and fetus, and in some cases death. The cases in essence rested upon the classical theories of a latent defect in ordinary use, even if one puts aside the elements in the case (continued marketing after receipt of notice of the serious dangers) that pointed toward punitive damages. For a detailed account of the Dalkon Shield episode, see Morton Mintz, At Any Cost: Greed, Women and the Dalkon Shield (1985).
worthy and to remain an automobile. In other cases, the absolute liability imposed under the present law induces manufacturers to withdraw certain products from the market—for example, the pertussis vaccine—because they do not think that they can recoup through the product’s price the expected costs of litigation and liability.

The search for an appropriate standard thus shifts to the appropriate test for negligence. One test holds that if the risk is “foreseeable,” then the manufacturer may be liable for the failure to take reasonable care. But this formula simply lacks the relevant components of any sound social proposal, for it does not take into account any explicit measurement of the probability of loss, the costs of precaution, the availability of substitutes, and other

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Since this article was written Congress has passed the National Childhood Vaccine Injury Act of 1986 (see 132 Cong. Rec. H. 11597 (Oct. 17, 1986)), which provides both for a compensation fund for certain vaccine-induced injuries, and for a revision of the tort rules of both actual and punitive damages in those cases that remain in the system. The statute is far too complex to analyze in a short space, but two brief observations are in order. First, tort liability remains where the manufacturer does not provide “proper” warnings. Compliance with the statutory norms is “presumed” to supply such warnings, unless the plaintiff shows “by clear and convincing evidence that the manufacturer failed to exercise due care notwithstanding its compliance” with the applicable statutes and the regulations issued thereunder. § 2122(b)(1)(B). The standard thus falls short of the conclusive presumption offered in the text; and the level of actual protection depends critically upon the judicial interpretation of the statutory standard. Second, the statute prohibits punitive damages against defendants that have complied with the statutory standards unless the defendant manufacturer engages in fraud, or intentional and wrongful withholding of information, or other illegal conduct, either before the vaccine is approved or after it is in the field. § 2123(d). Again, the meaning of the standard awaits judicial construction.

70 Here note that sales often are made to institutions, not to individual purchasers, whose budgets may not accommodate the premiums that have to be charged. The usual paradigm of individual consumer purchasers is thus complicated by the presence of intermediate institutions at the original purchase stage. The swine flu case is an obvious illustration of the failure of insurance markets to work as the proponents of the modern products liability law believe they should. My thanks go to Patricia Danzon for stressing this point in conversation.

71 For cases that have emphasized the importance of foreseeability, either on the question of scope of duty or causation, see Barker v. Lull Engineering, 20 Cal.3d 413, 429 n.9, 573 P.2d 443, 452 n.9, 143 Cal. Rptr. 225, 234 n.9 (1978) (design defect in loader); Soler v. Castmaster, Div. of H.P.M. Corp., 98 N.J. 137, 151-52, 484 A.2d 1225, 1232-33 (1984) (design defect in altered casting machine design); Rossell v. Volkswagen of America, 147 Ariz. 160, 166-67, 709 P.2d 517, 525-26 (1985) (design defect in placement of battery in 1958 Volkswagen); MacDonald v. Ortho Pharmaceutical Corp., 394 Mass. 131, 138-36, 475 N.E.2d 65, 68 (1985) (omission of “stroke” from warning list of possible complications from use of birth control pills). In all these cases, the bottom line was the same: notwithstanding the difficulties with duty and causation, liability in the end rested in the hands of the jury, so that balancing tests replaced categorical standards.
similarly relevant considerations.

The weaknesses of this program can be corrected by a shift to a more complex cost-benefit analysis patterned on the Hand formula and captured in the Wade factors. But this approach simply substitutes one major problem for another. The information for determining whether a firm has conducted an optimal research program cannot be acquired or evaluated accurately. In order to work, these formulas require that specific numbers be identified for each of the relevant variables. This empirical information, if available at all, is available only in the most gross of qualitative terms. One can easily imagine how erroneously high estimates of the probability and extent of harm and low estimates of the costs of prevention could yield uniform determinations of negligence. Likewise, errors in the opposite direction could lead to uniform exonerations of manufacturers. What good is any test if the possible outcome is so sensitive to different values of the relevant variables that any outcome is arguably consistent with the evidence?

I have no strong belief in the matchless ability of administrative agencies to make the correct cost-benefit analysis. In many cases, I would substitute a regime of private contract for a system of direct regulation. But if the only question is what form of regulation is best able—or rather, least unable—to control the risk of dangerous products, administrative agency decisions do have three major advantages that modern products liability tort law lacks. First, administrative decisions are not blinded by the mishaps in individual cases, which, once they occur, tend to obscure the original estimates of probability and severity of harm. Second, and most relevant here, administrative decisions are made at the time the product is released and can be revised continuously thereafter on the strength of new data. The system thus can begin to cope with the acute information deficit otherwise brought on by the passage of time. Third, recognizing that a determination must be made at some point, an ex ante determination is cheap in comparison with the cost of litigation after the fact, and it will remain so even if post-release scrutiny is tightened.

Again, note the parallel to problems of title in real estate cases. The social solution to the adverse possession problem was not endless refinement in the rules that governed litigation over title. Rather, it was an end run around the process of case-by-case litigation through superior conveyancing, surveying, and recording practices. The use of ex ante procedures is also somewhat like a demand for writing under the statute of frauds or even for confession of judgment clauses in loan agreements.
In sum, for all long-lived products, the proper solution for setting liability relies upon ex ante determinations of the standards for design and warning, not ex post standard-setting by the jury. Organizing lawsuits after the fact is often very difficult. The framework for future litigation must be prepared when the product is released, long before the litigation takes place. Administrative standards can provide the needed road map in the form of more categorical rules of litigation, which no common law of adjudication can match.

F. Outside Statutes of Limitation

The substantive changes in products liability law and the problems they produce, outlined in the previous section, set the stage for the special "outside" statutes of limitation (often called statutes of repose) passed in the last decade by a number of states. The modern doctrinal developments moved the focus of litigation backwards in time; the statutes of repose represent an effort to return it to the present. These statutes are like ordinary statutes of limitation in that they establish fixed periods in which suits must be brought. But they differ from the usual statute in that they do not run from the date of injury, but from the time the defendant surrenders possession and control of the instrumentality in question. Accordingly, it may well be that injury will occur after the period has run. The plaintiff's cause of action therefore could be barred before it ever accrued.

1. Architects and Constructors. A good illustration of the pressures leading to these outside statutes is the evolution of New Jersey law on the liability of architects and contractors. The cases arise as follows. An architect designs or a contractor builds or refurbishes real estate. The work then is completed and turned over to the owner for general use and occupation, and the original architect or contractor remains under no ongoing obligation to maintain or repair the premises. A person injured after turnover to the owner claims that his losses were caused by the defective design or workmanship of the original architect or contractor. The question is whether this cause of action lies or whether the remedy must be

directed against the party in possession.

Miller v. Davis & Averill\textsuperscript{72} stated the early common law position:

[T]he general rule is well established that an independent contractor is not liable for injuries occurring to a third person after the contractor has completed the work and turned it over to the owner or employer and it has been accepted by him, even though the injury results from the contractor's failure properly to carry out his contract. When the work is finished by the contractor and accepted by the employer the latter is substituted as the party responsible for existing defects.\textsuperscript{73}

In Miller, this rule barred an action brought by an injured worker against a contractor who had installed an overhead crane on a track affixed to the ceiling in the plant where the plaintiff worked. The crane was either leased or owned (the facts were unclear) by the Coca-Cola Company. The track had been delivered some seven or eight years before the accident, and the defendant had repaired it two years before the accident. Coca-Cola had maintained the equipment thereafter but had not been joined in the suit, doubtless because it was protected from suit by the exclusive remedy provision of the workers' compensation statute.

In defending its result, the court held that the intervention by the owner severed the causal connection with the original wrong because "the owner deprives the contractor of all opportunity to rectify his wrong. The duty of inspection and repairing in such a case is exclusively upon the owner." \textsuperscript{74} MacPherson v. Buick Co., which had overturned the privity limitation in products liability cases generally, was not cited.

Miller was overruled twenty years later in Totten v. Gruzen.\textsuperscript{75} In Totten, the architect and contractor cases were no longer kept separate from the cases governing defective chattels, and the general rules were seen as creating a jury issue.\textsuperscript{76} MacPherson was re-

\textsuperscript{72} 137 N.J.L. 671, 61 A.2d 253 (1948). See also the earlier decisions, Smith v. Claude Neon Lights, Inc., 110 N.J.L. 326, 164 A. 423 (1933); Marvin Safe Co. v. Ward, 46 N.J.L. 19 (1884).

\textsuperscript{73} Id. at 674-75, 61 A.2d at 255-56 (citations omitted).

\textsuperscript{74} Id. at 675, 61 A.2d at 256, quoting Smith v. Claude Neon Lights, Inc., 110 N.J.L. at 330, 164 A. at 425.

\textsuperscript{75} 52 N.J. 202, 245 A.2d 1 (1968). The date fits well with the 1968 division suggested earlier in note 56 and accompanying text.

\textsuperscript{76} The case most heavily relied upon was Schipper v. Levitt & Sons, Inc., 44 N.J. 70, 207 A.2d 314 (1965), which extended strict products liability rules to developers of mass
garded as the decisive authority on privity, while the proximate cause argument in *Miller*, that "the contractor is deprived of all opportunity to rectify his wrong, the owner being thereupon substituted as the party responsible for existing defects," was rejected as an "unrealistic theory." Having passed over this initial hurdle, the New Jersey Supreme Court quickly leaped over a second by noting that the distinction between patent and latent defects no longer had an absolute character sufficient to sever causal connection:

[T]he dichotomy appears to rest on the notion that if the design or workmanship is so obviously bad and dangerous, the owner would or should do something promptly to correct it and, if he does not, liability for injury rests with him alone. The idea is somewhat strange and illogical in thus terminating the possibility of liability of the party basically at fault. Perhaps it would be sounder to say that the subsequent inaction of the owner simply adds him as another possible tortfeasor.

With these last two sentences, the court demotes the wrong of the current owner from the sole to a concurrent cause, thereby allowing an action to proceed against the remote contractor and supplier. It is far from clear, however, why the prior rule of liability should be abandoned as illogical. The prior rule barring the remote action shortens the time frame, eliminates the possibility of an erroneous verdict against a remote party, and fastens incentives for precaution on the part of the party in possession, where those incentives are most likely to be effective. Neither the original architect nor the contractor could force his way into possession, and it is not obvious that the present owner will allow them access to correct the defect even if they could discover it at a distance. There may also be a dispute as to whether the defect exists, whether it needs correction, and if so, what that correction might be. The owner of the premises may demand compensation at the outset for the time and profits lost because of the time his plant is down for repairs, or he may insist upon such compensation in the event that something goes wrong.

The modern rule of divided responsibility thus creates a com-
plex bargaining situation with considerable opportunity for confusion, even if the owner in possession does not seek to extract some collateral gain by holding out against the architect or contractor. The clean rule of *Miller* has obvious advantages that the *Totten* decision never confronts.

The story does not end there, however. *Totten* proved to be unstable because of the enormous and ongoing liability exposure it created for architects and contractors. With common law developments foreclosed, the pressure built for a statutory response. It came in the form of an outside statute of limitation. By its terms, the statute barred any suit against the parties who originally designed or constructed improvements beyond ten years after they turned it over to the party in possession of the property, be it as owner or tenant.\(^7\)

In effect, this outside statute reinstitutes a fraction of the older proximate cause rule of *Miller*. The logic behind the statute is that the problems dealt with by the *Miller* rule did not disappear with the abrogation of its proximate cause limitation. The outside statute therefore shortens the time frame, reduces the level of error, reduces the need to examine the conduct of intermediate parties, and clarifies the incentives upon the party in possession. It is a close question whether the ten-year statute is as good as the original (and more restrictive) proximate cause rule, but both rules seem superior to the open-ended joint causation rule of *Totten*.

In due course, this statute was subject to constitutional challenge, which the New Jersey Supreme Court rejected in *Rosenberg v. Town of North Bergen*.\(^8\) The court rebuffed the plaintiff's argument as follows:

> [P]laintiff's alleged cause of action did not arise until she fell

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\(^7\) The full text reads as follows:

No action whether in contract, in tort, or otherwise to recover damages for any deficiency in the design, planning, supervision or construction of an improvement to real property, or for any injury to property, real or personal, or for an injury to the person, or for bodily injury or wrongful death, arising out of the defective and unsafe condition of an improvement to real property, nor any action for contribution or indemnity for damages sustained on account of such injury, shall be brought against any person performing or furnishing the design, planning, supervision of construction or construction of such improvement to real property, more than 10 years after the performance or furnishing of such services and construction. This limitation shall not apply to any person in actual possession and control as owner, tenant, or otherwise, of the improvement at the time the defective and unsafe condition of such improvement constitutes the proximate cause of the injury or damage for which the action is brought.


\(^8\) 61 N.J. 190, 293 A.2d 662 (1972).
and sustained injury. Of course this was many years after the ten-year period fixed by the statute had expired. She claims that the statute, in its application to her, amounts to a deprivation of due process, since, as she expresses it, the statute bars her cause of action before it has arisen. This formulation suggests a misconception of the effect of the statute. It does not bar a cause of action; its effect, rather, is to prevent what might otherwise be a cause of action, from ever arising. Thus injury occurring more than ten years after the negligent act allegedly responsible for the harm, forms no basis for recovery. The injured party literally has no cause of action. The harm that has been done is *damnnum absque injuria*—a wrong for which the law affords no redress. The function of the statute is thus rather to define substantive rights than to alter or modify a remedy. The Legislature is entirely at liberty to create new rights or abolish old ones as long as no vested right is disturbed. 81

The response of the court is odd and evasive, but this is not to say that the result is wrong. Of course, it is wholly a matter of words to say that the cause of action was barred before it accrued or to say that it never existed at all. Whether the statute should stand or fall should depend upon its substance, not upon an arbitrary judicial verbalization.

Admittedly also, the court’s total deference to the legislative action is unjustified. I reject the now-popular view that the legislature has complete power to alter general rules of conduct. General rules are essential in defining the existence of property rights in the first instance. 82 There would be no coherent conception of private property if the general law of trespass to land were totally abolished, even prospectively. Altering rights of action is serious business because it necessarily alters the underlying property and personal rights that the rights of action protect.

However, even a more stringent standard of judicial review does not doom this outside statute to constitutional invalidation, whether the due process analysis is substantive (as an alteration of

81 61 N.J. at 199-200, 293 A.2d at 667 (citations omitted).
82 I have addressed these issues in Richard A. Epstein, Takings: Private Property and the Power of Eminent Domain chs. 8, 16 (1985); Richard A. Epstein, Toward a Revitalization of the Contract Clause, 51 U. Chi. L. Rev. 703, 711-12 (1984). Note that the New Jersey court’s distinction between “defining” substantive rights and “altering or modifying” a remedial provision parallels the unsatisfactory use of that distinction in the contracts clause cases. See 51 U. Chi. L. Rev. at 746.
The control of error in adjudication is one of the primary objectives of any legal system. As the arguments above suggest, the modern common law rules generate high error rates and are very costly to administer. A solution that eliminates a right of action against a remote party while preserving an action against the immediate party is the best way to reduce the costs associated with the passage of time.

It is easy to see how the reduction in these costs creates gains for owners and contractors. Once the liability rules are fixed and definite, the original owner can reduce the purchase price and fees otherwise payable to the architect and contractor to reflect the additional costs (of repairs and of prospective liability) that the owner now has to bear. Therefore, the critical question is whether the outside statute improves the position of the injured party. Here the matter is more doubtful because of the risk that the owner (now the only potential target) will be insolvent. Yet that problem exists in the many cases where, under all conceivable theories, the owner alone is responsible for defective maintenance and repair. The problem should be and usually is countered with a system of occupier liability, mandatory premises insurance, or direct government inspection of dangerous premises.

In any event, one should not condemn the outside statute on constitutional grounds simply because it is not immediately obvious that it will leave victims better off. On matters of error control, it is very difficult to demand of any given rule that it leave everyone better off than its alternative. Often the only possible choice is between a rule with too many cases of undeserved liability and one with too many cases of undeserved escapes from liability. Either way, any rule generates systematic and uncompensated losses. The best one can ask for is a long term consistent movement toward error minimization in all contexts, and this the outside statute provides. Under an aggregate utilitarian approach, this result is utterly unproblematic; while if one demands a Pareto justification, the statute probably moves the legal system closer to some Pareto ideal (even if it will not achieve it), since both the benefits and burdens of these remedial statutes are widely dispersed.83

83 Under my own system the question here requires a balancing of two types of error, overinclusion and underinclusion. On this determination, some degree of deference has to be shown to the legislature, for the most that can be asked is that the statute in question tries reasonably to minimize the sum of the two types of errors. That goal may be served best by imposing no liability on some defendants. For more extended development, see Epstein,
The case for the statute can be put more forcefully. To hold this outside statute of limitation unconstitutional necessarily condemns on constitutional grounds the earlier common law rules of privity and the rule of proximate cause under Miller. Both these common law rules were more restrictive of the plaintiff's rights of recovery than is the new statute. If the statute is unconstitutional, then the prior common law rules of causation and privity are unconstitutional as well, notwithstanding their wide traditional acceptance and their strong efficiency justifications.\(^8\)

2. Products Liability. The qualified nature of the constitutional approval given in Rosenberg is illustrated by the subsequent reaction to more recent statutes of limitation passed in response to the changes in general products liability law. The basic pattern of these statutes is to create an outside period of ten to twelve years from the date of sale, after which no action may be brought against the original manufacturer. Suits against all other parties in possession remain unaffected by the statutes, which are designed to shorten the interval between the operative facts and the date of suit. As was the case with real estate recording statutes, steps also had to be taken to ensure that these statutes of repose could not be circumvented by allowing the party in possession, once sued, to pursue the original manufacturer with claims for contribution and indemnity. In addition, there were serious questions as to whether the outside period of limitation should bar only actions attributable to negligence, or, more problematically, should extend to bar actions arising from willful and deliberate concealment of known product defects; and finally, whether the outside limit should apply at all to certain kinds of products, prescription drugs in particular.

Takings at 126-29 (cited in note 82). Note that it is not certain that the improvement in incentives and judicial administration will provide sufficient net benefit ex ante to the particular parties whose actions for tort it might compromise. Yet that is necessarily the case with respect to any statute designed to control error in litigation, including the ordinary statute of limitation.

\(^8\) See Epstein, Takings at 238-41 (cited in note 82), where I argue that most common law rules of general application are constitutional, even when a modification of these rules (for example, the shift from strict liability to negligence) raises in principle serious constitutional issues.

One further defense of the privity rule is that it offers the best approximation of the contract that all three persons would have reached if, with knowledge of the future difficulties, they could have contracted costlessly at the outset of their relationships. For further discussion, see Stephen E. Margolis, Two Definitions of Efficiency in Law and Economics, 16 J. Legal Stud. (forthcoming 1987); Epstein, 16 Ga. L. Rev. at 775 (cited in note 52). It surely must be remembered that so many problems of modern liability law arise because explicit contracts are rejected even where they have obtained consumer acceptance.
In my view, the hard line on the outside limitation seems to be appropriate to most of the disputed situations. The question again is how to minimize the sum of the relevant error costs in both directions. The costs created by the statute arise in cases where recovery should be allowed because the harms are attributable to latent defects that cause harm in ordinary use. However, the analysis in such cases is not uniform with respect to all products, and not all actions against manufacturers will fall within the statute's bar. Consider, for example, capital equipment: as a matter of course, almost all capital equipment whose life exceeds ten years will be inspected, repaired, and maintained in the interim. In some cases (as is often so with airplanes and their components) the manufacturer retains a continuous service obligation over the product, in which case liability commonly could attach to a breach of that duty.

In other cases, where the control over the product has ceased, the only liability possible is for original defects; but that liability nevertheless should cease after a fixed time, as others further down the chain have superior control over the product and thus are more appropriate defendants. With asbestos the employer controls the workplace environment and the product use. With drugs and generic products, there often is similar intervening supervision as well, usually by physicians or public health officials. The most difficult cases by far are the drug cases with delayed manifestation of injury. In those cases, there is no intermediate party who stands responsible for subsequent harms. Nonetheless, the inherent difficulties presented by the passage of time, as demonstrated in the DES and Agent Orange cases, suggest that the presumptive ten- or twelve-year period makes good sense in these cases as well. Although my conclusion here is a cautious one, the probability of identifying a sound basis for recovery against the original supplier seems sufficiently small in these cases to justify banning the action altogether—at least after some period of time.

Similarly, there appears to be little reason to exempt negligence actions from the operation of the statutes as regards either capital equipment or generic products. If negligence-based causes

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86 See, e.g., Ariz. Rev. Stat. Ann. § 12-551 (West 1982), which calls for a twelve-year period but exempts actions based upon negligence. The statute also exempts actions based upon breach of express warranty. There is no reason not to enforce voluntary undertakings, but there is a risk that some vague affirmation will be confused with a written warranty, which often has explicit time protections.
are not excluded, the statute may have little practical effect. As courts and commentators repeatedly have noted, it often is very difficult to find a principled difference between theories of negligence and theories of strict liability, especially in modern warning and design cases.87

In other cases, it is true, the line between negligence and strict liability is tolerably clear because the strict liability test dispenses with the cost-benefit calculation that the negligence formula makes obligatory. Yet given the network of contracts that link producer and consumer, simple tests of physical causation cannot establish prima facie liability in products cases. Instead, the operative distinction between strict liability and negligence is, verbally, the line between a defendant's producing an unreasonably dangerous product and a defendant's using less than reasonable care in producing an unreasonably dangerous product. Some case-by-case cost-benefit analysis, with its substantial temporal component, must be undertaken under both these standards of liability. The line between negligence and strict liability in products cases therefore becomes sufficiently evanescent that no outside statute of limitation could have much bite if it barred only strict liability actions. The point of outside statutes is to ban actions that should not be brought; it is not to encourage deft pleading by skilled plaintiff's lawyers determined to make an end run around the ban.

The more difficult question is what to do with the cases of deliberate harm of the sort that would support sound claims for punitive damages. One solution would be to maintain the absolute ban, following the original design of the New Jersey architect's and contractor's statute. One could argue in favor of the absolute ban that it is not likely that manufacturers ever will engage in systematic harmful conduct in reliance upon statutory protection that kicks in only ten or twelve years after the product is marketed. The future benefits of the statute have to be discounted to their present value, which is small in comparison to the very substantial tort, criminal, and regulatory sanctions that remain in the long period after the initial sale of the product and before the imposition of the ban. It is very difficult to design a product that does harm only after the expiration of the statutory period. Even if the manufacturer has direct protection under the statute, he still might be forced to sign contracts of indemnity or contribution to protect his immediate purchasers, who as parties in possession of dangerous

87 See, e.g., Volkswagen of America, Inc. v. Young, 272 Md. 201, 321 A.2d 737 (1974) (discussing the difficulty of setting an ex post standard for crashworthiness).
instrumentalities will not fall within the ambit of any outside statute. Alternatively, where the contractual obligation is not made explicit, the immediate buyer will have a greater incentive to inspect the product before placing it in use, which in turn will redound to the benefit of the ultimate user. Therefore, the statute still maintains substantial incentives for product safety.

Still another argument in favor of the absolute ban rests on the risk that a series of judicial decisions will expand the class of "deliberate harms" by degrees until it swallows the original rule. Already the line between accidental and deliberate harms has proven sufficiently pliable in, for example, the context of punitive damages, where today a showing that a manufacturer had some notice of a possible product defect is potentially sufficient to trigger an inquiry into punitive damages. Likewise, the experience with qualified privileges in the law of official immunity shows how difficult it is to keep the door open just a crack. Flexibility in these cases, therefore, may be not a virtue, but a vice.

However, it is important not to press this argument for the outside ban too far. A manufacturer may be more able to take strategic advantage of the absolute bar where the harms from the dangerous substance (chemical, drug, or natural substance) show up only years after ingestion—as for example with asbestos. In these circumstances, the length and regularity of the latency period make it quite possible that all such cases will arise after the period has run, so that a manufacturer could reap substantial benefits from deliberate suppression of relevant information. Thus the case

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9 For the progression, see Barr v. Matteo, 360 U.S. 564 (1959), reh'g denied, 361 U.S. 855 (1960) (providing for an absolute immunity against common law torts for officials acting within the outer perimeter of their official duties); Butz v. Economou, 438 U.S. 478 (1978) (creating a qualified immunity for official actions undertaken "reasonably and in good faith" by cabinet officials, in cases of constitutional wrongs); Harlow v. Fitzgerald, 457 U.S. 800 (1982) (narrowing the scope of that immunity by emphasizing the "objective" elements); Fitzgerald v. Nixon, 457 U.S. 731 (1982) (conferring an absolute immunity on the President). It is also interesting to note that nowhere in the modern case law development has it been seriously suggested that any qualified immunity, once granted, should be overridden by a simple showing of negligence. That same line of reasoning applies to the protection afforded by outside statutes of limitations.
for the absolute ban is far weaker in these instances of latent defect and cumulative trauma.

The ideal solution in such cases is hard to come by, but perhaps some mixed approach may be tried. For latent injury cases, the protection of an outside statute of limitation probably should not be absolute: proof of deliberate concealment should revive the cause of action. On the other hand, for ordinary equipment and capital goods the outside statute should remain; but an extended period could be provided for actions based on deliberate harm. Yet at some point, the cost of adjudication becomes so large that an absolute cutoff becomes preferable even for deliberate harms. A possible compromise would leave the ten-year period for accidental harms and adopt a longer period, perhaps twenty years, for deliberate harms. There clearly is room for much disagreement over the ideal provisions of an outside statute.

The substantive changes in products liability have created substantial pressures to adopt these outside statutes of limitation as a safe harbor from the open-ended principles of liability that have developed at common law. Nonetheless, the second generation of statutes has fared far worse in the courts than did the architect and contractor statute sustained in *Rosenberg*. The decision of the New Hampshire Supreme Court in *Heath v. Sears, Roebuck & Co.* is typical of the substantial minority of states that have struck down outside statutes of limitations in products cases. In essence, the New Hampshire statute required that, subject to certain exceptions not relevant here, a products liability action be brought not "later than 12 years after the manufacturer of the final product parted with its possession and control or sold it, whichever occurred last." The court struck down the statute on the ground that it arbitrarily barred a cause of action before it accrued. The court also condemned the statute as "unreasonable because the mere purchase of pills produced by a drug manufacturer"
in California, or of a defective automobile in Michigan, does not place the consumer on notice of a hidden defect injurious to his health or safety. It then quoted a passage from the dissenting opinion of Judge Frank in Dincher v. Marlin Firearms Co. to clinch its constitutional condemnation:

Except in topsy-turvy land, you can't die before you are conceived, or be divorced before ever you marry, or harvest a crop never planted, or burn down a house never built, or miss a train running on a non-existent railroad. For substantially similar reasons, it has always heretofore been accepted, as a sort of legal 'axiom,' that a statute of limitations does not begin to run against a cause of action before that cause of action exists, i.e., before a judicial remedy is available to the plaintiff.

I confess to some awkwardness in criticizing Heath, for I helped draft the original version of the New Hampshire statute in my capacity as a consultant to the American Insurance Association. But like the architect and contractor statutes in Rosenberg, this particular statute of limitation need not be defended in the constitutional arena solely on the ground that legislatures have plenary powers to regulate causes of action in the courts. The passage by Judge Frank shows, if anything, how perilous it is to move from propositions about natural truths to conclusions about sound legal policies. It is in the physical nature of things that birth precede death and planting precede harvest. Yet there is no necessary axiom that limitation periods must run only from the time of injury. To be sure, that rule makes good sense as a first approximation; were the basic rule to be otherwise, there could be no legal system at all, as all lawsuits would be barred before they were created. But the question still remains: is it possible to work some Pareto improvement by a principled deviation from the default rule that statutes of limitation are keyed to the accrual of a cause of action?

The advantages of the outside period already have been noted. It reduces both administrative and error costs of litigation. It provides a corrective against the general doctrinal tendencies of prod-

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**464 A.2d at 295. Note the implicit appeal to the "latent defect causing harm in ordinary use" formula as an attack on the statute. There would be no need for the outside statute if the basic common law doctrines had confined tort liability of remote manufacturers in this fashion.

**198 F.2d 821, 823 (2d Cir. 1952) (Frank, J., dissenting) (footnotes omitted).
ucts liability law, tendencies that have removed all internal doctrinal barriers to suits based on ancient evidence and have precluded contractual allocation of the risk of liability for personal injury. It strengthens the incentives for care on the party in possession. Ex ante these gains seem to be substantial. On the merits, I believe that the legal system operates better with the statute than without it. This point, however, surely is open to debate, given the empirical estimates on which it necessarily rests. Yet as a constitutional matter, it seems wholly improbable that this estimate is so wildly incorrect that it should be struck down by a court that itself never examined any of the possible arguments that could be made in favor of the statute.

It is an ironic measure of the temper of the times that Judge Frank’s account of a topsy-turvy world came in dissent in a case involving a statute that provided that a cause of action should accrue within one year of “the act or omission complained of.” In that case, the defendant sold a rifle to a third party three years before the date on which its use resulted in injury. At no point did anyone challenge the constitutionality of this unfortunate statute. The court simply treated the matter as an exercise in statutory construction and dismissed the hapless plaintiff by noting that the date of the last act or omission is not the date of injury. One could easily strike down the statute in Dincher on constitutional grounds, precisely because it introduces the very error costs controlled by the ten-year outside period.

CONCLUSION

The critical point, on which this article closes, is that an understanding of the statute of limitation requires an understanding of the frictions of the legal system to which it responds. That response cannot proceed on the basis of any self-evident axiom that ignores the relevant costs and benefits of alternative institutional arrangements. The discussion thus leads back to the point from which this journey began. The detailed features of any successful working system of tort law must beware of the enormous practical frictions that have the power to undermine any substantive system, however noble. It is a lesson that courts tend to forget today in fashioning the common law and constitutional responses to the temporal dimension in tort litigation.