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A Clear View of *The Cathedral*: The Dominance of Property Rules

Richard A. Epstein[†]

I. INTRODUCTION: TWO KINDS OF RULES, TWO KINDS OF RISKS

In their 1972 article, Guido Calabresi and A. Douglas Melamed introduced the now standard distinction between property rules and liability rules.¹ A property right gives an individual the right to keep an entitlement unless and until he chooses to part with it voluntarily.² Property rights are, in this sense, made absolute because the ownership of some asset confers sole and exclusive power on a given individual to determine whether to retain or part with an asset on whatever terms he sees fit. In contrast, a liability rule denies the holder of the asset the power to exclude others or, indeed, to keep the asset for himself. Rather, under the standard definition he is helpless to resist the efforts by some other individual to take that thing upon payment of its fair value, as objectively determined by some neutral party.³

Calabresi and Melamed would have made a major contribution if they had simply pointed out how these remedial choices recur in widely divergent substantive settings. Yet their article became enormously influential by pinpointing the key economic consequence that flows from these alternative specifications of remedial protection for any entitlement. Because property rules give one person the sole and absolute power over the use and disposition of a given thing, it follows that its owner may hold out for as much as he pleases before selling the thing in question. In contrast, by limiting the owner's protection to a liability rule, that holdout power is lost, and in its stead the owner of the thing receives some right to compensation for the thing that has been taken away from him against his will.

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1. Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972).

2. *See id.* at 1092 ("An entitlement is protected by a property rule to the extent that someone who wishes to remove the entitlement from its holder must buy it from him in a voluntary transaction in which the value of the entitlement is agreed upon by the seller.").

3. *See id.* ("Whenever someone may destroy the initial entitlement if he is willing to pay an objectively determined value for it, an entitlement is protected by a liability rule.")

It is one thing to articulate a distinction; it is another to determine how it should be used. Although their work was pathbreaking in many ways, Calabresi and Melamed nonetheless failed to address systematically the challenge of deciding whether legal protection via a property or a liability rule should be conferred to holders of particular sorts of assets, or why. It is to that question that I shall address myself here. I shall lay out my cards clearly at the beginning. In a world in which transaction costs were zero, where all disputes could be costlessly resolved, the choice between liability rules and property rules would be of little or no importance—just another application of the ubiquitous Coase Theorem.⁴ On the one hand, the holdout danger from a property rule would be of no consequence because the two parties could exchange an infinite number of offers within an infinitesimal period of time; in essence, that is what a world of zero transaction costs would entail. On the other hand, a liability rule would have no serious downside either. Armed with our zero transaction costs assumption, any dispute on valuation could be resolved both accurately and instantly. In both cases, each asset would end up in the hands of the party who valued it most with no institutional drag, so that the choice of institutional arrangements would be of little or no consequence to the overall situation.

It is an open question, however, whether one can even understand what a world of zero transaction costs means, given the violence it does to our ordinary understanding of the importance of time. Be that as it may, our world is not one in which transaction costs are zero. Rather, they are positive and large, so that the choice between the two rules is certain to have major consequences for the overall operation of any legal system. Given this fact, it becomes clear that each legal system will have to choose some legal rule that minimizes the transactional imperfections that occur in securing the transfer of assets from one person to another. The standard practice in virtually all legal systems assumes the dominance of property rules over liability rules, except under those circumstances where some serious holdout problem is created because circumstances limit each side to a single trading partner. In these cases of necessity, the holdout problem could prove enormous, so that the strong protection of a property rule is relaxed. One person may be allowed to take the property of another upon payment of compensation, but only in a constrained institutional setting that limits the cases in which that right can be exercised and supervises the payment of compensation for it.

The reason for this allocation of power is as follows. In most situations, the owner of a particular asset may choose from a large number of potential trading partners. In those settings, the holdout advantage conferred by a liability rule is relatively small, for a potential buyer can play one seller off against another until a competitive price is reached. At this point, the exchange

4. See R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

will usually occur without explicit legal intervention on terms that leave both parties satisfied with the outcome, taking into account both the market and subjective components of value that may inhere in specific assets. To inject liability rules into this setting, however, requires some level of state intervention in *each and every* transaction to set the appropriate value for the parties. The risk of undercompensation in such situations is pervasive given the inability to determine with accuracy the losses, both economic and subjective, that follow when individuals find that someone else has plucked away from them assets that they need for the operation of their own business. The problems here are acute under the current law of eminent domain, in which the levels of compensation generated systematically ignore all elements of subjective loss and consequential damages brought on by deliberate government action.⁵ Do we allow one business to take some key equipment from the other in the dark of night if it is willing to pay full compensation? Do we allow one person to take the wedding ring of another simply by paying its market value? Over time, the inefficiencies of a liability system cascade until the security of possession and the security of exchange needed for complex commercial life and a satisfying personal one are no longer available.

These valuation difficulties help explain why liability rules, when used, always take the direction of a "call"—that is, an option that allows some person the right to take a thing in time of need. To be sure, markets themselves invent all sorts of different kinds of options, including "puts," which allow holders of a specific asset to sell it to another person for some predetermined price.⁶ Those arrangements are common enough in financial markets, but they are rarely encountered in the world of legally created remedies.

The reason seems clear. A liability rule is typically adopted to counter the monopoly position of the holder of the asset. The holder of cash has no monopoly position at all, so it is very hard to believe that by allowing the present holder of some specific asset to designate the person who must take it off his hands, we advance any conceivable measure of social welfare. The potential recipients are numerous, and there is no reason to believe that if the holder of the asset is allowed to cash out safely from the transaction, he will foist the asset off on a party, arbitrarily chosen, that can make better use of it than he. Puts, therefore, are never imposed as a matter of law on strangers but are the outgrowth of consensual transactions over organized markets. As between strangers, liability rules, however sharply constrained, always take the form of calls: The person who has the cash can dictate that some asset be

5. For further discussion, see RICHARD A. EPSTEIN, *TAKINGS* 51–56, 80–86 (1985).

6. See, e.g., Madeline Morris, *The Structure of Entitlements*, 78 CORNELL L. REV. 822, 854 (1993) (arguing that "the in-kind holder can force a compensated transfer").

moved in his direction, where there is every reason to believe that he can make at least some intelligent use of it, perhaps better than his incumbent.

Owing to these dangers, liability rules are limited to those circumstances in which property rules work badly, namely, cases where the holdout power implicit in a property rule becomes so large that useful transactions may be blocked by a wide range of strategic behaviors. These holdout situations arise when the resource currently commanded by *A* is needed by *B*, such that each can deal only with the other for the useful exchange to take place. In such settings, *A* may value the thing at 10 and *B* may value it at 1000, such that it is clear that a mutually beneficial voluntary exchange could take place at any sum between 11 and 999, but the exact point between the two extremes cannot be determined in the abstract, so that the parties labor under strong incentives to hold out for the largest fraction of the gain. At this point, even if the bargain is made, much of the surplus (equal to 1000 minus 10, or 990) could be dissipated in achieving it. Alternatively, the bargaining process itself could break down. Aware of these future possibilities, the parties could easily take excessive precautions to avoid ever finding themselves in a holdout situation.⁷

Often, the parties will know that these risks might occur. Tenants to a lease can introduce terms that ease the problems on renewal. Marriage contracts could include provisions for property division on divorce. Where these contract rules are made, they normally ought to be respected because the parties have the best knowledge of their future situation and can assess the competing risks better than the legal system, but in many cases the holdout problem is thrust upon people without their consent and against their will. To prevent the bargaining from breaking down in these contexts, the law could tell one person that he is entitled to take the property of another upon payment of just compensation, namely, an amount that equals the return he could have gotten for that asset in a competitive situation in which that holdout potential is lost. Yet even here, the law will, whenever possible, impose a layer of independent review that indicates what property may be taken and how much compensation should be paid for it.

Stated formally, the task of a legal system is to minimize the sum of errors that arise from expropriation and undercompensation, where the two are inversely related. Stated empirically, the solution is that the risk of undercompensation is greater in the routine case, such that we are willing to put up with the endemic risks of a liability rule only in those cases in which we can envision major impediments to a system of property rules, and even then we hedge their operation with expensive institutional safeguards that are not needed when exchanges take place by mutual consent.⁸ As with all

7. See, e.g., Richard Craswell, *Contract Remedies, Renegotiation, and the Theory of Efficient Breach*, 61 S. CAL. L. REV. 629 (1988).

8. See *infra* Part IV (discussing telecommunications and flood easements).

assertions of this sort, the claims here are implicitly empirical but not capable of precise justification. Yet the very strong set of practices in legal systems suggests that just this judgment has been made, perhaps unconsciously, by large numbers of persons who have been forced to confront just these choices.

This aspect of the subject is, however, usually missing in the law and economics approaches to the problem. Rather, the choice between property rules and liability rules is often decided at a very high level of theoretical abstraction, where insufficient attention is paid to the specific institutional context in which the one set of rules displaces the other.⁹ The models in question chiefly analyze some one-period, two-party situation, such as the pollution of a stream or the breach of a single contract, and then seek to derive very broad generalizations about the relative strength of the two types of rules, without asking how specific institutional contexts might influence the relevant choices. In so doing, the opportunity is lost to develop a more systematic view of the relative spheres of influence of these rules over the full range of social arrangements.

More important perhaps, the approach of Calabresi and Melamed, and of those who have followed in their wake, has led to an unfortunate form of intellectual agnosticism that tends to distort the relative merits of the two kinds of remedies, by overstating the circumstances in which liability rules are thought to be superior to property rules, or at least plausible substitutes for them.¹⁰ That point of view is taken to its most extreme formulation in the recent essay of Ian Ayres and J.M. Balkin, which proposes to allocate property rights by a system of "internal auctions" that contemplate a theoretically endless array of sequence of liability.¹¹ One party may take from another so long as he is prepared to pay, but that property may be retaken by its original owner so long as he is prepared to pay more, and so on, until one side or the other retreats, its willingness to pay exhausted.

The dogged agnosticism of Calabresi and Melamed, and the newfound preference for liability rules, are both mistakes. The overarching theme is to find that legal rule that minimizes the sum of the costs associated with extraction and undercompensation, the signature risks of property rules and liability rules respectively. These two risks are not of equal weight in all circumstances. More concretely, in any comprehensive legal structure property

9. For some recent notable efforts in that direction, see Ian Ayres & Eric Talley, *Solomonic Bargaining: Dividing a Legal Entitlement to Facilitate Coasean Trade*, 104 YALE L.J. 1027 (1995) [hereinafter Ayres & Talley, *Solomonic Bargaining*]; Louis Kaplow & Steven Shavell, *Do Liability Rules Facilitate Bargaining? A Reply to Ayres and Talley*, 105 YALE L.J. 221 (1995); Ian Ayres & Eric Talley, *Distinguishing Between Consensual and Nonconsensual Advantages of Liability Rules*, 105 YALE L.J. 235 (1995); Louis Kaplow & Steven Shavell, *Property Rules Versus Liability Rules: An Economic Analysis*, 109 HARV. L. REV. 713 (1996) [hereinafter Kaplow & Shavell, *Economic Analysis*].

10. See, e.g., Kaplow & Shavell, *Economic Analysis*, *supra* note 9.

11. See Ian Ayres & J.M. Balkin, *Legal Entitlements as Auctions: Property Rules, Liability Rules, and Beyond*, 106 YALE L.J. 703 (1996).

rules should dominate liability rules, as indeed they do. To develop and defend these themes, the remainder of this Essay proceeds in three steps. Part II argues for the dominance of property rules in ordinary transactional settings. Part III explains why liability rules should be adopted only in those settings chiefly involving cases of necessity and bilateral monopoly, where holdout problems are likely to prove important. Part IV explains the institutional safeguards that are, and should be, introduced in those cases where liability rules are part of the fabric of everyday life, most notably in cases of takings for public use, and in the rate regulation of common carriers.

II. THE DOMINANCE OF PROPERTY RULES

It is a common habit of legal analysts to gravitate to complex issues while ignoring the simpler ones that lie along the way. Thus, rather than talk about ordinary contracts for sale or hire, it becomes more intriguing to look at tricky necessity cases or to study complex systems of regulation and social control that only the state can put into place for, say, electrical power or telecommunications. Any temptation to master graduate studies before finishing the elementary school curriculum should be resisted. To understand why everywhere and in every society property rules form the norm and liability rules the critical exception, it is useful to begin with the simplest of transactions, not the most complex, both in tort and contract.

The simplest situation in the law of tort is one where *A* simply takes and keeps the property of *B*. The common remedy that is allowed by all legal systems is a simple recovery of the thing so taken, in the Roman law by the *vindicatio rei*, and in the English law by real action for land. In some cases, a legal system does not appear to have resources to allow the specific recovery of the thing, so that the competence of the court is limited to an award of damages. Even when the line is blurred, courts can use the calculation of damages to reinstitute a *de facto* property rule. In the Roman law, for example, the defendant who had taken the plaintiff's property was given an option to keep the thing if he were prepared to pay its value, which looks like a liability rule. But what the law gave with one hand it took back with the other, for the value of the thing was determined by the plaintiff, who could set it above market value "without straying over the line between optimism and perjury,"¹² under what we would call a self-assessment system.¹³ This system is designed not to get an accurate measure of value, but rather to insure by indirection the specific recovery of the thing itself—an early preference for the property rules. Indeed we can say with some confidence that property rules

12. BARRY NICHOLAS, AN INTRODUCTION TO ROMAN LAW 102 (1962).

13. See Saul Levmore, *Self-Assessed Valuation Systems for Tort and Other Law*, 68 VA. L. REV. 771 (1982).

are at their height in those situations where one party starts out with the full bundle of ownership rights and the other starts out, to use Carol Rose's pointed phrase, with "zip."¹⁴ There is no legal system of which I am aware that defines the ownership of property rights as between strangers as being subject to an option to purchase by any identified or unknown party.

A similar level of clarity carries over to the law of contract in the case of the "clean" deal. The definition of an ordinary sale is a voluntary transaction in which the seller transfers the property he owns in exchange for a money consideration called the price.¹⁵ Given this definition, there are no confusions in the basic delineation of rights. The owner is in possession of property to which no one else has any legal claim. The buyer has clear title to the cash, and the two sides agree on and then perform an instantaneous exchange of thing for cash, leaving both happier than before. The entire regime of the simple sale presupposes a strong property rights regime that gives each side to the transaction the absolute right to refuse any deal not entirely to his liking. Prices are kept in line by the availability of close substitutes for the thing in the seller's possession. By definition, there are always perfect substitutes for the cash that the buyer agrees to pay. The velocity of transactions is controlled by the preferences of the parties. A could easily be a dealer in goods, anxious to move inventory at the greatest possible speed. Or he could be the owner of a family heirloom who parts with it only with great reluctance.

What makes this system work is the stability of possession that David Hume recognized as one of the dominant rules of society.¹⁶ Thus, transactions take place only if both sides agree to them, which means that all individuals keep their holdings until they agree to part with them. A liability rule would dash those expectations. Instead of seeking a sale, any individual could take anything owned by any other person and leave its perfect equivalent in cash on the table. Of course, that would not happen. Things do not have obvious cash equivalents, given the complications alluded to above. A concrete example might help. While many academics are quite happy to insist that the sole remedy for the breach of a contract of sale should be expectation damages, the commercial practices on the issue are emphatically the opposite.¹⁷ A damage remedy, in effect, allows a person to take property of another individual and then pay for it with cash, an option to breach as it were. Following that sequence in effect allows one person to circumvent the property

14. See Carol M. Rose, *The Shadow of The Cathedral*, 106 YALE L.J. 2175 (1997).

15. See, e.g., English Sale of Goods Act, 1894, 56 & 57 Vict., ch. 71, § 1(1) (Eng.). There is no definition of sale in the Uniform Commercial Code.

16. See, e.g., DAVID HUME, *A TREATISE OF HUMAN NATURE* 484-516 (L.A. Selby-Bigge ed., Oxford Univ. Press, 2d ed. 1978) (1739-40).

17. For articulation of efficient breach, see RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 117-19 (4th ed. 1992). The origin of the proposal is in OLIVER WENDELL HOLMES, JR., *THE COMMON LAW* 301 (Legal Classics Library 1982) (1881). For a powerful criticism, see Daniel Friedmann, *The Efficient Breach Fallacy*, 18 J. LEGAL STUD. 1 (1989).

system in two easy stages. First, he does a wrong of some sort, and then he makes good on the wrong by paying for it at a price determined by some neutral third party to represent the value of the thing in question. That has not generally been the law. The sanctity of contract, it was said, made it impossible for *A* to change the obligation he owed to *B* simply by paying some damages in addition: "Where parties have made an agreement for themselves, the Courts ought not to make another for them."¹⁸

The anomaly in that situation is this: Why should someone ever be allowed to profit from his own wrong? If *A* and *B* agree to the sale of *A*'s house to *B* for \$100,000, then *B* should normally get the house and not just a damage remedy. A damage remedy looks as though it were a unilateral revision of the original deal. If *B* collects \$10,000 in damages, it is as though the house were first sold for \$100,000 and then, against *B*'s will, retaken by *A* for \$110,000. The remedy of specific performance was not perfect: It could not compel conveyance at the time called for under the contract.¹⁹ Nor could it work where the seller did not have good title. To the extent that the law could insure the outcome, it tried to duplicate the result of the voluntary transaction, that is, the transfer of the property from *A* to *B*. To be sure, it may well be that *A* wants to have an option to get out of the sale upon payment of damages. If so, the usual practice is to write that option into the agreement and to specify in advance the amount of money that must be paid to *B* to undo the sale. Whatever lawyers may think of the situation, ordinary persons in business believe that binding contracts for sale contain within them concealed options to retake the property for a price to be determined after the fact. Only in those cases where transactions were purely financial, as with stocks and bonds, did the damage remedies dominate, and for good reason. The parties themselves cared only about their cash equivalence and could easily buy and sell whatever specific entitlements they had. So why not just settle up the transaction with cash and be done?

More to the point, the system of liability rules has no effective stopping point. To allow a contract to be breached at will is in effect to create a universal private right of eminent domain. *B* takes from *A*, but *B* has property that is protected only by a liability rule, so that *C* could take from *B* on the same terms that *B* took from *A*. Indeed, there is nothing that prevents *A* from

18. *Hoare v. Rennie*, 157 Eng. Rep. 1083, 1087 (Ex. D. 1859).

19. See HOLMES, *supra* note 17, at 300 (noting that law may compel specific performance if "the promisee prefers to have it [the conveyance] late rather than never"). It was in this context that Holmes went on to defend his very dubious proposition that, "[t]he only universal consequence of a legally binding promise is, that the law makes the promisor pay damages if the promised event does not come to pass." *Id.* at 301. The universal nature of the damage remedy stems from the fact that the class of promises to which Holmes refers includes those events over which the promisor has no control, e.g., tomorrow's weather, see *id.* at 298, so that the transaction looks more like a bet than an undertaking. For those cases where performance is possible and desired, specific performance does become a remedy, precisely to frustrate the unilateral transformation of property rights.

reclaiming the goods that were taken from him by *B*. In each case, the valuation question remains thorny and will often have to be settled by litigation. Throughout, the nature of the rule that the outsider can force the reassignment of the entitlements removes the stability normally afforded possession. It is difficult to conceive of a system that is attended by greater inconvenience. So long as the holdout potential is effectively negated by a set of alternative suppliers, the case for introducing a liability regime is at its lowest ebb. The protection of a system of voluntary exchange from attack from without is no small function of the legal order. For these routine transactions in land and chattels, a property rights system offers the only hope for stable and productive legal arrangements.

The general preference for a property rights system carries over to particular cases. The perfect-tender rule is widely supported by merchants, so much so that a merchant who chooses to dishonor a contract of sale by paying expectation damages is normally drummed out of the trade.²⁰ The damages are insufficient to cover the dislocations brought on by the exceptions and create further ripple effects by destabilizing relations that the innocent and disappointed buyer might have with his own customers (who now are protected at most by a liability rule if their seller finds it impossible to perform). Parties are almost always willing to deal when circumstances call for modifications in delivery terms. They wish to have strong property rights, however, to make sure that the renegotiations assume a sensible course in ways that do not prejudice their own obligations to third parties. Liability, therefore, is invoked when delivery is not possible. A contract is not viewed as an option to deliver or pay damages in the manner suggested by Holmes in *The Common Law*.²¹ It is viewed as an obligation to deliver.

A similar analysis applies on the tort side of the line. As before, it is best to start with the simplest case, when *A* takes something from *B*. Here there is no question that when the taking is deliberate, the owner can always regain possession of the thing, plus damages that compensate for any interim loss of use. That restoration prevents the cycle of taking followed by taking that makes liability rules so inappropriate for ordinary social interactions. Against this backdrop, there is a certain irony in the traditional common law rule that treated conversion (even an innocent conversion, that is, one where the converter thought he had title) as initiating a forced sale, whereby the owner of the thing had a "put" that forced only the person who took the thing to purchase it for market value. The "forced sale" rule has come under constant attack especially in cases of innocent takings, where it is usually rejected

20. For a discussion of the issues in the remainder of this paragraph, see Lisa Bernstein, *Merchant Law in a Merchant Court: Rethinking the Code's Search for Immanent Business Norms*, 144 U. PA. L. REV. 1765 (1996). The deliberate breach for a higher price is, in her terminology, the violation of a relationship preserving norm (RPN), which leads to its dissolution. See *id.* at 1801–02.

21. See HOLMES, *supra* note 17, at 301.

today. What possible reason is there to believe that I want the ill-fitting galoshes that I took by mistake from the opera cloakroom? Even innocent parties have difficulties in forcing exchanges against unwilling wrongdoers, so powerful is the impulse to the stability of possession.

What do the exceptions to this system look like? The first and most obvious of these exceptions has to do with the damage or destruction of *A*'s possession by *B*. Here we draw several immediate distinctions. The first asks whether the destruction of the thing was accidental or deliberate. One reason the distinction is so important is that it signals future intentions. Accidental harms have no deep motivations. No one can claim of them that their perpetrator, itself a term that is a bit off-center in this context, is making any conscious effort to circumvent the rules of voluntary exchange. An accident is just that: a set of consequences that was unintended and unwanted from the point of view of the party who brought it about. Repetition is no part of the game plan.

Second, accidents pose no danger of multiple sequential transformations of property rights. The scenario in which *A* takes from *B* who took from *C* depends on deliberate interactions. The likelihood that a set of mistakes and blunders could lead to the destabilization of property rights is minuscule, no matter how great the harm in the individual case. Accidents often cause harm, or hold out some risk of harm, to the party who causes them. Bad drivers are as likely to injure themselves as they are to injure other people. While these people are likely to take insufficient care if they escape all liability for accidental harms, they still face some constraints that bind. It is easy to identify some natural upper bound on the frequency and severity of accidents that just disappears in the context of deliberate violations of the rights of others, which are subject to no definite limit at all.

Third, accidental loss results in damage or destruction. Here restoration to the original owner is not possible, as it is with innocent conversion, so that cash payment becomes the next best equivalent, both for compensation in the immediate case and for deterrence in the long run. It is too late for any form of prohibition, so the liability rule is chosen by default: The property rights protection is no longer possible. Abstractly, one might conjure up some form of injunctive relief, but who should be enjoined for whose benefit? With the threat of deliberate harms, the parties who want to disturb the prior order single themselves out for special treatment.

Of course, an injunction may be practicable. If not, the law will usually not settle with a liability rule that is keyed to the net loss of the innocent party. The private law of conversion draws a sharp distinction between the innocent and the deliberate converter. The former is allowed an offset for the labor and materials expended on improvement, subject only to the constraint that the

innocent party is not made worse off by that offset.²² The imposition of a criminal set of sanctions is designed in the after-the-fact setting to mimic the effects of the injunction. If all of the gains of one party are removed from the transaction after it has taken place, then the deliberate wrongdoer suffers a net loss, so that (with certain enforcement) he will not undertake the act: a de facto injunction with the manipulation of the damage rules. Punitive damages and criminal sanctions are often calibrated to have the same effect.²³ The old joke that it is cheaper to kill than to maim happens to be true unless additional penalties are added to the mix. Deliberate harms introduce cycling effects that cannot be ignored.

The same form of analysis can be applied to the ordinary nuisance cases that are of interest to Calabresi and Melamed. Once again, the basic rule in these cases is that an injunction will normally lie in the event of a substantial nuisance caused by one landowner against another. In the usual case, the system tries to stop the invasion so as to require that the alteration of property rights takes place by voluntary transaction. Damages are a second-tier remedy. As with the necessity rules, it would be a mistake to treat injunctions and damages as dichotomous and mutually exclusive remedies. Quite simply, there is no doctrinal or institutional reason for a legislature or a court to pick between these two pure forms of remedy. Nothing prevents them from being mixed and matched, as they routinely are even in the garden variety nuisance and pollution cases that gave rise to the distinction in the first place.

Consider the possibilities. One is to issue an injunction that is subject to conditions. The plant may continue to run but only during business hours, or only if measures are taken to abate the noise. Once the injunction is in place, the level of residual noise can still be monitored, and damage assessed in accordance with its severity. To give but one instance of a routine practice, in *Quinn v. American Spiral Spring & Manufacturing Co.*,²⁴ the plaintiff complained of noise generated by the defendant's machinery. Shutting the equipment down would have caused major inconvenience to the defendant to secure the plaintiff his deserved peace and quiet, but it was possible to relocate some of the equipment to reduce the sound and inconvenience generated. If necessary, some additional damages could have been added to the mix. The entire tradition of "balancing the equities" started with the presumption in favor of injunctive relief which was relaxed in extreme cases.²⁵

22. A simple numerical example illustrates the point. Suppose that uncut timber is worth \$100 to its owner. It is cut for \$50 and now has a market value of \$140. The owner recovers the timber subject to payment of only \$40. In effect, the innocent supplier of labor takes the risk of his higher cost structure. In no event should the original owner be left with cut timber worth a net value of \$100 to him. The whole analysis is surely complicated when litigation and settlement costs are greater than zero.

23. See Calabresi & Melamed, *supra* note 1, at 1124-26.

24. 141 A. 855 (Pa. 1928).

25. See generally *Developments in the Law—Injunctions*, 78 HARV. L. REV. 994 (1965) (discussing increased use of injunctions).

These mixed solutions reflect the diminishing marginal return to additional protections. The property protections are allowed against the major incursions that the defendant's activities could cause. The damages are used to clean up the harm that still remains. The switch in remedy comes from a rough and ready appreciation of the relative costs and benefits of the two systems. The injunctive relief is given against major disruptions of the plaintiff's business where there is some reason to think that the gains from the prohibition are substantial. If the plant can be operated with only little inconvenience to the plaintiff, then why invite the holdout problem by extending the scope of the injunction?

In most cases, the injunction will provide sufficient protection, but it is easy to envision situations where even the most modest dollop of property protection could be regarded as excessive. In *Madison v. Ducktown Sulphur, Copper & Iron Co.*,²⁶ a case cited by Calabresi and Melamed,²⁷ the court denied any injunctive relief to plaintiffs who were owners of "thin mountain lands, of little agricultural value."²⁸ The estimated value of the plaintiffs' land was on the order of \$1000 and that of the defendants' mining and manufacturing operations was worth over \$2,000,000 in taxes and local salaries to the town. It does not take a Ph.D. in economics to see the holdout danger implicit in the case. The court held that the shoe was on the other foot, so that allowing the injunction was a de facto confiscation of the defendants' interests in their own extensive holdings. One need not go that far to indicate that essentially the appropriate solution is to allow injunctive relief when the relative balance of convenience is anything close to equal, but to deny it (in its entirety if necessary) when the balance of convenience runs strongly in favor of the defendant. The usual presumption is that the exploitation risk is greater than the holdout risk. This presumption can be reversed by a showing of the dramatic difference in values found in *Madison*.

Even this view of the subject understates the level of variations that can be followed in the nuisance law. As Calabresi and Melamed have it, the only form of compensation that seems permissible under a liability rule is ordinary cash damages. Once again, the nuisance law over time has proved itself more protean than their economic models. Two portions of the nuisance law, on which I have commented at length elsewhere,²⁹ deserve some special attention. The "live and let live" rule is one that denies to each landowner the

26. 83 S.W. 658 (Tenn. 1904).

27. See Calabresi & Melamed, *supra* note 1, at 1120 n.60.

28. *Id.* at 659.

29. See Richard A. Epstein, *For a Bramwell Revival*, 38 AM. J. LEGAL HIST. 246 (1994) (supporting intellectual positions of nineteenth-century judge Baron George Bramwell, who offered idea that arrangements between individuals should be enforced by law without regard to substantive terms of agreements); Richard A. Epstein, *Nuisance Law: Corrective Justice and its Utilitarian Constraints*, 8 J. LEGAL STUD. 49 (1979) (developing substantive law of nuisance and examining interaction of "utilitarian constraints" and corrective justice principles in shaping of nuisance law).

ability to enjoin certain low-level interferences with her quiet enjoyment. The reason is that the frequency of these interferences is so high that any rule that allows the one side to seek injunctive relief against one imagined hurt will surely allow the other side to seek injunctive relief against another hurt that is equally slight. In view of what was said above, why allow an injunction where the harms are small relative to the anticipated gains for both sides? Yet it should not be assumed that because the injunction is denied, the liability rule will be imposed in its place. Here no damages are awarded to either side for reasons that are completely consistent with the economic model. The benefits to each side from undertaking its preferred activities are the compensation that each side receives from bearing the small slights caused by others. The "average reciprocity of advantage," to take Holmes's famous phrase,³⁰ is such that no cash has to be paid over in either direction. In addition, the rule does not cycle. It is accomplished once and for all by the state, a neutral party, and thus obviates the dangers of a private initiation of takings.

There is more. In those situations where the neighborhood is dedicated to certain industrial uses, the pollution damage offset by reciprocal benefits is likely to increase, so the locality rule at common law also adopts the same "live and let live" rule for those specified locales. The legal system is again able to invoke a larger repertoire than the simple dichotomy of Calabresi and Melamed to make adjustments between neighbors in matters that preserve their relative positions and enhance the overall efficiency of the common law system.

It is instructive to note one rule that does not appear in the remedial risk: the famous, and subversive, "Rule 4."³¹ As articulated above, the set of permissible remedies for violation of property rights is some mix of specific relief and damage protection, with the strong presumption in favor of the former. That dichotomy does not preclude the obvious conclusion that in those cases where no nuisance has occurred, the plaintiff is without any remedy. Calabresi and Melamed do not, however, treat this conclusion as equal to a simple statement that the plaintiff has no remedy because the defendant has operated within the outer perimeter of his property rights. Instead, they treat the no liability option as a third kind of legal rule which they then pair with their fourth rule: "Marshall may stop Taney from polluting, but if he does he must compensate Taney."³² The enormous risk of this rule should be seen instantly if we propound its analogy for violations to the person. Just to say that "a woman can stop a man from raping her, but if she does she must compensate him" shows how far this position is from an ordinary understanding of rights, and it is with great relief that Calabresi and Melamed

30. *Pennsylvania Coal Co. v. Mahon*, 260 U.S. 393, 415 (1922)

31. *See* Calabresi & Melamed, *supra* note 1, at 1116

32. *Id.*

do not carry their innovation to this extreme. Rather, they note elsewhere that concern with "bodily integrity" precludes the application of an ordinary liability (take and pay) in these contexts.³³ Obviously Rule 4 would be still more grotesque.

Nonetheless, Rule 4 had its moment of fame in one case that came down about the same time as the publication of the Calabresi and Melamed piece, *Spur Industries v. Del E. Webb Development Co.*,³⁴ where the court held that a corporation that developed property in the country could be obliged to pay the costs of shutdown to the owner of a cattle feedlot whose operations were intolerable to the persons who lived nearby. Apart from that flirtation, Calabresi and Melamed's fourth alternative has largely been ignored in nuisance cases, and for good reason: It utterly subverts the nature of property rights. Recall that early on, Calabresi and Melamed announced that their concern was with the choice of remedies once the basic entitlement had been established.³⁵ Here the basic rule of nuisance law is that all persons are entitled to the enjoyment of their land free of the nontrespassory invasions of their neighbors. The rule that awards either damages or injunctions, or some combination of the two, clearly respects that form of entitlement. So too does a rule that offers no compensation at all, so long as it could be justified under either the live and let live or locality rules.

Yet once the purchased injunction is brought to the table, the discourse changes. Now what is said in essence is that individuals have the right to pollute. That might well be the case if one landowner has purchased an easement to cause pollution from another, but it is wholly subversive of any account of ordinary property rights between neighbors to assume that this state of affairs exists wholly apart from some such special arrangements, such as the purchase of a pollution easement. To say that a court or a legislature has the right to choose among these four alternatives is to give them the right to define and redefine property rights at will, and thereby to engage in the most massive destabilization of property rights imaginable. The reversal of the flow of cash is tantamount to saying that the polluter has property rights in the activities that generated the pollution, which is altogether a different kettle of fish.

This conclusion might appear credible, at least for a moment, in the "coming to the nuisance" cases like *Del Webb* where the nuisance-like activity began before the homeowners occupied the nearby lands; but a proper

33. Calabresi & Melamed explain:

In other words, quite apart from the expense of arriving collectively at such an objective valuation [as required by a liability rule], it is no guarantee of the economic efficiency of the transfer. If this is so with property, it is all the more so with bodily integrity, and we would not presume collectively and objectively to value the cost of a rape to the victim against the benefit to the rapist even if economic efficiency is our sole motive.

Id. at 1125 (citation omitted).

34. 494 P.2d 700 (Ariz. 1972).

35. See Calabresi & Melamed, *supra* note 1, at 1092.

understanding of this fact pattern indicates that it should not be treated under this fourth rule. The basic explanation lies in the operation of the statute of limitations, which has a critical, if neglected, role to play in these cases.³⁶ Thus, at the time of the initial interaction, the plaintiff and the defendant each own a separate parcel of neighboring land. Defendant then starts pollution that spreads to plaintiff's land but causes her no damage.

The great risk is that the legal system will reach two conclusions at one time: (1) she has no cause of action because she has suffered no harm; and (2) the statute of limitations will start to run nonetheless because defendant has engaged in tortious conduct, i.e., the pollution. To avoid that nasty dilemma, one of two choices must be made: Either the action must be allowed immediately to prevent defendant from obtaining the prescriptive easement, or the statute of limitations must be tolled until plaintiff's actual use of her property is harmed by pollution that antedated it. The coming to the nuisance defense embraces that second alternative, and for two good reasons. First, it defers the time of litigation and thus guarantees defendant an interim use of land that might be otherwise barred, unless of course that entitlement could be purchased from plaintiff, and perhaps others in her position. Second, it increases the likelihood that the conflict will disappear. Nothing says that defendant's present use of his land is permanent. So it is possible that when the neighborhood changes, defendant will abandon his old use at the time that plaintiff begins her use. After all, if plaintiff's property is valuable for real estate development, then it is likely that defendant's adjacent parcel may become valuable for that use as well.

There are then good and sufficient reasons for reaching the conclusion that plaintiff should obtain her injunction without having to purchase it as the misguided Rule 4 suggests. More precisely, the case is one in which the injunction should allow defendant some time to alter his behavior, so long as he pays interim damages—a combination of the first and the second rule. But there is no reason why the plaintiff should have to buy for a second time land that she purchased once before.

III. LIABILITY AND NECESSITY

Whenever the law chooses between granting restoration of a chattel or payment of money damages, it picks between a property rule and a liability rule. Whenever it chooses between specific performance and damages in contracts, it makes the same choice. Whenever it prefers an injunction to damages, it does the same. To classical lawyers, what we call the choice

36. See *Sturges v. Bridgman*, 11 Ch. D. 852 (1879), of which an exhaustive account was given by A.W. Brian Simpson, *Coase v. Pigou Reexamined*, 25 J. LEGAL STUD. 53 (1996); followed by the response of R.H. Coase, *Law and Economics and A.W. Brian Simpson*, 25 J. LEGAL STUD. 103 (1996); and the inevitable Simpson rejoinder, A.W. Brian Simpson, *An Addendum*, 25 J. LEGAL STUD. 99 (1996).

between property rules and liability rules was a choice between absolute, autonomy-like rules and legal rules that allowed one party to initiate a forced exchange of legal entitlements. As a general theoretical matter, the nature of property requires, almost by definition, that the right be respected by all others unless it is relinquished with voluntary consent, or is taken from an individual to satisfy the obligation imposed on that person by virtue of some wrong that he committed, be it a tort or a breach of contract.³⁷ Property is something that is mine, and it cannot be mine if you can take it at your free will and pleasure.³⁸

The strong definition of property rights should not lead us to lurch to the other extreme and assume that property rights could never be taken by another. Cases in which other individuals can just enter and take, or even use, the property of another individual are carefully circumscribed to cases of necessity. The nature of the necessity could, of course, vary with the circumstances. Thus, one of the major topics of Roman law was the law of merger, dealing with the inadvertent and irreversible combination of the property or labor of two or more individuals.³⁹ To take only the simplest case, A mistakenly carves his own sculpture in a piece of marble owned by B. The problem was of no little concern because once the sculpture was carved, it was no longer possible to allow a simple restitution remedy—an illustration of a property rule—whereby the thing which had been misdelivered or taken is returned to its owner.⁴⁰ Given the innocent change, either the owner of the marble slab had to surrender it without consent, or the sculptor had to surrender the product of his labor to another without his consent. In these circumstances, it is quite literally impossible to respect the property entitlements of both sides, and the first legal task is to resolve the ownership of the thing, which should rest with the sculptor, given the distinctive nature of his input. But the owner of the marble slab should not be left uncompensated for his loss. One possibility is to provide him with a slab of marble equal in quality to the slab that is taken, and another is to provide him with cash compensation equal to its market value. The extensive and erratic Roman texts on the subject provide evidence of the uneasiness that they sensed in any system that allowed for the necessary transfer of property without consent. It was far from evident, at least to them, that the division mentioned above should dominate in all cases;

37. See Jules L. Coleman & Jody Kraus, *Rethinking the Theory of Legal Rights*, 95 YALE L.J. 1335, 1338–39 (1986) (“It is surely odd to claim that an individual’s right is protected when another individual is permitted to force a transfer at a price set by third parties. Isn’t the very idea of a forced transfer contrary to the autonomy or liberty thought constitutive of rights?”).

38. Hence this definition: “Any object of value that a person may lawfully acquire *and hold*; anything that may be owned; stocks, land, etc.; any possession.” FUNK & WAGNALLS NEW COMPREHENSIVE INTERNATIONAL DICTIONARY OF THE ENGLISH LANGUAGE 1011 (encyclopedic ed. 1978) (emphasis added). The “and hold” precludes the prospect that others may take.

39. For some of the relevant texts, see G. INST. 2.73–79 (Edward Poste trans., Oxford Univ. Press, 4th ed. 1904); J. INST. 2.I.25–34 (Peter Birks & Grant McLeod trans., Duckworth 1987).

40. See G. INST. 3.91.

Justinian, for example, in many cases appeared to favor giving ownership to the owner of the materials.⁴¹ For present purposes, the key point is only this: The willingness to use a liability rule was only brought on by the necessity of the situation created by the mistaken joinder of the property or labor of two or more individuals. The property rules were clearly preferred.

Another measure of the same level of intimate interconnection arises in the law of joint tenancies, where the necessities of the situation also make it impossible to respect the strong entitlements of either side. To briefly recapitulate a complicated legal situation, each of two joint tenants is entitled to *sever* his interest from the other by creating a tenancy in common that destroys the previous right of survivorship.⁴² That form of severance denies to both parties the holdout advantage from the current legal relationship, and, in some instances at least, leads to an implicit transfer of wealth between the two parties, given that the value of the right of survivorship is dependent, at the very least, on the relative ages of the two parties.⁴³ Joint tenants and tenants in common have the further right to seek physical *partition* of the property, which creates a liability rule of sorts, but one which confers on each cotenant some portion of the original property, which ideally is worth as much as or more than his prior undivided share.⁴⁴ Even here, if partition is not possible, then a court may on its discretion order a sale of the property, which unlike partition allows for an even division of the proceeds, a vintage liability rule. Today the general practice favors partition over sale, a presumption for the more property-like of the two rules.

Another situation of divided control arises when one person holds property subject to a lien by another. Ordinarily the lien holder is allowed to take and sell the property for the satisfaction of his debt whenever the borrower is in default, a property-like rule which respects the terms of the original loan agreement. Within the bankruptcy framework, however, that right is demoted to a (constrained) liability rule whereby the trustee in bankruptcy is allowed to prevent the lienholder from seizing and selling the subject property, so long as the trustee provides the lienholder with a stream of payments that offer the

41. See J. INST. 1.25 ("If the new object can be reduced to the materials of which it was made, it belongs to the owner of the materials; if not, it belongs to the person who made it") Little here is said of compensation for the labor lost. In other contexts, the owner of a thing that had been improved by another could only recover it if he were prepared to pay for the expenses associated with the improvement. See G INST. 2.76-77; J. INST. 1.30.

42. For discussion of these rules, see Robert W. Swenson & Ronald E. Degnan, *Severance of Joint Tenancies*, 38 MINN. L. REV. 466 (1954).

43. It is worth noting that the presumption of equal value for equal shares is so strong that no co-owner may unilaterally convert a tenancy in common into joint ownership.

44. For an illustration of the entanglements that may result from joint tenancies, see *Johnson v Hendrickson*, 24 N.W.2d 914 (S.D. 1946), where, upon the death of a farmer, the farm was divided between his widow and three children. After her death 40 years later, the widow's second husband and two children by that marriage also had interests in the property, and the widow's share was subject to a homestead interest in her husband. Partition was adjudged impracticable, and sale of the farm with division of proceeds was ordered. The "general rule," such as it is, favors partition over sale.

lienholder an "indubitable equivalence" to the value he could have obtained by foreclosure, a task that requires an accurate calculation of interest, which is not easily achieved.⁴⁵

The principles of necessity are not limited to cases of joint ownership of property but also are extended to other situations. The most dramatic of these arises when one person seeks to enter without permission the land of another when in imminent danger of injury or death.⁴⁶ In situations less dramatic, the necessity makes it permissible to cross over private land that abuts a public highway if the road itself has become impassable.⁴⁷ These necessities have to be those of the moment, and have to be brought about by sudden and unexpected changes in external conditions for which no advance adaptation was possible. Certainly no one can squat on the land of another simply because he has been evicted from his own apartment. Similarly, the duration of the intrusion is limited to the necessity that created it. The sailor can take refuge at someone else's dock only for the duration of the storm; the passerby can walk over the land but cannot stake it out as his own. Once the necessity has passed, the owner can reassert his full panoply of rights, including exclusive possession, without having to bargain further with the intruder. Finally, in most cases, any destruction or damage of property, although perhaps not its mere use, gives rise to a correlative obligation to pay for the harm so caused. The cases of necessity are real, and they cannot be eliminated from any accurate summarization of the common law rules or indeed from any systematic philosophical study of the question.⁴⁸ The most dramatic illustrations occur infrequently, perhaps once in a lifetime. By no stretch of the imagination do these rules set the framework that governs ordinary trade or commerce, or even ordinary social interactions.

This view of the necessity cases has been challenged, mistakenly in my view, in the recent work of Ayres and Balkin.⁴⁹ They contend that the necessity cases represent a powerful illustration of the deeper structure of legal entitlements, that is, a situation in which sequential use of liability rules generates a continuous internal auction. In the first round, one party can take

45. See *Koopmans v. Farm Credit Services, ACA*, 102 F.3d 874 (7th Cir. 1996), where Judge Frank Easterbrook correctly held that the cost of capital in all cases was the market rate of interest, representing the opportunity cost of capital. See *id.* at 875. A standard that allowed a far lower figure was authorized by the Second Circuit. See *In re Valenti*, 105 F.3d 55 (2d Cir. 1997). The case is now before the Supreme Court, where hopefully the correct resolution can be reached.

46. See, e.g., *Vincent v. Lake Erie Transp. Co.*, 124 N.W. 221 (Minn. 1910). Note that once the property right did go over even temporarily to the entrant, the original owner was debarred from blocking entry and could use force to gain entrance to property that he did not own. See *Ploof v. Putnam*, 71 A. 188 (Vt. 1908). These cases are discussed extensively in Ayres & Balkin, *supra* note 11, at 715–16.

47. See *Ploof*, 71 A. at 189 ("A traveler on a highway who finds it obstructed from a sudden and temporary cause may pass upon the adjoining land, without becoming a trespasser because of the necessity.").

48. See, e.g., 2 SAMUEL PUFENDORF, *THE LAW OF NATURE AND NATIONS* 305 (Amsterdam, Andreas Van Moogenhuysen 1688).

49. See Ayres & Balkin, *supra* note 11.

from the second, and thus make use of any private information that he has about the value of the entitlement to him relative to the price that he must pay the other side. The problem with this system is that it ignores any private information of the "takee," the party whose property is taken. That information in turn can be harnessed, we are told, by having the parties reverse roles. The original takee can now *retake* what has been taken from him so long as he goes to a higher price. In principle, that cycle can repeat itself indefinitely until one party ceases to bid. It seems odd that we have to suffer the repeated use of force to achieve such a result when it can normally be achieved by making offers and counteroffers without any actual taking. Those offers could be bluffs, and the instantaneous combination of taking and paying curbs that possibility.

To illustrate their system, Ayres and Balkin return to the familiar duo of *Ploof* and *Vincent*, the two cases which more than any other illumine various aspects of the cases of necessity at sea. This choice is apt because, taken together, the two cases illustrate the incomplete nature of the privilege at common law. *Ploof* makes it clear that the outsider has a right to enter; *Vincent* establishes the correlative duty to pay. So situated, the first part of the Ayres-Balkin analysis is easy and supports the recognition of the liability rule. Under the rule in *Vincent*, the owner of the boat can gain access to the dock to preserve his life. Ayres and Balkin go astray when they write: "The dock owner has a second-stage option to unmoor the ship, but at a cost: The dock owner gives up a cause of action against the shipowner for damages and exposes himself to tort liability for any resulting damages to the ship and its crew."⁵⁰ That conclusion misstates the legal position. To be sure, *Ploof* itself allowed just such an action, given that the plaintiff had been cast out to sea when the owner of the boat was unable to prevent the defendant's servant from untying the boat.

That said, the dock owner has no option to reclaim the dock for, as it were, a higher bid, because the whole structure of entitlements switches drastically once the necessity is truly identified. Normally, the owner of property is allowed to commit an assault and battery on an intruder who does not leave after being requested to do so.⁵¹ What happens with necessity? *Ploof* makes it clear that the dock owner is not allowed to use force against the boat owner. Would the boat owner have been justified in using force against the dock owner to gain entry to the dock? Yes, because the ownership of the dock quite literally becomes that of the outside entrant so long as the necessity endures. The boat owner is thus entitled to use force to overcome the defendant's servant, including deadly force if his life or that of his family and crew were endangered. The legal system does not create an indefinite series

50. *Id.* at 716.

51. See *M'Ilvoy v. Cockran*, 2 A.K. Marsh 271 (Ky. 1820).

of options between the two parties, as if they had time to bid one against another. Rather, it creates in the short run a temporary property right in the outsider, a right that nips any auction in the bud. The rights here may not be absolute, but the mode of defeasance is not the one Ayres and Balkin suggest. The only way that the original owner could reclaim the dock is to show that he too had need of it in time of necessity, for it appears that the rule is that when *both* parties face a common necessity the advantage swings back to the original owner, at least on the assumption that only one party can be saved. As Pufendorf put the point: "A man ought not to be stripped of his possessions against his will, if it be clear that he will at once fall under the same necessity, if the possession passes to another."⁵²

The dramatic effects of necessity on the overall legal position is confirmed insofar as the doctrine of necessity influences not only the law of property and self-defense but also the legal attitude toward the enforcement of contract. Under normal circumstances, the owner who has the power to exclude can admit on whatever terms and conditions he sees fit. Under terms of necessity, however, the power to exclude is lost, and so too any contract right by which the boat owner may have agreed to hand over his worldly possessions to gain safety for himself and his family. As the dock owner has denied the boat owner access to his own dock, the contract may be set aside for duress, just as under ordinary circumstances the dock owner can set aside any contract that forces him to buy back his dock from an intruder. The boat owner can make whatever promise is demanded and happily disaffirm it later on. If he has paid over property in advance of entry, he could recover what has been paid over under a theory of restitution. The entire system is geared to making one decisive switch in property rights. It bears no relationship to any sequential auction, real or imagined.

This full range of legal responses makes good sense. The need to save life is so evident that the law allows the individual at risk to use someone else's property as though it were his own. The ostensible superiority of a liability rule, that it harnesses the private information of the party who takes, is of little significance here. No one could seriously maintain that for some hidden reason the owner has greater need for his dock than the sailor who is at risk for his life. We do not need to indulge in any speculation about relative values or to suppose that private and asymmetrical information in this context generates any problem worthy of a social solution. Only cynics doubt that, at the critical moment, the boat owner attaches greater value to the use of the dock than the dock owner attaches to his right to exclude. Whatever uncertainty can be conjured up about their relative magnitude does not begin to alter the direction of the inequality. The legal system has no interest to block the forced exchange. Rather, its key task is to make sure that the outsider does not cause

52. PUFENDORF, *supra* note 48, at 305.

unnecessary damage to the dock, which could be achieved either by holding him liable for negligence in its use (assuming we know what that means) or, as was the case in *Vincent*, by making him pay for whatever damage he causes. The legal rules do not show any penchant for indefinite internal auctions, only the commendable preference for life over property. Indeed, it is instructive that these complications only arise under circumstances of necessity. Ayres and Balkin suggest no other set of circumstances in which a property rule is demoted to a liability rule at common law, and I know of none. The incomplete privilege in private necessity cases shows by implication that the ordinary rules of property dominate in cases where the necessity is mercifully absent.

IV. THE INSTITUTIONAL SETTING

The various liability rules outlined above do not take place in isolation but within some particular institutional structure. The cases in which the property or labor of two parties is merged by inadvertence may be sorted out by private agreement, but never by unilateral action. Where there is some disagreement as to who keeps the thing and how much compensation is owed, the matter is resolved in court. The dramatic cases of private necessity involve situations where no administrative intervention is possible prior to the confrontation, so that public intervention is necessarily limited to sorting out the damages, if any, to be awarded after the fact. The institutional framework, however, becomes much denser when discourse moves from the public to the private sphere, most concretely in those cases that involve the use of the eminent domain power.

The connection between tort law and the takings power has long been recognized in the literature, especially in connection to public necessity cases; that is, those where the government takes or destroys private property to advance some public good.⁵³ In some of these cases the ultimate question of policy is deflected by a causal issue, for no compensation is awarded when the property destroyed by the government would have in any event fallen into enemy hands.⁵⁴ In other cases, the public necessity clearly requires compensation, as when factories and mines not in the line of fire are commandeered for military service.

The connection between liability rules and the takings power escapes Calabresi and Melamed, who noted, for example, that the eminent domain power is often used to assemble small parcels of land into a larger unit that can be turned to a public purpose. The case they posited involves land owned

53. See Dale W. Broeder, *Torts and Just Compensation: Some Personal Reflections*, 17 *HASTINGS L.J.* 217 (1965) (discussing relationship between just compensation rules and private necessity cases)

54. See, e.g., *United States v. Caltex (Philippines), Inc.*, 344 U.S. 149 (1952) (refusing to award compensation when property was destroyed during World War II in path of Japanese advance)

separately by 1000 people, which is taken for use as a public park. The diverse parcels were purchased with the resources acquired from taxes imposed on the 100,000 (in a different town) who would benefit from it.⁵⁵ In truth, that problem arises far more often with street improvements and special assessments, where exactly the same logic holds. The holdout risks in those cases are too large to be dealt with, but the land itself has a well-established market value before the government intervention, which in turn can serve as the baseline for the forced takings that follow. Indeed, in those cases where the individuals who use the park are identical to those from whom the land is taken, cash compensation itself becomes irrelevant because each party is made to contribute the exact same amount to the common venture as everyone else and draws from it the same (and greater) amount of gain.⁵⁶ Putting money into the common pool and removing it only recirculates the cash without any net transfer to or from any party, so that everyone loses equally by bearing his proportionate transaction costs of administering the payment system.

It should be clear from these examples that land acquisition by the state routinely takes place through the eminent domain power. Often the state has a choice of where to buy or rent and finds it cheaper to buy than to condemn because of the utter absence of the holdout problem. Public officials resort to the eminent domain power only where holdouts confound voluntary transactions. Yet vesting the power of eminent domain in the government, or even some private party acting under government supervision, counters one great generic risk of liability rules. Cycling cannot happen. The property taken under eminent domain stays put unless voluntarily transferred. Title remains secure against further encroachment.

By the same token, it is a mistake to regard the eminent domain power merely as a pro-government liability rule writ large. The broader attitude toward takings reveals an overall reluctance to confer that unbridled power on the state or its preferred delegates. To counter that risk, the Constitution, at least on its face, creates a legal regime that is more complex than the sharp dichotomy apparently captured in the property rights/liability rules distinction. Although it is too easy to forget or belittle, the Takings Clause does contain an explicit public use component: "[N]or shall private property be taken for public use without just compensation."⁵⁷ The standard joke in takings law is that it therefore follows that property may be taken for private use without any compensation at all, a position utterly inconsistent with the view that the

55. See Calabresi & Melamed, *supra* note 1, at 1106-07.

56. See EPSTEIN, *supra* note 5, at 195-215.

57. U.S. CONST. amend. V; see also *Ruckelshaus v. Monsanto Co.*, 467 U.S. 986, 1003-04 (1984) (holding that "to the extent that Monsanto has an interest in its health, safety, and environmental data cognizable as a trade-secret property right under Missouri law, that property right is protected by the Takings Clause of the Fifth Amendment"); *Hawaiian Hous. Auth. v. Midkiff*, 467 U.S. 229, 243 (1984) (holding that Hawaii statute redistributing land is "rational exercise of the eminent domain power" and thus not prohibited by Public Use Clause of Fifth Amendment).

Takings Clause is designed to place limitations on the power of the state to act, even when it does so in the public interest.⁵⁸ The only sensible interpretation of the Public Use Clause is that it indicates that the state cannot always operate under a regime of take and pay, that is, with the benefit of an unconstrained liability rule. As an initial proposition, where the taking is not for a public use (whatever its precise content) then the individual property owner is once again protected by a property right, so that what can be taken can only be taken with consent, assuming (which is doubtful) that the government has any business acquiring that land at all.

What kinds of constraints are appropriate? Here the nineteenth-century Mill Acts cases are suggestive of earlier attitudes on the question.⁵⁹ In practice it is possible to identify two classes of mills—grist mills, which were held open to the public to use on reasonable terms, and power mills, whose output was controlled privately by the mill owner without any correlative common carrier-like obligation—of the sort that makes it clear why private parties can condemn property for public use. Both types of mills are highly site-specific investments, and the power they generate can only be obtained by upsetting the flow of water within a river, and often by flooding private lands. For these purposes, we shall ignore the effect of the mill on instream uses,⁶⁰ and confine our attention to the cases where uplands are flooded.

The key question is whether the owner of those lands could enjoin the taking on the ground that it was not for public use, given the private use of the output. By the tests thus far developed, the answer should be yes. In practice, the answer turned out to be no. Here, the judges took constitutional language

58. It is one that has been repeated with mock seriousness:

It can be argued that if the taking is not for a public use, it is unconstitutional, but perhaps not as a taking; for all the takings clause says is "nor shall private property be taken for public use, without just compensation." This language specifies a consequence if property is taken for a public use but is silent on the consequences if property is taken for a private one. Perhaps the effect of this silence is to dump the case into the due process clause.

Coniston Corp. v. Village of Hoffman Estates, 844 F.2d 461, 464 (7th Cir. 1988) (Posner, J.). No explanation is offered as to why or how this helps.

59. See, e.g., *Murdock v. Stickney*, 62 Mass. (8 Cush.) 113 (1851); *Miller v. Troost*, 14 Minn. 365 (1869).

60. In the former situation, the Supreme Court has held that the diminution in the power head of one mill from the construction of a dam does not constitute a taking. Its decision rests on the erroneous assumption that public sovereignty over navigable rivers under the commerce power confers ownership rights that allow the government to squash out the correlative rights of riparians. In land regulation, the expansion of government power is supported in the name of communitarian values. In the water rights cases, the delicate balance of correlative duties among riparians and the public at large is simply eradicated by the judicial acceptance of a fortress-like federal interest in navigable waters.

For regrettable proof of this development, see, for example, *United States v. Twin City Power Co.*, 350 U.S. 222 (1956), where the Court wrote:

The interest of the United States in the flow of a navigable stream originates in the Commerce Clause. That Clause speaks in terms of power, not of property. But the power is a dominant one which can be asserted to the exclusion of any competing or conflicting one. The power is a privilege which we have called "a dominant servitude" or "a superior navigation easement."

Id. at 224–25 (citations omitted). For earlier cases, see *United States v. Chandler-Dunbar Water Power Co.*, 229 U.S. 53, 62 (1913); and *Scranton v. Wheeler*, 179 U.S. 141, 163 (1900).

that, to say the least, was not perfectly adapted to its purpose, and held that so long as a serious holdout problem arose, the state could switch from a strong system of property rights to a system that relied in part on the use of a liability rule. In essence, the public use requirement was met, not because of the public nature of the end use, but because the holdout problem required a switch from the property rule to a constrained liability rule. The functional imperative altered the constitutional doctrine.⁶¹

At this juncture, however, it is vital to note, as the Calabresi and Melamed analysis does not, the constrained nature of these liability rules. Their vision is one devoid of institutional structures and safeguards. It is composed of Taney and Marshalls (with an occasional Chase thrown in) who act as autonomous individuals without institutional identities of any sort. Yet the Mill Acts contained an explicit institutional structure to limit the risks that arose when one party was given the right to take property for his own use. The drafters knew that the statutes were needed to overcome a site-specific holdout problem. Deny the rights to take and the dam may never be built, if only because each nearby landowner could hope to hold out for the lion's share of the anticipated profits from the construction of the mill. If there were many such landowners, the greed of each could easily get in the way of the others, so that the dam that everyone might wish to have constructed would never be built.⁶²

Nor is it satisfactory simply to allow the flooding to take place upon a promise to pay damages. Not only is there a question of whether the parties who flood will be good for the damages in question, there is also the further issue of whether they should be allowed to determine the extent of the flooding that they impose on their neighbors. To control that risk, the liability rule did not operate at the pleasure of the prospective mill owner. Rather, that party had to make an application to some independent public officials prior to the flooding, and these officials were charged with determining whether the dam should be built and, if so, its location and size.⁶³ One advantage of this procedure was that it prevented the initiation of multiple dams along a single stretch of water whose operation could well be inconsistent with each other.

A privately generated liability rule could not stop these problems, and thus raises complications that were not considered in the relatively simple situations that were assayed by Calabresi and Melamed. In addition, the compensation rule under the Mill Acts called for the payment of some premium, here of fifty percent, over the market value.⁶⁴ While this had the disadvantage of blocking some transactions where net gain was larger than net losses, it probably had the greater advantage of offering a modicum of protection for those elements

61. See Thomas W. Merrill, *The Economics of Public Use*, 72 CORNELL L. REV. 61, 66-72 (1986).

62. See Calabresi & Melamed, *supra* note 1, at 1107-08.

63. See *Head v. Amoskeag Mfg. Co.*, 113 U.S. 9, 10-11 (1885).

64. See *id.*

of value that are sometimes hard to quantify in an objective setting. For farmland, the rule seemed to go beyond that objective by giving the landowner some portion of the gain that came from the venture in which his land was conscripted. The Hayekian principle is that the use of state power should be countenanced only where we can establish a manifest advantage from its use. The premium was a proxy for that large net advantage. In essence, the position taken was that where the holdout problem did exist, then the taking could be regarded as one for public use.⁶⁵

The alternative interpretation of the Mill Acts treats the premium solely as an effort to make sure that the liability rule operates at an efficient price. To bolster this argument, Ayres and Balkin observed that, "[t]he legislature might have believed that the average upstream landowner (who has not sold her house) has an average value which is fifty percent above the market price."⁶⁶ The telltale sign of error is that it assumes that houses, as opposed to raw land, could be flooded in order to help the mill. The applicable statute, however, appears to limit the privilege to flood only to those cases in which "the land of any person shall be overflowed, drained, or otherwise injured by the use of such dam."⁶⁷ In the usual case, only land was flooded, and the land in question was ordinary farmland, which is quite unlikely to have a subjective value anything close to the fifty percent bonus contained in the statute. Indeed, it is far more likely that the bonus was included to reduce the political resistance to the taking, which easily could be galvanized around the prospect that the private aggressor would keep all the gain from his own action, a public-choice dimension that is ignored in the more static analyses of the takings law. If the only reason for the bonus were to calibrate the damage rule to subjective value, a lower figure would be far more likely. That bonus, moreover, would be required not only in Mill Acts cases, which are privately initiated, but also in ordinary takings cases initiated by government bodies. It simply misstates the social context to equate the eminent domain power in this instance to a state-administered liability rule.

A similar analysis applies to a second of the classic takings cases, *Miller v. Schoene*.⁶⁸ That case, it will be recalled, involved a pest that spent part of its life cycle as a harmless denizen of cedar trees, only in a later stage of its development to wreak havoc on the more valuable apple trees nearby. Viewed narrowly, the case held that the owners of the cedar trees did not receive any compensation when their trees were destroyed to protect the nearby apple trees. Yet a complete institutional account of the case must abandon the passive voice and ask who chops the trees down and when. Here the simplest rule

65. See *id.* at 23–24.

66. Ayres & Balkin, *supra* note 11, at 742 (criticizing my earlier position in *TAKINGS*, *supra* note 5, at 174).

67. Act for the Encouragement of Manufactures, 1868 N.H. Laws 152, ch. 20, § 2

68. 276 U.S. 272 (1928).

would allow the apple tree owners to act of their own accord, without having to pay compensation. The statute rejected that initiative by requiring a state entomologist to certify the danger to nearby apple trees and to order the cutting.⁶⁹ The intervention of the state official supplies a buffer between the owner of the cedar trees and the wrath of the apple growers. That feature would have been desired even if compensation had been owing from the state, or more likely from the owner of the affected cedar trees.⁷⁰ Within the public sphere, some limitations and conditions are often placed on the use of the liability rule.

The takings rule parallels tort law in yet another respect: Rule 4 should be peremptorily ruled out of bounds in all takings cases because of the massive destabilization of property rights that it creates. Calabresi and Melamed hint at the use of Rule 4 in eminent domain takings of nonconforming uses: ecological easements and subdivision exactions,⁷¹ both of which have become hot subjects. What is odd perhaps is that they never drew the connection to *Hadacheck v. Sebastian*,⁷² the takings analogue to the coming to the nuisance question that received such an idiosyncratic answer in *Del Webb*. In *Hadacheck*, the question was whether the owner of a brickyard was entitled to compensation under the Takings Clause when he was ordered to cease operations to benefit his newly arrived neighbors. The court denied him compensation on the ground that no single owner could establish an early use that forever after held the rest of the vicinity hostage to his choice.⁷³ That result is clearly correct on the analysis given earlier for the coming to the nuisance cases. The state acts as the agent for the neighbors who, under the applicable tort rule, could obtain the injunction without having to purchase it.

Interestingly enough, the subsequent cases that have commented on *Hadacheck* do not treat it as a nuisance case, but, in line with *Miller v. Schoene*, regard it as an instance of a regulated party making some lawful use of land that the state may end for the greater benefit of other groups and individuals.⁷⁴ *Hadacheck* is therefore reinterpreted to allow the police power

69. See *id.* at 277.

70. The Supreme Court denied the compensation on the ground that the common law of nuisance afforded no help in deciding, so that the state had the right to decide the lesser for the greater value. Even if one defends the (dubious) result in *Miller*, this reason cannot carry the day, for it would allow the taking of land by one person for whom it had greater value than another. One way to understand the case is to ask what should have been done if the pest had originated in the apple trees only to cause harm to the cedar trees. To allow the owner of the apple trees to win both ways suggests a political bias, not a neutral theory. If *Miller* is correct, then the apple tree owners have to lose. Perhaps they might not be ordered to cut down their trees given their greater value, but at the very least they should pay damages for the harm caused. Presently, by state intervention a liability rule only protects the less valuable from the more valuable good: avoiding the holdout problem that could occur on renegotiation. For a good discussion of the setting in *Miller*, see WILLIAM A. FISCHER, *REGULATORY TAKINGS: LAW, ECONOMICS, AND POLITICS* 151-57 (1995).

71. See Calabresi & Melamed, *supra* note 1, at 1117 n.58.

72. 239 U.S. 394 (1915).

73. See *id.* at 410.

74. See, e.g., *Penn Cent. Transp. Co. v. New York City*, 438 U.S. 104, 126 (1978).

to restrain private parties even if they had committed no wrong. Thus, if an owner has to buy protection against pollution, it is a short step to the proposition that, in the absence of pollution, an owner may be allowed to develop and use his property only if he purchases that right anew from the state. Hence we can develop a system of environmental "mitigation," whereby ordinary development which falls far short of the definition of a common law nuisance can be allowed only if the private party sets aside some of its lands for the state by creating the ecological easement for which it receives no compensation in exchange. The choice of the word "mitigation" is no accident.⁷⁵ The landowner becomes, by state declaration, a potential wrongdoer who can be properly asked to mitigate the damage he creates.

The dangers of Rule 4 now become evident: To treat it as one of four possibilities is to destabilize the entire system of property rights, the very result that Calabresi and Melamed deplore, when private individuals use acts of aggression to circumvent the rules of voluntary transfer.⁷⁶ At this point, the entire enterprise no longer is determined by deciding which remedy shall be given for a particular entitlement, for it seems very hard to think that someone can be said to own land if he is required to buy a second time the quiet possession associated with ownership. If it is one purchase that is required, then why cannot a second threat of pollution be used as an occasion to repurchase the land yet a third time, and so on down the line? These possibilities are not so farfetched as they seem. The current disputes over the question of habitat preservation under the Endangered Species Act⁷⁷ which reached the Supreme Court in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*,⁷⁸ raise just this question. The individual who wants to farm his land is told that this activity is a wrong against the species that live there which will be tolerated only if "mitigated" by a private purchase of alternative suitable habitat at the owner's expense, a strategy that can work a dozen times if it works even once.⁷⁹ Those habitat cases are only the tip of the iceberg, for the judicial ambivalence over the status of property rights has led to a difficult and confused law of exactions that has yet to reach its final resting point.⁸⁰ On the one hand, the logic of property rights is flatly

75. See, e.g., *Bersani v. Robichaud*, 850 F.2d 36 (2d Cir. 1988) (discussing case in which disappointed applicant, to create shopping mall in designated wetland, unsuccessfully sought to mitigate impact of its actions by improving some existing wetlands and creating new artificial wetlands by utilizing, inter alia, off-site gravel pit).

76. See Calabresi & Melamed, *supra* note 1, at 1124-26.

77. The Endangered Species Act of 1973, 87 Stat. 884 (codified at 16 U.S.C. § 1531 (1994))

78. 115 S. Ct. 2407 (1995).

79. See Richard A. Epstein, *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, *The Law and Economics of Habitat Preservation*, 1996 SUP. CT. ECON. REV. 1, 37-40

80. The two key cases are *Nollan v. California Coastal Commission*, 483 U.S. 825 (1987), and *Dolan v. City of Tigard*, 512 U.S. 374 (1994). The two cases are difficult to summarize, but the gist seems to be this: In *Nollan*, the Court made it clear that the doctrine of unconstitutional conditions applied to the takings area, as it does in other cases, so that a mere recitation of the truism that the greater power entails the lesser power would not of itself justify a state land use regulation. In *Dolan*, the Court then addressed the

inconsistent with the approach to governance that offers the state the unlimited right to require permits that can then be sold back to individuals for land. In the end, therefore, Rule 4 undercuts the original modest mission of Calabresi and Melamed's original piece. An economic analysis designed to explain property rights should not be used to force their transfer to the government without compensation.

Thus far I have insisted on the bounded use of liability rules in the ordinary water and land use cases that lie at the core of the takings issue, but the institutional argument reaches further to touch a central social institution alluded to in the earlier discussion of the Mill Acts cases, namely, the regulation of common carriers. The legal position with regard to these institutions was well stated in the seventeenth century by Sir Matthew Hale, in writings that reflect, perhaps imperfectly, an earlier tradition.⁸¹ The common carrier is one that has a monopoly over some particular kind of service. An exclusive franchise from the crown is, after all, the quintessential legal monopoly. The correlative duty is to serve all customers at a reasonable price unless the carrier has some specific cause to decline service, of which nonpayment of bills or rowdy behavior are two of the most common.

The obligation of universal service to all comers is the obvious and effective way to overcome the holdout advantage that common carriers would otherwise possess as against their customers. The ordinary right of property holders to exclude is gone, which affects an enormous class of property that covers franchises, trains, shipping, gas, electricity, and telecommunications. The owner of the property dedicated to service as a common carrier is protected by a liability rule: Those who want its services must pay fair value for them. The rates that are paid for the services that are tendered are the compensation for the devotion of property to the public service. Here, as in the other cases, certain patterns of behavior are required. The rates in question are not determined unilaterally, nor do the ratepayers become owners of the business.⁸² An elaborate ratemaking procedure is adopted with the purpose of setting rates that are high enough to allow the regulated industry to cover its full costs, including those of attracting capital, while being low enough to

question of what kinds of justifications could be offered, and concluded that the state could try to show some rough proportionality between the restriction in question and *either* some benefit conferred upon the landowner or, in the alternative, some harm that the landowner inflicted on public property or the property of others. For my analysis of the problem, see RICHARD A. EPSTEIN, *BARGAINING WITH THE STATE* (1993); and Richard A. Epstein, *The Harms and Benefits of Nollan and Dolan*, 15 N. ILL. U. L. REV. 479 (1995). For further comments, see Jan G. Laitos, *Causation and the Unconstitutional Conditions Doctrine: Why the City of Tigard's Exaction Was a Taking*, 72 DENV. U. L. REV. 893 (1995); Thomas W. Merrill, *Dolan v. City of Tigard, Constitutional Rights as Public Goods*, 72 DENV. U. L. REV. 859 (1995); and Robert F. Nagel, *A Comment on Constitutional Rights as Public Goods*, 72 DENV. U. L. REV. 889 (1995).

81. See SIR MATTHEW HALE, *DE PORTIBUS MARIS* (1670) (1 Harg. Law Tracts 78), quoted in Allnutt v. Inglis, 104 Eng. Rep. 206, 208 (K.B. 1810).

82. See Board of Pub. Util. Comm'rs v. New York Tel. Co., 271 U.S. 23, 31-32 (1926).

prevent the expropriation of monopoly rents from a class of captive customers.⁸³ In addition, the arrangement is structured so that the utility is required only to offer its services, and not dismember its plant for the benefit of its customers. The passengers of a railroad have a right to travel on the train, not to claim a piece of the fee simple ownership of the rolling stock or the train station.

A similar situation has developed under the Telecommunications Act of 1996.⁸⁴ That statute takes it as its central purpose to end the older system under each of the Regional Bell Operating Companies and other local telephone companies that obtained local service monopolies subject to price regulation by the Federal Communications System and the various state public utility commissions.⁸⁵ A simple declaration that competition shall reign is not possible in telecommunications because of the imperative of allowing the subscriber of any one telecommunications company to reach any subscriber of any other telecommunications company. That result could be achieved if all the carriers were able to enter into voluntary agreements with each other for the transmission of their phone calls, but the blockade position of the local monopolists is such that they would have every incentive to guard access to their networks against their would-be competitors.

The Telecommunications Act has, therefore, as one of its central purposes the creation of complex institutional arrangements to overcome this holdout question. At some point, state intervention will be needed to decide what connections will take place and at what price. Hence the Act contains detailed provisions that articulate the basic interconnection obligation and delineate the respective spheres of federal and state regulation in the event that private negotiations for interconnection should fail.⁸⁶ It is not my purpose here to go into the many different interpretations that have been given to key provisions of the Act, a matter that will doubtless end up in the United States Supreme Court.⁸⁷ Note that the system of forced interaction follows in the pattern of earlier common carrier regulation to place complex substantive and institutional limitations on the power of any person simply to take the property of another. At a minimum, the statute authorizes either the FCC or state commissions to propound some regulations on the duties imposed on incumbent carriers: number portability, dialing parity, access to rights-of-way, the creation of reciprocal compensation agreements, and most critically, interconnection and

83. For discussion, see *Duquesne Light Co. v. Barasch*, 488 U.S. 299, 307-16 (1989), and *Federal Power Comm'n v. Hope Natural Gas Co.*, 320 U.S. 591, 603-05 (1944).

84. Telecommunications Act of 1996, Pub. L. No. 104-104, 110 Stat. 56 (codified in scattered sections of 47 U.S.C. §§ 151-613).

85. See *United States v. American Tel. & Tel. Co.*, 552 F. Supp. 226 (D.D.C. 1982) (modification of final judgment).

86. See 47 U.S.C. §§ 251-54 (1994).

87. I have worked on this matter as a consultant to Bell Atlantic and SBC Communications, both Regional Bell Companies.

the resale of certain services. It also imposes on the parties the obligation to negotiate in good faith (so as to obviate the holdout danger on both sides), and to allow state commissions to supervise mandatory arbitrations between the parties once those direct relationships fail. The very need to create this complex set of rules demonstrates once again that an unconstrained liability rule is too crude to be of use in complex regulatory settings.

V. CONCLUSION

The great contribution of Calabresi and Melamed was to introduce a measure of economic rigor into the discussion of remedies. The range of issues that they touched on in one article was truly extensive, but they necessarily left their work incomplete. In the twenty-five years since the publication of their article much has been written about the subject, and now it is possible to reach a definitive conclusion on some of the questions that they raised. The choice between property rules and liability rules should normally be resolved in favor of the former to preserve the stability of possession and social expectations that are necessary for the growth of any complex social order. The exceptions to that rule come in cases of necessity which could arise in momentary crises (private necessity) or in large-scale social arrangements (common carriers). Where liability rules are invoked, it is normally insufficient to implement them without extensive procedural protections. In addition, it is critical to introduce other institutional safeguards to ensure that the right things are taken, and that the right price is paid. And Rule 4 should disappear from the face of the earth.