

Introduction to
Guido Calabresi and Douglas Melamed,
“Property Rules, Liability Rules, and Inalienability: One View of the Cathedral”

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After the publication of “The Problem of Social Cost,” a rapidly growing group of scholars began to explore potential applications of economics to law. One of the most important of the pioneers was Guido Calabresi. Born in Italy in 1932, Calabresi came to the United States at the age of six, when his family fled Fascism. Diverse intellectual tastes prompted him to obtain a BS in Analytical Economics from Yale (where he studied with James Tobin), a BA in Politics, Philosophy, and Economics from Oxford (where he was a Rhodes Scholar and had as tutors Sir John Hicks and Lawrence Klein), and a law degree from Yale (where he graduated first in his class). In 1959, after serving for a year as a law clerk to Supreme Court Justice Hugo Black, Calabresi joined the Yale Law School faculty.

During the 1960s, Calabresi wrote several groundbreaking essays applying economic theory to tort law. Their central theme was that the goal of the legal system should not be to eliminate accidents altogether, but rather to create a pattern of incentives that would induce both people who cause accidents and the victims of those accidents to behave in socially optimal ways.

Calabresi spent most of his adult life at Yale, but during the 1969-1970 academic year, he served as a Visiting Professor at Harvard Law School. Invited by the editors of the Harvard Law Review to submit an article for publication, Calabresi, collaborating

closely with a promising law student, Douglas Melamed, began work on a manuscript that would both extend the arguments of his papers on accident law and apply them to other doctrinal fields. The end result was one of the most influential essays of twentieth-century legal scholarship. As Carol Rose notes, “*One View of the Cathedral* is now so much a part of the legal canon that it is widely known simply by the joined names of its authors, ‘Calabresi and Melamed.’”

Three aspects of the article were eye-opening. First, like Hohfeld, Calabresi and Melamed proposed a novel taxonomy of legal entitlements. The primary doctrinal field they employed to illustrate their proposed schema was the law of nuisance – the set of common-law rules that govern the extent to which landowners are permitted to engage in activities that annoy their neighbors (generating pollution or noise; conducting noxious or frightening enterprises; etc.). Judges and scholars had traditionally assumed that there were only three possible responses to a case in which one landowner asserted a nuisance claim against another: (1) the plaintiff could be granted an injunction; (2) the plaintiff could be denied an injunction but granted damages to compensate her for the injuries she sustained as a result of the defendant’s past and future activities; or (3) the plaintiff could be denied both an injunction and damages. Calabresi and Melamed argued that the range of options available to a judge (or other legal decisionmaker) in such a case could be clarified by differentiating two questions: which party should be granted “the entitlement” (in other words, which party should be “favored”); and what type of “rule” should be employed to “protect” that entitlement. In answering the latter question, the judge could choose among at least three options: a “property rule,” under which the favored party could continue to enjoy and exercise the entitlement unless and until the

disfavored party persuaded him to surrender it voluntarily (typically, by paying him a sufficient amount of money); a “liability rule,” under which the disfavored party could force the favored party to surrender the entitlement by paying him a sum of money determined by the judge or by some other government official; and an “inalienability rule,” under which the favored party would be forbidden to transfer the entitlement to the disfavored party (or anyone else).

Analyzing the issue this way made clear that there were at least six possible responses to a nuisance case:

**Assignment of
Initial Entitlement**

		Plaintiff	Defendant
Method of Protecting the Entitlement	Property Rule	Option #1	Option #3
	Liability Rule	Option #2	Option #4
	Inalienability Rule	Option #5	Option #6

The first three options mapped nicely onto the traditional array of possible remedies. Option #1 (giving the plaintiff an entitlement protected by a property rule) meant granting the plaintiff an injunction against the defendant’s activity; if the defendant

wished to continue engaging in the challenged conduct, he would have to purchase from the plaintiff the right to do so. Option #2 (giving the plaintiff an entitlement protected by a liability rule) meant initially granting the plaintiff a right not to be subjected to the noxious activity, but permitting the defendant to override that entitlement without the plaintiff's consent by paying her a specified sum of money. (In the most traditional variant of this option, exemplified by the case of *Boomer v. Atlantic Cement Company*, the sum of money consisted of "permanent damages.") Option #3 (giving the defendant an entitlement protected by a property rule) meant denying the plaintiff all relief; if the plaintiff wished to stop the noxious activity, she would have to pay the defendant enough money to persuade him to desist.

So far, Calabresi and Melamed seem to have contributed to the traditional understanding of the nuisance problem nothing more than a somewhat counterintuitive vocabulary. The real payoff of their approach consisted of the exposure of Option #4. Hidden by the traditional approach was the possibility that the defendant could be granted an entitlement to engage in the challenged activity, but that the plaintiff could be empowered to force the defendant to desist by paying a specified sum. Calabresi and Melamed acknowledged that the oddity of requiring the plaintiff to "purchase" an injunction, plus the difficulty of determining the price thereof, made it unlikely that judges would choose this option frequently. But, they argued, other government agencies already employed this device routinely, and judges in appropriate circumstances (to be considered shortly) might consider employing it more often.

Options #5 and #6 completed the array. Under the former, the plaintiff would be granted an entitlement not to be subjected to the defendant's annoying activity and

forbidden to sell that entitlement no matter how much the defendant offered. Under the latter, the defendant would be empowered to engage in the annoying activity and forbidden to surrender that right no matter how much the plaintiff offered.

Thus far, we, following Calabresi's and Melamed's lead, have been using nuisance law to illustrate their taxonomy. But a crucial claim of the article was that the same schema could be applied to virtually any field of law. As Carol Rose subsequently pointed out, many of their most evocative illustrations were derived from accident law, Calabresi's original specialty. Thus, for example, the negligence standard that governs most unintentional injuries is an example of Option #2. (The law assigns to each pedestrian an entitlement to bodily integrity, but authorizes an automobile driver to override that entitlement by negligently [not deliberately] running the pedestrian over, provided that the driver pays the pedestrian judicially determined damages to compensate him for his injuries.) Other illustrations were derived from contract law, criminal law, and the law of eminent domain.

The second major contribution of the article was a taxonomy of normative considerations that a judge or other lawmaker might rely upon when deciding which of the six options reviewed above would be the best way of resolving a particular dispute or responding to a particular doctrinal problem. In this respect, Calabresi and Melamed were surely not writing on a blank slate; there already existed a substantial literature – in economics, political theory, and philosophy as well as law – that sought to identify considerations of this sort. But the manner in which Calabresi and Melamed mapped the constellation of values was unusual and proved influential.

They divided the set of pertinent considerations into three baskets. The most coherent – and the one that occupied most of their attention – was “economic efficiency.” This of course was a familiar ideal. Among legal scholars, Coase, Richard Posner, Frank Michelman, and Calabresi himself had explicated and applied it in prior essays. Calabresi’s and Melamed’s particular formulation was relatively conventional:

Economic efficiency asks that we choose the set of entitlements which would lead to that allocation of resources which could not be improved in the sense that a further change would not so improve the condition of those who gained by it that they could compensate those who lost from it and still be better off than before.

But in one respect, their interpretation of this familiar standard – variously known as the “Kaldor-Hicks criterion” and “potential Pareto superiority” – was unusual: they emphasized that, when determining the magnitude of the benefits and losses caused by a legal change, one need not rely exclusively upon the self-understandings or behavior of the affected individuals; “the state, for paternalistic reasons,” might be a better judge of the magnitude of those gains and losses. In other words, in Calabresi’s and Melamed’s view, the efficiency criterion was not necessarily tied to the principle of consumer sovereignty.

The second basket consisted of “distributional” considerations. At stake here was not the net impact of a legal decision or rule upon aggregate social welfare, but rather who was helped and who was hurt and by how much. Again, Calabresi’s and Melamed’s formulation of this familiar criterion was unusually encompassing. They urged lawmakers, under this heading, to take into account not only traditional considerations of “distributive justice” (such as whether a particular decision would ameliorate or exacerbate inequality of wealth) but also considerations of “corrective justice” (such as

whether a person or group, because of his or its conduct or needs, *deserved* a benefit or detriment).

In Calabresi's and Melamed's judgment, efficiency and distributional values, thus capaciously defined, pretty much exhausted the set of considerations that a lawmaker might want to take into account. But, to ensure that nothing fell through the cracks, they also identified a third, residual basket, which they called "other justice considerations." What might it contain? The authors were hard pressed to offer anything. Their one example was non-distributional religious commitments.

The last of the major contributions of the article was a set of reflections upon how the taxonomy of norms and the taxonomy of values might be put together. This portion of the analysis was meant to be suggestive rather than exhaustive; the authors' aspiration was merely to identify some circumstances in which, measured by some normative standards, some types of rules would seem better than others. Some examples:

If the judge confronted with a two-party nuisance dispute (a) were concerned primarily with the maximization of economic efficiency and (b) knew which of the parties could more cheaply avoid the costs associated with the challenged activity, he or she should simply assign the entitlement to the other party; the choice of property rules or liability rule would be irrelevant. In situations in which the identity of the "least cost avoider" is unclear, but transaction costs are low, and thus the parties can rearrange entitlements easily if the initial allocation is inefficient, property rules make the most sense. By contrast, when transaction costs are high (such as when the existence of multiple affected parties gives rise to "holdout" or "freeloader" problems), and thus

voluntary rearrangements are impracticable, liability rules may be superior from the standpoint of economic efficiency.

When one introduces distributional considerations into the equation, things get more complex. For example, in a situation in which high transaction costs point toward liability rules, the choice between Option #2 or Option #4 might properly be determined by which of the parties (or which of the groups whose welfare is tied to that of each of the parties) is the more deserving or, perhaps, the more wealthy.

And what about inalienability rules? When might it make sense to establish patterns of entitlements that cannot be rearranged at all? Perhaps when necessary to prevent directly affected parties from striking deals that neglect “moralisms” – psychic impacts upon third parties. Perhaps when a group wishes to “tie itself to the mast” – i.e., to advance its long-term interests by preventing it from succumbing to “momentary temptations.” Or perhaps in situations characterized by “true paternalism” – in which the state knows better than the people affected by a given legal rule what’s in their best interest.

Calabresi’s and Melamed’s purpose, in making such recommendations (and many more of this general sort), was surely not to provide a comprehensive guide to lawmakers confronted in the future with novel problems. Their goal, rather, was to enlarge and organize the array of considerations lawmakers might wish to consider when addressing particular problems and, by highlighting the variety of rules from which they might choose, to increase their ability to achieve and reconcile those objectives.

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The brilliance of “One View of the Cathedral” was not immediately obvious to everyone. Indeed, Calabresi later reported, the editors of the Harvard Law Review almost refused to publish it, relenting only after he “explain[ed] to them face-to-face what the piece was about.” But quite quickly, it began to attract fans, interpreters, and critics.

The credibility of the essay was much enhanced by a nearly simultaneous ruling by the Arizona Supreme Court in an unusual nuisance dispute. At issue in *Spur Industries v. Del E. Webb Development Company* was a demand by the developer of a rapidly expanding retirement community that a preexisting cattle feedlot be shut down because it generated odors and flies that annoyed the community residents. Trying to balance several competing considerations – the seriousness of the harm; the fact that the developer, by building houses in close proximity to the feedlot, had “come to the nuisance”; and the innocence of the community residents – the court granted an injunction against the continued operation of the feedlot, but required the developer to indemnify the feedlot operator “for a reasonable amount of the cost of moving or shutting down.” Such a composite ruling, it should be apparent, is an example of Calabresi’s and Melamed’s Option #4. The court seems to have been unaware of their as yet unpublished article, but its ruling provided strong support for the authors’ contention that a purchased injunction might make it possible to reconcile seemingly incompatible “distributional and efficiency goals.”

Scholars of various stripes also soon began to take note of the essay. Many found it persuasive and applied its central insights to fields of law other than those addressed in the article itself. In a 1973 essay, for example, Robert Ellickson relied upon Calabresi’s and Melamed’s taxonomy of entitlements when considering the relative merits of zoning

ordinances, the common law of nuisance, servitudes, and fines as ways of resolving disputes among adjacent landowners. And a large group of scholars, led by Richard Posner, invoked “One View of the Cathedral” for the proposition that liability rules were more likely than property rules to lead to economically efficient outcomes in situations in which transaction costs were high – often neglecting, unfortunately, the efforts of Calabresi and Melamed to qualify that judgment.

As one might imagine, many scholars sought to identify ways in which Calabresi’s and Melamed’s deliberately “simple” framework might be elaborated or improved. The large majority of these essays focused exclusively (to Calabresi’s dismay) on the question of which sorts of rules were most economically efficient under particular circumstances.

One of the earliest and most important interventions was made by A. Mitchell Polinsky. In three articles published during the 1970s and in the various editions of his widely read primer, *An Introduction to Economic Analysis of Law*, Polinsky argued (among many other things) that a liability rule is not necessarily better than a property rule in situations where a combination of high transaction costs and uncertainty concerning the identity of the least cost avoider render the latter potentially inefficient. Why? Because a liability rule requires a judge or some other official to estimate the injury that the party to whom the entitlement is initially assigned will suffer if the initially disfavored party overrides that entitlement without permission. Making such an estimate is costly, and that cost must be taken into account when determining the merits of a liability rule. More seriously, if the estimate is too high or too low, then the disfavored party will “punch and pay” (i.e., override the entitlement and pay damages) either

inefficiently seldom or inefficiently often. In short, whether a liability rule is superior from an economic standpoint to a property rule depends in part upon the expense and accuracy of the determination of damages.

Ian Ayres and Eric Talley identified a different potential advantage of liability rules. Central to their argument was the observation that, in some situations, parties can through voluntary transactions rearrange entitlements protected only by liability rules, just as they can rearrange entitlements protected by property rules. Suppose, for example, that, after the ruling just mentioned by the Arizona Supreme Court, the feedlot operator (Spur Industries) concluded that the amount of damages the court (or a lower court on remand) ordered the retirement community builder (Del Webb) to pay was significantly less than the actual harm than Spur would suffer as a result of being forced to cease operations. Spur could try to persuade Del not to exercise its option by offering it a sum of money (less than the difference between the cost to Spur of shutting down and the court-ordered damages). If that sum exceeded the difference between the value to Del of an odor-free environment and the court-ordered damages, then Del should accept the offer (or at least haggle for a larger share of the mutual benefit to the parties of allowing the feedlot to remain in business). Consummation of such a deal would benefit both parties and society at large. Up to this point, Ayres and Talley were on solid ground. Their next step was more controversial: They argued that a liability rule, which forces the parties to bargain over such unusual and complex terms, may be more likely to result in an efficiency-enhancing bargain than a property rule, which assigns to one or the other party a simple entitlement (either an absolute right to clean air or an absolute right to operate a feedlot). Why? Because the liability rule compels the party whose

entitlement may be overridden (in this case, Spur) to reveal – by offering (or not offering) to bribe the other party not to exercise its option – the value that the former places upon the endangered entitlement. In short, Ayres and Talley claimed, liability rules are “information forcing”; they are thus more likely than property rules to overcome certain kinds of transactions costs and thus “may” facilitate efficient bargaining.

Louis Kaplow and Steven Shavell disagreed sharply with Ayres’ and Talley’s argument on this score and offered a different analysis of the relative abilities of property rules and liability rules to maximize social welfare in various circumstances. In their view, the critical distinction was between situations in which the law seeks to regulate the incidence of “harmful externalities” (undesirable impacts upon third parties of presumptively legitimate activities) and situations in which the law seeks to protect “possessory interests” (i.e., to prevent “the unwanted transfer of possession of a physical object to a taker”). In most cases of the first type – such as nuisance disputes and automobile accidents – transaction costs of various types prevent the parties from negotiating with one another. Polinsky, you will recall, had contended that liability rules could work well in such situations, but only if the courts could accurately estimate that magnitude of the injury that the plaintiff had suffered or would suffer as a result of the defendant’s conduct. Kaplow and Shavell went further, contending that “there is a strong prima facie case favoring liability rules over property rules for controlling harmful externalities” even when the courts are not able to measure accurately the injuries suffered by individual plaintiffs, so long as the courts can and do “set damages equal to ... the average harm for cases” of the general type at issue. (To that generalization, there are various exceptions – such as when the victims of externalities may be able to avoid

the harm more cheaply than the perpetrators, or when defendants' limited resources render them "judgment proof.") By contrast, when the law seeks to protect possessory interests, Kaplow and Shavell argued, property rules are most often superior. One reason was that, unlike liability rules, they prevent endless rounds of "reciprocal takings" (A seizes B's car, paying a judicially determined fee for it; B retakes the car, returning the money; etc.). Another was that, under a liability rule, the owner of an object who considered it more valuable than the judicially determined sum would be obliged, in order to keep it, either (a) to pay a virtually unlimited number of potential takers not to seize it or (b) to resort to socially wasteful self-help measures (locks, secrecy, spring guns, etc.).

In a contemporaneous article, James Krier and Stewart Schwab expressed skepticism concerning one critical portion of Kaplow and Shavell's argument – their suggestion that reliable estimates of the "average harm" associated with a particular type of externality could be obtained at modest cost. In Krier and Schwab's view, determination of the relative merits of a property rules or a liability rule in handling a particular kind of dispute should hinge on the following inquiry:

[M]arket bargaining [of the sort required by property rules] entails transaction costs[,] and judicial valuation [required by liability rules] entails assessment costs. Each is a species of what we can call *valuation costs*. Since both methods of valuing entitlements, through the market or in the courts, are ordinarily costly, either can be wrong, resulting in *error costs*. Hence the (efficiency) issue in any given case is this: Which kind of rule, property or liability, promises to minimize the sum of valuation and error costs?

Answering that question, unfortunately, will often be very difficult, because many of the same factors (collective action problems, strategic behavior, etc.) that increase in some

contexts the various costs associated with bargaining also in those same contexts make judicial valuation more costly. So can we identify any general guidelines that might help lawmakers decide which type of rule is optimal? At least one, Krier and Schwab suggested: The transaction costs associated with property rules may prove more mutable than the valuation costs associated with liability rules. Specifically, judges might find that, if they refuse “to intervene by way of damages when bargainers might balk,” then the parties or their successors will be forced to acquire the skills or build the institutions that will enable them to negotiate voluntary deals. In a subsequent essay, Robert Merges relied upon a similar, though more elaborate, argument for the superiority of property rules over liability rules in the context of intellectual-property systems.

Carol Rose’s response to this cacophonous debate was to suggest that everyone may be partly right. Each commentator had identified factors highly relevant to controversies of a particular sort; each went wrong in extrapolating his insights to radically dissimilar types of disputes:

By using examples that implicitly claim too much, liability rule scholars lose an important opportunity to consider that there could be genuine differences among the historic domains of tort, contract, and property. Since Calabresi and Melamed's pioneering work, it is not a great stretch to opine that the dominating issues of tort may be the externalities that accompany [the kind of] transaction costs [that] arise where large numbers of persons or vaguely specified rights impede actors from bargaining with one another directly. Perhaps more unexpectedly, it could be that in the areas of the law usually classed as contract, the dominating issues are to force the information that overcomes the [kind of] transaction costs [that] arise where bargaining parties can locate each other and identify their respective rights, but where their deals may nevertheless falter because of strategic bargaining and "adverse selection." Finally, it could be that the dominating concerns of what we designate as property law are rather different: to create the conditions that induce people to work hard and to invest in things.

Note the parallelism between Rose's response to the synthetic impulses of Calabresi, Melamed, and their successors and the Legal Realists' response to the synthetic impulse of Classical Legal Thought.

While the battle raged over the relative merits of property rules and liability rules from the standpoint of economic efficiency, a smaller group of scholars began to explore a less prominent dimension of Calabresi's and Melamed's original analysis: their suggestion that, in some circumstances, inalienability rules might be the best way to protect a particular type of entitlement. In a 1985 article, Susan Rose Ackerman argued that inalienability rules came in many shapes and sizes – prohibitions on sales of entitlements, prohibitions on gifts of entitlements, limitations on the set of persons empowered to surrender their entitlements, limitations on the set of persons to whom entitlements could be transferred, etc. Then, relying on the normative taxonomy first outlined by Calabresi and Melamed, she mapped and assessed a wide variety of efficiency and distributive arguments that might be deployed to justify one or another type of restriction. The gist of her argument is as follows:

The efficiency rationales for inalienability rules are second-best responses to market failures that arise because of externalities, imperfections in information, or difficulties of coordination. The straightforward responses of internalizing the externality through fees or taxes, of subsidizing the provision of information, and of facilitating joint action may, for one reason or another, be costly. In such cases, the alternative of restricting market trades becomes a realistic possibility....

[T]he distributive case for inalienability is more narrowly focused. If policymakers wish to benefit a particular sort of person but cannot easily identify these people *ex ante*, they may be able to impose restrictions on the entitlement that are less onerous for the worthy group than for others who are nominally eligible. For example, the coercive conditions imposed on the use of land under the Homesteading Acts can be justified as a means of ensuring that the resource was transferred only to worthy recipients -- in this case, formerly landless people willing to live on and farm the property for several years.

Finally, Rose-Ackerman explored a variety of circumstances in which prohibitions on transfers of particular entitlements (such as the right to vote or obligations of military service) were essential to the realization of certain conceptions of citizenship.

In a 1987 article, Margaret Jane Radin examined more deeply one type of inalienability rule – under which a designated entitlement may be given away but not sold – which she called “market-inalienability.” In Radin’s view, neither traditional Liberalism (which regards the rights to life, liberty, and property as inalienable, but sees property rights themselves as fully alienable) nor the methodology of economic analysis (which presumes that entitlements of all sorts should be transferable and views all impediments to compensated exchanges as problematic, in need of special justification) provided satisfactory understandings of or guides to market-inalienability. A better approach, she contended, would begin with a theory of human flourishing, which would encompass rich conceptions of “three main, overlapping aspects of personhood: freedom, identity, and contextuality.”

The freedom aspect of personhood focuses on will, or the power to choose for oneself. In order to be autonomous individuals, we must at least be able to act for ourselves through free will in relation to the environment of things and other people. The identity aspect of personhood focuses on the integrity and continuity of the self required for individuation. In order to have a unique individual identity, we must have selves that are integrated and continuous over time. The contextuality aspect of personhood focuses on the necessity of self-constitution in relation to the environment of things and other people. In order to be differentiated human persons, unique individuals, we must have relationships with the social and natural world.

In an ideal world, Radin argued, markets would still exist, but market-inalienability rules would prevent the commodification of all things important to the dimensions of personhood just identified. In our current, nonideal world, such sweeping restrictions on

sales of entitlements would have to be tempered somewhat in order to avoid exacerbating inequalities of wealth and power.

It is likely that debate along these and other lines will continue for the foreseeable future. As Calabresi pointed out on the twenty-fifth anniversary of “One View of the Cathedral,” the emergence of new legal issues – such as the proliferation of various ways of “splitting” the costs associated with injuries and the troublesome question of the appropriate scope of property rights in bodily parts – will provide fresh occasions to invoke, complicate, and contest the taxonomies that he and Melamed provided us.

In the now thirty-five years since the publication of the article, its authors have continued to flourish. Calabresi went on to an illustrious career as a scholar (writing, for example, a provocative book on the ways in which courts in the modern era should interpret older statutes), as dean of the Yale Law School, and as a judge on the Second Circuit Court of Appeals. Melamed has had an equally prominent career in legal practice, serving in such capacities as Acting Assistant Attorney General in the Antitrust Division of the Justice Department and as co-chair of the Antitrust and Competition Department of the law firm, Wilmer Cutler Pickering Hale and Dorr.

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Bibliography

Short biographies of Guido Calabresi can be found on the websites of Yale Law School and of some of the institutions where he has been honored:

<http://www.law.yale.edu/outside/html/faculty/gc3/profile.htm>;

<http://www.virginia.edu/insideuva/2000/11/jefferson.html>;

<http://www.gmu.edu/departments/law/currnews/calabresi.html>. Information concerning

Douglas Melamed's education and career can be found on the website for his law firm:

http://www.wilmerhale.com/doug_melamed.

Calabresi's principal articles during the 1960s on accident law are: "Some Thoughts on Risk Distributions and the Law of Torts," *Yale Law Journal* 70 (1961): 499; "The Decision for Accidents: An Approach to Non-Fault Allocation of Costs," *Harvard Law Review* 78 (1965): 713; "Fault, Accidents, and the Wonderful World of Blum and Kalven," *Yale Law Journal* 76 (1965): 216; and "Transaction Costs, Resource Allocation and Liability Rules," *Journal of Law and Economics* (1968): 67. (The last, in particular, contains several arguments that appeared in fuller form in "One View of the Cathedral.") The culmination of this line of argument was *The Costs of Accidents: A Legal and Economic Analysis* (New Haven: Yale University Press, 1970).

The three best intellectual histories of "One View of the Cathedral" are James E. Krier and Stewart Schwab, "Property Rules and Liability Rules: The Cathedral in Another Light," *New York University Law Review* 70 (1995): 440; Carol M. Rose, "The Shadow of *The Cathedral*," *Yale Law Journal* 106 (1997): 2175; and Calabresi's own

comments looking back on the article twenty-five years after its publication, “The Simple Virtues of The Cathedral,” *Yale Law Journal* 106 (1997): 2201.

Robert Ellickson’s early explication and invocation of “One View of the Cathedral” can be found in “Alternatives to Zoning: Covenants, Nuisance Rules, and Fines as Land Use Controls,” *University of Chicago Law Review* 40 (1973): 681. Richard Posner’s invocation of the article to support the claim that liability rules are superior to property rules when transaction costs are high appears in the first edition of *Economic Analysis of Law* (1972), p. 29, and the accompanying Teacher’s Manual. In “The Cathedral in Another Light,” cited above, Krier and Schwab document (and criticize) the consensus that emerged during the 1970s and ‘80s concerning the superiority of liability rules in situations characterized by high transaction costs.

A. Mitchell’s Polinsky’s argument – and many other refinements of the Calabresi and Melamed thesis – are set forth in “Controlling Externalities and Protecting Entitlements: Property Right, Liability Rule, and Tax-Subsidy Approaches,” *Journal of Legal Studies* 8 (1979): 1; “On the Choice Between Property Rules and Liability Rules,” *Economic Inquiry* 18 (1980): 233; “Resolving Nuisance Disputes: The Simple Economics of Injunctive and Damage Remedies,” *Stanford Law Review* 32 (1980): 1075; *An Introduction to Law and Economics* (Boston: Little, Brown, 1983), 11-49.

The primary paper by Ian Ayres and Eric Talley is “Solomonic Bargaining: Dividing a Legal Entitlement to Facilitate Coasean Trade,” *Yale Law Journal* 104 (1995): 1027. Their argument was criticized by Louis Kaplow and Steven Shavell in “Do Liability Rules Facilitate Bargaining? A Reply to Ayres and Talley,” *Yale Law Journal*

105 (1995): 221. In response, Ayres and Talley modified their position in “Distinguishing Between Consensual and Nonconsensual Advantages of Liability Rules,” *Yale Law Journal* 105 (1995): 235. The essay by Kaplow and Shavell setting forth their own analysis of the relative merits in various circumstances of norms of different sorts is “Property Rules Versus Liability Rules: An Economic Analysis,” *Harvard Law Review* 109 (1996): 713.

The contributions of James Krier and Stewart Schwab to this debate are set forth in “The Cathedral in Another Light,” cited above. Toward the end of that article, Krier and Schwab proposed an addition to the set of six options that Calabresi and Melamed had originally outlined, which they illustrated by suggesting an alternative remedy to the *Spur Industries* case: “First, have the judge estimate as damages the residents’ social costs.... Next, have the judge enter the following peculiar order: If Spur Industries moves, the residents must pay Spur Industries the residents’ damages set by the judge; if Spur Industries stays, it will get nothing.” The paper by Robert Merges, building on the argument of Krier and Schwab, is “Contracting into Liability Rules: Intellectual Property Rights and Collective Rights Organizations,” *California Law Review* 84 (1996): 1293.

The two cases to which almost all scholars refer when debating the relative merits, from an efficiency standpoint, of liability rules and property rules are *Boomer v. Atlantic Cement Company*, 257 N.E.2d 870 (N.Y. 1970); and *Spur Industries v. Del E. Webb Development Company*, 494 P.2d 700 (Ariz. 1972).

The two major essays exploring inalienability rules are Susan Rose-Ackerman, “Inalienability and the Theory of Property Rights,” *Columbia Law Review* 85 (1985):

931; and Margaret Jane Radin, “Market-Inalienability,” *Harvard Law Review* 100 (1987): 1849.

Since “One View of the Cathedral,” Calabresi has written nearly 100 articles and three books: *Tragic Choices* (with Philip Bobbit) (New York: Norton, 1978); *A Common Law for the Age of Statutes* (Cambridge: Harvard University Press, 1982); and *Ideals, Beliefs, and the Law: Private Law Perspectives on a Public Law Problem* (Syracuse University Press, 1985).