

The Truth About Property Rules: Some Obstacles to the
Economic Analysis of Remedies
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Abstract

Property Rules, as famously described by Calabresi and Melamed, are remedial rules that place a prohibitively high penalty on violations of rights. This essay examines two aspects of property rules. In each case, the form of the rule is critically important. The first question addressed is the capacity of property rules to affect behavior that takes place outside the context of litigation. Most economic analysis assumes that when a right is protected by a property rule, the property rule will guide private decisionmaking at the time of a contemplated violation, and possibly before that time. Yet, to have this effect, property rules (and liability rules) must be embodied in a set of determinate legal rules defining not only the penalty imposed on violation, but also the entitlements protected and the conditions on which the property-rule remedy is available. Property rules, in other words, must be rules.

In fact, “true property rules” that meet this description are scarce. This casts some doubt on the predictions made in literature on the subject. Theory and doctrine may or may not be reconcilable, depending on the desirability and feasibility of determinate rules in the area of remedies.

In existing law, most true property rules protect property rights. This leads to the second question addressed here: what relationship, if any, do property rules bear to property? After examining several theories others have proposed to explain the association between property rules and property rights, I suggest that property rules are connected to property in two ways. First, deterrent property rules ensure the continuity that makes property rights valuable to owners and to society. Second, once property rights are securely in place, the value they generate makes property rules a more efficient response to the possibility of unilateral taking. To achieve these results, however, both property

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rights and property rules must be implemented by general, determinate, and authoritative legal rules.

INTRODUCTION

Since Guido Calabresi and Douglas Melamed published their seminal article on the subject in 1972,¹ economic analysis of

¹ Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972). This is one of the most widely and deeply cited articles of all times. See James E. Krier & Stewart J. Schwab, *The Cathedral at Twenty-Five: Citations and Impressions*, 106 YALE L.J. 2121 (1997).

² For a sampling of the literature inspired by Calabresi and Melamed's article, see Ronen Avraham, *Modular Liability Rules*, 24 INT'L REV. L. & ECON. 269 (2004); Ian Ayres & Jack Balkin, *Legal Entitlements As Auctions: Property Rules, Liability Rules, and Beyond*, 106 YALE L.J. 703 (1996); Ian Ayres & Paul M. Goldbart, *Correlated Values in the Theory of Property and Liability Rules*, 32 J. LEGAL STUD. 121 (2003) [hereinafter Ayres & Goldbart, *Correlated Values*]; Ian Ayres & Paul Goldbart, *Optimal Delegation and Decoupling in the Design of Liability Rules*, 100 MICH. L. REV. 1 (2001) [hereinafter Ayres & Goldbart, *Optimal Delegation*]; Ian Ayres & Eric Talley, *Solomonic Bargaining: Dividing a Legal Entitlement to Facilitate Coasian Trade*, 104 YALE L. J. 1027 (1995); Lucian A. Bebchuk, *Property Rights and Liability Rules: The Ex Ante View of the Cathedral*, 100 MICH. L. REV. 601 (2001); Richard R. W. Brooks, *The Relative Burden of Determining Property Rules and Liability Rules: Broken Elevators in the Cathedral*, 97 NW. U.L. REV. 267 (2003); Richard Craswell, *Property Rules and Liability Rules in Unconscionability and Related Contract Doctrines*, 60 U. CHI. L. REV. 1 (1993); Richard A. Epstein, *A Clear View of the Cathedral: The Dominance of Property Rules*, 106 YALE L.J. 2091 (1997); Lee Anne Fennell, *Revealing Options*, 118 HARV. L. REV. 1399 (2005); Keith N. Hylton, *Property Rules and Liability Rules Once Again*, 2 REVIEW OF ECONOMICS 137 (2006); Louis Kaplow & Steven Shavell, *Property Rules and Liability Rules: An Economic Analysis*, 109 HARV. L. REV. 713 (1996); James E. Krier & Stewart J. Schwab, *Property Rules and Liability Rules: The Cathedral in Another Light*, 70 N.Y.U. L. REV. 440 (1995); Saul Levmore, *Unifying Remedies: Property Rules, Liability Rules and Startling Rules*, 106 YALE L.J. 2149 (1997); Madeline Morris, *The Structure of Entitlements*, 78 CORNELL L. REV. 822 (1993); A. Mitchell Polinsky, *Controlling Externalities and Protecting Entitlements: Property Right, Liability Rule, and Tax Subsidy Approaches*, 8 J. LEGAL STUD. 1 (1979); A. Mitchell Polinsky, *Resolving Nuisance Disputes: The Simple Economics of Injunctive and Damage Remedies*, 32 STAN. L. REV. 1075 (1980); Jeffrey J. Rachlinski & Forest Jourden, *Remedies and the Psychology of Ownership*, 51 VAND. L. REV. 1541 (1998); Carol M. Rose, *The Shadow of the Cathedral*, 106 YALE L.J. 2175 (1997); Henry E. Smith, *Property and Property Rules*, 79 N.Y.U. L. REV. 1719 (2004) [hereinafter Smith, *Property*]; Henry E. Smith, *Exclusion and Property Rules in the Law of Nuisance*, 90 VA. L. REV. 965 (2004) [hereinafter Smith, *Exclusion*].

legal remedies has centered on the choice between “property rules” and “liability rules” for protection of entitlements. Calabresi and Melamed observed that a full description of any legal right entails not only who possesses the right but how the right is enforced.² Thus, in a case of industrial pollution, courts must choose not only whether to assign the entitlement (to pollute or to be free from pollution) to the factory or to homeowners, but whether to protect the entitlement by means of an injunction, which gives practical control to the entitlement holder, or with a damage remedy, which allows the non-entitled party to take the entitlement for a court-determined price.³

In this article, I will suggest that the economic notion of a property rule relies on a critical assumption about the form of legal rules governing remedies. Specifically, a property rule capable of producing efficient outcomes must be embodied in a set of general, determinate, and authoritative rules. In fact, rules governing remedies tend to be at the low end of the continuum of legal determinacy, although perhaps they should be more rule-like than they are. This discrepancy between theory and practice places economic analysis of remedies in some jeopardy.

A further mystery pertaining to property rules is what relation, if any, they bear to what we typically think of as property rights. Property rules are linked to property rights in at least some economic analyses of remedial choice, yet the connection between them has not been fully explored. I will suggest that, although property rights and property rules are not coextensive, they have in common a strong dependence on determinate legal rules.

I assume, as most writers have done, that maximizing the value derived from resources is at least one of the objectives courts should pursue in choosing among remedies.⁴ Depending on one’s political morality, a choice based on efficiency can then be adjusted in response to distributive concerns or other deontological requirements. I will say nothing in this essay about distributive justice or the moral justifications for property rights; nor will I embark on a technical economic analysis of legal methods for enforcing rights. My aim is to examine the logical structure of the

³ Calabresi & Melamed, *supra* note 1, at 1092, 1115-24.

⁴ *See id.* at 1093-94. I assume that efficiency is a valid normative objective for law, even if it does not in itself express a moral standard. Efficiency is a goal that morally sound political institutions can legitimately pursue. *See* Jody Kraus, *Transparency and Determinacy in Common Law Adjudication: A Philosophical Defense of Explanatory Economic Analysis*, 93 VA. L. REV. 287, 302-03, 311-313 (2007).

problem of remedial choice, with emphasis on the connections among property rules, property, and rules.⁵

I. PROPERTY RULES AND LIABILITY RULES

A. *Basic Definitions*

The essential characteristic of what Calabresi and Melamed called a property rule is that it effectively prevents deliberate unilateral violations of the right it protects.⁶ Consequently, those who wish to appropriate or otherwise interfere with the right must seek the rightholder's consent. They must either bargain or abstain.

For simplicity, I will refer to violations of rights as "takings," although the violation may consist of harm—invasion, appropriation, or unauthorized use. Potential violators are denominated "takers." Rightholders are "victims" (or, when appropriate, "owners").

Property rules deter takings by imposing strong penalties, such that no rational actor would choose to take without consent and suffer the legal consequences. A property rule may take the form of an injunction backed by contempt sanctions that negate expected benefits from violating the right, a criminal prohibition backed by similarly severe sanctions, an order for specific restitution, or an order requiring the taker to disgorge any benefits obtained.⁷ I shall have more to say in later sections about the

⁵ Thomas Merrill examined the role of determinate rules early in the debate over property rules and liability rules. See Thomas W. Merrill, *Trespass, Nuisance, and the Costs of Determining Property Rights*, 14 J. LEGAL STUD. 13 (1985). He and Henry Smith have continued to pursue questions of legal form in property law in a series of excellent articles. See, e.g., Thomas W. Merrill & Henry E. Smith, *Optimal Standardization in the Law of Property: The Numerous Clausus Principle*, 110 YALE L.J. 1 (2000) [hereinafter Merrill & Smith, *Optimal Standardization*]; Thomas W. Merrill & Henry E. Smith, *The Property/Contract Interface*, 101 COLUM. L. REV. 773 (2001) [hereinafter, Merrill & Smith, *Property/Contract*]; Thomas W. Merrill & Henry E. Smith, *What Happened to Property in Law and Economics?*, 111 YALE L.J. 357, 359, 385-88, 394-97 (2001) [hereinafter Merrill & Smith, *Law & Economics*]; Smith, *Property*, *supra* note 2, at 1727-28; Smith, *Exclusion*, *supra* note 2, at 973-74.

⁶ See, e.g., Calabresi & Melamed, *supra* note 1, at 1092; Kaplow & Shavell, *supra* note 2, at 715.

⁷ Much of the literature focuses on injunctions, but the other remedies mentioned in the text have similar deterrent effects. See, e.g., Calabresi & Melamed, *supra* note 1, at 1124-26 (discussing property rule protection through criminal sanctions); Epstein, *supra* note 2, at 2096-97 (discussing property rule protection through specific restitution); Levmore, *supra* note 2, at 2156-57 (discussing property rule protection through profit-based restitution).

formal requirements for property rules.

A liability rule, in contrast, does not aim to prevent unilateral rights violations. Instead, it requires violators to pay a court-determined price for what they take.⁸ With the price in mind, potential takers may bargain, abstain, or proceed to take without consent. Ideally, the price is calculated to ensure that would-be takers will take if but only if the benefits to them exceed the cost to their victims.⁹

B. Effects of Property Rules and Liability Rules

1. Efficient Allocation of Resources

For most writers who have addressed the subject of property rules and liability rules, the primary motive in choosing between them is to place whatever resources are at stake in the hands of the party who values them most. The impact of remedial choice on resource allocation has been and continues to be a subject of intense debate. In their original discussion of property rules and liability rules, Calabresi and Melamed surmised that when the costs of bargaining are low, property rules are superior because they encourage private bargaining, and bargaining is more likely to produce an efficient allocation than forced exchange at an officially determined price. When bargaining costs are high, liability rules are superior because they permit exchanges to occur at the designated price.

Subsequent writers have questioned and refined Calabresi's and Melamed's conclusions. For example, James Krier and Stewart Schwab draw attention to "assessment costs," meaning the difficulties courts face in calculating values for the related risk of error.¹⁰ When the costs of private bargaining are prohibitively high, a property rule based on a mistaken assessment of the parties'

⁸ See, e.g., Calabresi & Melamed, *supra* note 1, at 1092; Kaplow & Shavell, *supra* note 2, at 723-24.

⁹ See Kaplow & Shavell, *supra* note 2, at 724-28; A. Mitchell Polinski, *Resolving Nuisance Disputes*, 32 STAN. L. REV. 1075, 1101-02 (1980). For varying proposals for calculating optimal liability rule prices when courts do not have perfect information about the parties' subjective values, see, for example, *id.* at 725-26 (defending liability rules based on average victim value); Ayres & Goldbart, *Correlated Values*, *supra* note 2, at 134-39 (defending liability rules based on a "conditional mean value" reflecting the point at which the taker's value equal the mean probable value of victims, given a known correlation in values).

¹⁰ Krier & Schwab, *supra* note 2, at 453-64; see also Polinski, *supra* note 9, at 1101-06 (concluding that neither property rules nor liability rules are generally superior when courts have imperfect information about values).

subjective valuations directly misallocates resources. A liability rule that misjudges the value the victim places on the resources results in too many or too few unilateral takings.

Others have argued that liability rules are generally superior to property rules as tools for allocating disputed resources. Ian Ayres and Eric Talley propose that when bargaining is possible, liability rules facilitate agreement by splitting the right to resources between parties; each party then has a reason to reveal information about his or her private valuation.¹¹ Louis Kaplow and Steven Shavell show that when bargaining costs are high, liability rules have the advantage of capturing private information. By putting potential takers to a choice, liability rules make use of takers' knowledge of their own valuations, which may otherwise be inaccessible to the court.¹² It follows that, at least in the paradigmatic nuisance case, a liability rule based on a rough estimate of average victim value will be superior on average to a property rule in favor of either the victim or the taker.¹³

Scholarly commentary has also produced a variety of arguments in defense of property rules. Kaplow and Shavell, for example, qualify their general conclusion in favor of liability rules with the observation that property rules may be more efficient when the taking consists of misappropriation of a physical thing.¹⁴ Henry Smith pursues a different line of argument, maintaining that a regime of exclusionary property rights, backed by property rules, is often the best way to generate and manage information about the

¹¹ See Ayres & Talley, *supra* note 2; Ian Ayres & Eric Talley, *Distinguishing Between Consensual and Nonconsensual Advantages of Liability Rules*, 105 YALE L.J. 235 (1995).

¹² See Kaplow & Shavell, *supra* note 2, at 719-20, 724-28; see also Ayres & Goldbart, *Optimal Delegation*, *supra* note 2 (proposing liability rules that manipulate the locus of choice to maximize the use of private information); Fennell, *supra* note 1 (proposing liability rules that require parties to generate serial options).

Kaplow and Shavell do not claim that liability rules are superior in all circumstances. They note that when bargaining costs are high but not prohibitive, as when both parties lack information about the other's actual valuation but know the average distribution of values among similarly situated parties, neither property rules nor liability rules are systematically superior. Kaplow & Shavell, *supra*, at 734-35. They also argue that property rules are likely to be superior in the particular setting of appropriation of things, discussed below. *Id.* at 721-23, 759-63.

¹³ For this purpose, Kaplow and Shavell assume that although the estimate of victim value may be rough, it is not systematically biased against victims. Kaplow & Shavell, *supra* note 2, at 720, 730-31.

¹⁴ See *id.* at 721-23, 759-63.

use of resources.¹⁵ I shall return to both these arguments later in the essay, when I address the relationship between property rules and property rights.

2. The Time-Frame Problem: Prospective Effects of Remedial Choice

I take no position in the debate over the relative efficiency of property rules and liability rules. My purpose in summarizing a sample of the arguments made on this question is to highlight a problem that sometimes has been overlooked: in order to assess the impact of remedies on resource allocation, one must be clear about the time frame in which they operate. On this point, the literature on property rules and liability rules is surprisingly indistinct. Yet the problem of time has significant implications for both the scope of remedial theory and the form of remedial rules.

One possibility is to assess the effect of property rules and liability rules at the time a court chooses between them. A particular dispute has arisen, the parties are before the court, and the question is how the court's choice of remedy, in this case, will affect final placement of the resources at stake in the litigation. If post-judgment bargaining is possible, the court's assignment of the resources is open to further negotiation, and the choice between a property rule and a liability rule may affect the chance of a successful agreement. For example, as Ayres and Talley have argued, a liability rule may raise the prospects for agreement by encouraging the parties to reveal information.¹⁶ If post-judgment bargaining is not feasible, the court's assignment of resources is final and the choice of remedy has only distributive effects.

The court's choice of remedy in a particular case also affects the administrative costs borne by the parties and the court.¹⁷ A liability rule requires a cardinal estimate of the value the victim places on resources; a property rule requires an ordinal ranking of

¹⁵ See Smith, *Property*, *supra* note 2, at 1753-90; Smith, *Exclusion*, *supra* note 2, at 980. See also Epstein, *supra* note 2, at 2094-95 (emphasizing the risk of undercompensation); Rose, *supra* note 2, at 2187 (suggesting that property rules facilitate long-term planning); Hylton, *supra* note 2, at 140 (arguing that property rules provide better protection for subjective values).

¹⁶ See *supra* note 10 and accompanying text.

¹⁷ See Brooks, *supra* note 2 (analyzing costs imposed on the court, independently of errors resulting in misallocation of resources between parties), Calabresi & Melamed, *supra* note 1, at 1093 (citing administrative costs as a relevant consideration); Kaplow & Shavell, *supra* note 2, at 741 (discussing administrative costs).

both parties' valuations.¹⁸ One or the other of these measurements may be more costly, depending on the setting.¹⁹ A liability rule also may require the victim to reveal information he or she would prefer to keep confidential.²⁰ A property rule may involve the court in monitoring compliance after judgment. Costs of this kind consume resources, even if they do not affect the final allocation between parties.

A second possibility is to step back in time and ask what impact a property rule or a liability rule may have on the initial private decision whether to violate a right. Anticipating a property rule, potential takers will not take (or will not engage in activities likely to violate rights). Instead, would-be takers will either make an offer or take no action. Anticipating a liability rule, potential takers will either take, bargain, or do nothing, depending on the price. From this perspective, the most important economic consequences of remedial choice occur prior to, and outside the context of, litigation.

The assumption that the choice of remedy affects behavior at the point of taking greatly enlarges the scope of the inquiry. Most obviously, the costs of bargaining at the time of taking are now factors to consider in assessing the efficiency of different rules. If pre-taking bargaining costs are low, then in theory the parties can and will reach a correct allocation of resources on their own, regardless of expected remedies.²¹ Efficient exchanges will occur and inefficient exchanges will not, without the intervention of a court. If pre-taking bargaining costs are high, then the expected remedy determines whether takings will occur.²² If takers believe that courts will apply a property rule in favor of victims, or a liability rule that fixes a price above the taker's value, there will

¹⁸ See RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 69-70 (7th ed. 2007) (noting that, given sufficient information, it is cheaper to compare the relative values of both parties' uses than to determine the value of one victim's use). See generally Russell Hardin, *Rational Choice*, in II *ENCYCLOPEDIA OF ETHICS* 1062, 1063-64 (Lawrence C. Becker & Charlotte B. Becker eds., New York; London: Garland Publishing 1992) (discussing cardinal and ordinal utility measurement).

¹⁹ See Brooks, *supra* note 2, at 277-96 (identifying variations in judicial information that affect assessment costs under different rules).

²⁰ Omri Ben-Shahar and Lisa Bernstein have suggested that in contractual disputes, measurement of the promisee's expectancy depends on information about profits and value that, if public, could weaken the promisee's position in subsequent dealings with the promisor and others. See Omri Ben-Shahar & Lisa Bernstein, *The Secrecy Interest in Contract Law*, 109 *YALE L.J.* 1885 (2000).

²¹ See, e.g., Kaplow & Shavell, *supra* note 2, at 733-34.

²² See *id.* at 724.

be no takings, although takers may sometimes place a higher value on the resources more than victims. If takers believe that the court will apply a property rule in favor of takers, or a liability rule that fixes a price below the taker's value, the taking will occur, although victims may place a higher value on the resources. There may, in other words, be too many or too few takings, again with no involvement by a court.

To complicate matters, the parties' remedial expectations may affect the costs of pre-taking bargaining. For example, as Kaplow and Shavell point out, a liability rule may force victims who expect to suffer harm that exceeds the damages fixed by the rule to bargain with multiple potential takers.²³ In theory, when damages are too low the victim can pay takers to refrain from taking. The low price, however, may attract an indefinite number of takers. If so, the owner cannot practically bargain to retain the right, even if bargaining costs are otherwise insignificant.²⁴

When pre-taking bargaining costs are high, the costs of judicial valuation, and the corresponding likelihood of judicial error, must be added to the equation. If potential takers anticipate

²³ See *id.* at 765-67. Kaplow and Shavell associate this problem with takings of physical things. In a nuisance dispute between two neighbors, presumably the owner can bargain with the taker; in a case of misappropriation, many would find it rational to take advantage of an erroneously low liability rule. See *id.* at 766-67. Yet the problem may be more general.

There is an interesting parallel between the difficulty a victim faces in bargaining out of multiple possible takings, and the reasons why the law is property laws and markets are structured to permit owners to demand prices from potential buyers, rather than requiring owners to pay for the benefit of continued possession. See Donald Wittman, *Liability for Harm or Restitution for Benefit?*, 13 J. LEGAL STUD. 57 (1984).

²⁴ Post-judgment bargaining costs may also be relevant, insofar as they affect the final allocation of resources between parties whose pre-taking decisions are shaped by the remedial rules. For example, suppose that an undercompensatory liability rule leads to an inefficient taking, and pre-taking bargaining costs prevent the victim from buying off the taker in advance. Suppose also that post-judgment bargaining costs are lower, perhaps because the parties have obtained better information about their respective valuations in the course of trial. The victim may then be able to recover what was taken by offering an additional payment. If so, the misallocation is thus correctable after the fact; and if this pattern is predictable, the initial inefficiency of the liability rule is of less concern. However, if post-judgment bargaining carries other costs that are likely to prevent agreement, the defects of the liability rule cannot be cured.

This scenario assumes a manageable number of potential takers. If pre-taking bargaining is costly because there are many potential takers, the owner is unlikely to offer a post-judgment buy-off because the risk of further takings would make the buy-off pointless. See *supra* note 21 and accompanying text.

that courts will systematically misapply the governing rule, giving property rule protection to the wrong party or fixing damages too high or too low under a liability rule, they will adjust their decisions accordingly.²⁵ The likelihood of error, in turn, depends on the type of information available to the court in different settings, as well as the governing remedial rule. If courts are likely to have reliable information about the distribution of victim valuations but not about the actual valuations of particular parties, then, as Kaplow and Shavell point out, liability rules will normally perform better on average than property rules because they make use of takers' private knowledge.²⁶ If courts are likely to have access to information about actual valuations, the ordinal calculation associated with property rules may be simpler, and therefore more accurate, than the cardinal estimate of victim value needed for a liability rule.²⁷

Administrative and other costs associated with property rules and liability rules can also affect decisionmaking at the point of taking. A rule that imposes high costs on victims in case of litigation weakens a victim's bargaining position at the time of taking because the victim's threat to sue is less credible. Similarly, if litigation under the governing rule will require one party to disclose information he or she would prefer to keep private, and both parties know this, bargaining positions at the time of taking will reflect the costs of disclosure.²⁸

Finally, analysis of property rules and liability rules can be extended to even earlier points in time, when the parties choose among possible uses of resources.²⁹ Anticipating that particular

²⁵ Kaplow and Shavell note that if courts systematically underestimate damages, it is no longer fair to assume that liability rules are more reliable. *See* Kaplow & Shavell, *supra* note 2, at 730-31. There is ample reason to think that damages are often undercompensatory. *See, e.g.,* Emily Sherwin, *Compensation and Revenge*, 40 SAN DIEGO L. REV. 1387, 1389-96 (2003); Jeffrey Standen, *The Fallacy of Full Compensation*, 73 WASH. U. L. Q. 145 (1995).

²⁶ *See supra* note 11 and accompanying text.

²⁷ *See* Brooks, *supra* note 2, at 279 (noting that judges generally "have some knowledge of the specific parties' valuations").

²⁸ *See supra* note 18 and accompanying text.

²⁹ Lucien Bebchuk undertakes this task, analyzing how the anticipated division of surplus in what he refers to as "ex post" bargaining may affect incentives for initial investment in productive activity and in measures to prevent harmful takings. Lucien Ayre Bebchuk, *Property Rights and Liability Rules: The Ex Ante View of the Cathedral*, 100 MICH. L. REV. 601 (2001). By ex post bargaining, Bebchuk appears to mean any bargaining that occurs after the parties have chosen and invested in activities, including both post-judgment and pre-taking bargaining. Given Bebchuk's assumption of perfect bargaining

activities may ultimately conflict, that the conflict may be resolved in court, and that the court will choose a property rule or a liability rule, parties will structure their investments accordingly. If the costs of later bargaining are high, the expected rule will guide investment; if bargaining costs are low, investment decisions will be influenced by the effects of the governing rule on the division of bargaining surplus.³⁰ Parties may also take into account the different methods of assessing value courts are likely use under property rules or liability rules in the event of litigation over conflicting uses, and adjust their activities in ways they hope will affect valuation.³¹

3. Prospectivity and Rules

Whatever specific conclusions one may draw about how property rules and liability rules operate under varying conditions, the economic significance of the choice between them depends on the extent to which the choice is prospective in effect. Not surprisingly, most writing on the subject takes as a premise that the effects of remedial choice extend at least to the point of taking and perhaps even further back in time. Yet very little attention has been paid to the form that property rules and liability rules must take to support this premise.

Choice among legal remedies can proceed in two ways: courts can select remedies case-by-case at the conclusion of trial, or lawmakers (courts or legislatures) can select remedies for classes of cases in advance of litigation, by means of remedial rules. Particularistic remedial choices affect only post-litigation behavior and administrative costs. Therefore, any analysis of property rules and liability rules that attributes broader effects to the choice of remedies necessarily assumes the existence of property rule *rules* and liability rule *rules*. It assumes, in other words, that remedial choices by courts or other lawmakers meet three formal criteria. They must be general, meaning that they

conditions, the timing of the ex post bargain is not significant. Bebchuk concludes that when bargaining is possible, different remedies (and different entitlements) will elicit mixed combinations of behavior by the parties, depending on context.

³⁰ See *id.* at 612-34 (assuming perfect bargaining conditions and examining the “*ex ante*” effects of the expected division of surplus under property rules or liability rules) (emphasis added).

³¹ See Henry E. Smith, *Ambiguous Quality Changes from Taxes and Legal Rules*, 67 U. CHI. L. REV. 685-96 (2002) (suggesting that under liability rules, parties may respond strategically to the prospect of qualitative assessment of value by altering features of the subject matter that serve as proxies for value).

apply to classes of future cases. They must be determinate, meaning that the terms in which they are expressed can be understood and applied by future courts without recourse to contestable moral standards. They must also be treated as authoritative by future courts. Only then can remedial choices operate as rules.³²

This is a simple point, but it leads to considerably more restrictive definitions of property rules and liability rules than commonly appear in the literature. Suppose, for example, that the best rule for a certain class of cases is a property rule in favor of victims (or, more precisely, a property rule *rule* in favor of victims). The function of a property rule is to prevent unilateral takings. If the rule is to perform this function prior to, and outside, litigation, the law must first define both the victim's substantive entitlement and the choice of remedy in determinate terms.

It follows that a right that depends on a balance of interests in context cannot effectively be protected by a litigation-independent property rule. For example, the *Restatement of Torts* defines nuisance as an unreasonable interference with enjoyment of land and reasonableness as a function of the private and societal interests at stake.³³ When this definition prevails, even a clear property rule, providing for routine injunctive relief, will not fully deter activities that might qualify as nuisances.³⁴

Assuming a determinate entitlement, the conditions under which courts will grant a deterrent remedy—that is, the criteria for selection of a property rule rather a liability rule—must also be defined in determinate terms. If injunctive relief for an acknowledged nuisance depends on the social value of the defendant's activity or other criteria on which courts are likely to disagree, nuisances may still occur. The remedial rule must also provide for sanctions that negate any benefits a taker might obtain by violating the right, and the sanctions must follow automatically

³² For an excellent discussion of the nature, requisites, and advantages of authoritative rules, see FREDERICK SCHAUER, *PLAYING BY THE RULES: A PHILOSOPHICAL EXAMINATION OF RULE-BASED DECISION-MAKING IN LIFE AND LAW* (1991). See also LARRY ALEXANDER & EMILY SHERWIN, *THE RULE OF RULES: MORALITY, RULES, AND THE DILEMMAS OF LAW* 26-36 (2001) (discussing the characteristics of authoritative rules).

³³ See *RESTATEMENT (SECOND) OF TORTS* § 822 (1979).

³⁴ See *RESTATEMENT (SECOND) OF TORTS* §§ 822, 826 (1979) (comparing gravity of harm to utility of conduct). *But cf.* Smith, *Exclusion*, *supra* note 2, at 993, 997-1005, 1024 (arguing that nuisance law often relies on simple rules of exclusion).

whenever the criteria for application of the rule are met.³⁵ A degree of uncertainty about the level of expected sanctions will not necessarily undermine the deterrent effect of the rule, as long as takers face a distribution of expected penalties in which the average penalty is equal to the takers' expected benefit. Yet, the choice *between* a deterrent property rule and a non-deterrent liability rule must be clear: remedial standards that leave the choice of remedy uncertain have neither the protective effects of property rules nor the pricing effects of accurate liability rules.

Finally, the rule must be announced as a rule by an authority whose decisions courts accept as binding in all cases. If the source of the rule is a court, the court's decisions on remedial questions must have the status of authoritative precedent rules.³⁶ To the extent that future courts treat prior decisions as examples or rules of thumb, prior decisions do not establish property rules.

Thus, a property rule capable of operating in advance of litigation—what I will call a true property rule—must instruct future courts to apply fully deterrent sanctions, under determinate conditions, for protection of a clearly defined class of entitlements, without further consideration of the specifics of the case at hand. Liability rules are subject to similar constraints, if they are intended to affect pre-litigation decisionmaking directly.³⁷ The entitlement must be defined and assigned in determinate terms; the choice of remedy must be specified for an ascertainable class of cases; and the price must be fixed for all cases to which the rule applies. The price may refer to a probability distribution, such as average victim value, but the formula for calculating prices in

³⁵ See Hylton, *supra* note 2, at 178-83 (arguing that a property rule must fix a price equal to the greater of the taker's valuation or the victim's subjective valuation, in order to fully protect subjective values).

The question what sanctions are necessary to deter takings is complicated by imperfections in the process of enforcement including, most obviously, the probability that not all victims will sue. See, e.g., A. Mitchell Polinsky & Steven Shavell, *The Optimal Tradeoff Between the Probability and Magnitude of Fines*, 69 AM. ECON. REV. 880 (1979).

³⁶ See ALEXANDER & SHERWIN, *supra* note 32, at 140-42 (discussing the "rule model" of precedent); see also Larry Alexander, *Constrained By Precedent*, 62 S. CAL. L. REV. 1, 17-28 (same).

³⁷ Indeterminate liability rules, or for that matter indeterminate legal standards of any kind, may affect private bargaining. See Jason Scott Johnston, *Bargaining Under Rules Versus Standards*, 11 J. L. ECON. & ORG 256 (1995) (suggesting that, under certain conditions, bargaining is enhanced by vaguely defined entitlements). Indeterminate standards, however, will not direct resource allocation in the manner contemplated in most literature on property rules and liability rules.

particular cases must be determinate.³⁸

In fact, true property rules are rather scarce. The remedy most typically associated with property-rule protection for entitlements is an injunction, backed by the threat of sanctions for contempt. Injunctions, however, are historically equitable remedies, subject to discretionary control by the issuing court.³⁹ In a few categories of cases, courts routinely grant injunctions; more typically, however, the choice between damages and an injunction is a fact-specific decision, based on considerations such as propensity to act, probability of harm, and the likelihood that damages will provide fair compensation if harm occurs.⁴⁰ Injunctions are also subject to “equitable defenses” that refer to vague principles of morality and fairness, such as “unclean hands” or “disproportionate hardship.”⁴¹

Punitive damages, available in civil proceedings, may contribute to deterrence.⁴² Yet the law provides very little guidance on either the availability of punitive damages in particular contexts or the measure of punitive damages when they apply.⁴³ Thus, at

³⁸ See *supra* text accompanying note 13.

³⁹ See generally 1 DAN B. DOBBS, DOBBS LAW OF REMEDIES: DAMAGES-EQUITY-RESTITUTION § 1.2 at 12, § 2.1(2) at 59, § 2.4(1) at 90-91 (2d ed. 1993).

⁴⁰ See generally *id.*; DOUGLAS LAYCOCK, MODERN AMERICAN REMEDIES 233-57(3d ed. 2002) [hereinafter LAYCOCK, REMEDIES]. Laycock has demonstrated through extensive research that courts rarely rely on the supposed requirement of “irreparable injury” (or “inadequacy” of legal remedies) as an independent reason to deny injunctive relief. See DOUGLAS LAYCOCK, THE DEATH OF THE IRREPARABLE INJURY RULES (1991). This is not to say, however, that they grant injunctions routinely, without evaluating the impact of the remedy in the context of a particular dispute.

Moreover, courts grant both preliminary injunctions, at the outset of litigation, and permanent injunctions, after trial, applying different standards that reflect the degree of factual uncertainty at different stages of adjudication. See 1 DOBBS, *supra* note 39, at § 2.11(1) at 249-50; LAYCOCK, REMEDIES, *supra*, at 440-77.

⁴¹ See generally 1 DOBBS, *supra* note 39, § 2.4(1) at 91; § 2.4(2) at 92-99, § 2.4(5) at 108-113.

⁴² See generally 1 DOBBS, *supra* note 39, § 3.11(1) at 452-57; LAYCOCK, REMEDIES, *supra* note 40, at 719-38.

⁴³ In an effort to control punitive damages, the United States Supreme Court has recently suggested that the Constitution may require a degree proportionality between compensatory and punitive remedies. See *BMW v. Gore*, 517 U.S. 559 (1996); *State Farm Mutual Auto. Ins. Co. v. Campbell*, 538 U.S. 408 (2003); *Phillip Morris USA v. William*, 549 U.S. 346 (2007). Yet even the rather loose restrictions proposed by the Court have met with resistance from state courts and lower federal courts. See, e.g., *State Farm Mut. Auto. Ins. Co. v. Campbell*, 98 P.3d 409 (Utah 2004), *cert. denied*, 543 U.S. 874 (2004) (awarding the maximum amount approved by the Supreme Court); *Mathias v. Accor Econ.*

least for parties who do not expect to litigate repeatedly over harms arising from a single activity, the prospect of punitive damages is unlikely to operate as a true property rule.⁴⁴

A more promising form of property rule is restitution of profits.⁴⁵ By definition, a remedy that allows victims to claim their injurers' full profits is an effective deterrent because it eliminates potential gains from taking, including economic gains in the form of saved costs.⁴⁶ Moreover, the criteria for profit-based restitution are relatively clear: for particular categories of wrongdoing, such as misappropriation of another's assets, conscious wrongdoers are routinely required to account for profits.⁴⁷ Yet full disgorgement of profits is a fairly limited remedy, which does not apply to all forms of deliberate or reckless wrongs. Notably, restitution of profits (or

Lodging, Inc., 347 F.3d 672 (7th Cir. 2003) (finding special circumstances).

⁴⁴ A manufacturer expecting multiple products liability suits may calculate and respond to the statistical probability of punitive damages. *See Baker v. Gen. Motors Corp.*, 522 U.S. 222 (1998) (in which General Motors attempted to block testimony by a former employee in the wake of large punitive damage awards against auto manufacturers).

There are substantial questions about the desirability of effective property rules in the context of products liability. Despite occasional awards of significant punitive damages, there probably is no social consensus in favor of deterring commercial activities that carry known risks of serious harm. For discussion of the problem, see LAYCOCK, REMEDIES *supra* note 40, at 598-600, 729-30 (addressing disgorgement of profits and punitive damages, respectively).

⁴⁵ Douglas Laycock helpfully refers to profit-based restitution as restitution of "consequential gains." LAYCOCK, REMEDIES *supra* note 40, at 575. The draft Restatement adopts the same term. RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 53(3) (Tentative Draft No. 5 2007). *See also* 1 DOBBS, *supra* note 39, § 4.5(3) at 637-41.

⁴⁶ *See, e.g., Olwell v. Nye & Nissen Co.*, 173 P.2d 652 (Wash. 1946).

⁴⁷ *See* RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 40(2)(a) (Tentative Draft No. 4, 2005); § 51(3), cmt. c (Tentative Draft No. 5, 2007); LAYCOCK, REMEDIES, *supra* note 40, at 585. Innocent wrongdoers normally are not liable for profits. RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT, *supra* note 45, § 40(2)(b); LAYCOCK, REMEDIES, *supra* note 40, at 585 (noting an exception in the case of copyright infringement).

There are also cases in which the criteria for disgorgement are far from clear, notably constructive trusts imposed on grounds such as breach of fiduciary duty and undue influence, or, on simply on the basis of unjust enrichment. *See, e.g., Snapp v. United States*, 444 U.S. 507 (1980) (imposing a constructive trust on a former CIA agent for breach of fiduciary duties arising from a contractual obligation to submit proposed publications to the agency for review); *Sharp v. Kosmalki*, 351 N.E.2d 721 (N.Y. 1976) (imposing a constructive trust on the plaintiff's former cohabitant for breach of fiduciary duties implicit in the parties' relationship). Deterrent remedies in cases of this kind do not operate as true property rules because they are not embodied in rules.

saved costs) is not ordinarily available for breach of contract⁴⁸ or for injuries caused by defective products.⁴⁹

Another possible source of deterrence is the criminal law.⁵⁰ The conditions for imposing criminal punishment and the extent of the penalty typically are specified in advance by legislation. As a consequence, criminal penalties can operate as true property rules, if the probable penalty is severe enough to negate the benefits of unilateral taking. Criminal laws, however, do not cover all forms of rights violation, and the penalties they impose for mundane takings may be inadequate to deter.⁵¹

Many, though not all, of the instances in which the law approaches true property rule protection involve property rights. Property rights tend to be relatively determinate, and remedial rules provide for deterrent remedies for violation of property rights in relatively well-defined circumstances. Thus, as noted, profit-based restitution is a standard remedy for intentional misappropriation of property.⁵² Similarly, injunctions are presumptively available in cases of repeated trespass to land,⁵³ interference with easements,⁵⁴ misappropriation of intellectual property,⁵⁵ and breach of contracts for sale of land.⁵⁶

The correspondence between property rights and true property rules is far from perfect. Not all property rights are protected by property rules,⁵⁷ and rules that call for property rule

⁴⁸ See RESTATEMENT (SECOND) OF CONTRACTS § 370 (1981); 1 DOBBS, *supra* note 39, § 4.5(3) at 644-45. *But see* RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 39 (Tentative Draft No. 4, 2005) (recognizing a claim to profits from “opportunistic breach”); LAYCOCK, REMEDIES, *supra* note 40, at 600-603 (noting some exceptions to the general rule).

⁴⁹ See LAYCOCK, REMEDIES, *supra* note 40, at 599.

⁵⁰ See Calabresi & Melamed, *supra* note 1, at 1124-27.

⁵¹ See, e.g., *Jacque v. Sternberg Homes*, 563 N.W.2d 154 (Wisc. 1997) (noting that defendants were fined \$30 for trespassing on the plaintiff’s land); *see also infra* note 58 and accompanying text.

⁵² See RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 40(2)(a) (Tentative Draft No. 4, 2005); *see also supra* note 45 and accompanying text. Some intellectual property statutes provide for restitution of profits, other do not; however, the statutes give courts considerable discretion in awarding profits. *See generally* 2 DOBBS, *supra* note 39, § 6.2(1) at 41, § 6.3(4) at 59; § 6.4(4) at 87-80; LAYCOCK, REMEDIES, *supra* note 40, at 584-85.

⁵³ See 1 DOBBS, *supra* note 39, § 5.10(3) at 809.

⁵⁴ See *id.* § 5.7(6) at 785.

⁵⁵ See 2 *id.* § 6.2(5) at 43-44; § 6.3(5) at 64-65; § 6.4(5) at 95-96.

⁵⁶ See 3 *id.* § 12.11(3) at 299-300.

⁵⁷ One significant exception is accident cases: when a legal thing is inadvertently invaded or destroyed, deterrence is not possible and courts must resort to liability rules. By their nature, however, accidents are beyond the reach of any

protection against violation property rights are seldom perfectly determinate.⁵⁸ Nevertheless, reasonably reliable deterrent remedies are more common in the field of property than in other areas of law. I shall return later to the association between true property rules and property rights.

As an illustration of the elusiveness of true property rules, even when property rights are at stake, consider *Jacque v. Sternberg Homes*.⁵⁹ Sternberg sought permission to cross the plaintiffs' land to deliver a mobile home after a snowstorm made normal routes impassible. When the Jacques refused, the defendant proceeded to cross their land. A jury ultimately held Sternberg liable for nominal damages of \$1 and punitive damages of \$100,000, which the Wisconsin Supreme Court approved.⁶⁰ This case may appear to establish true property rule protection against unauthorized crossing of the boundaries of private land. In fact, however, the award of punitive damages depended on the jury's conception of egregious conduct, and other deterrent remedies

theory about the prospective effects of remedial choice.

There are also instances in which property rule protection is possible, but courts decline to use it. For example, traditional rules hold that profit-based restitution is not available when a trespasser enters land without consent and profits from the entry, but leaves the land intact. *See id.* § 5.9, at 800-02. The draft Restatement of Restitution and Unjust Enrichment adopts the contrary view, allowing recovery of profits. RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 40(2)(a), cmt. c, illus. 4 (Tentative Draft No. 4, 2005). *See also* *Edwards v. Lee's Adm'r*, 96 W.W.2d 1028 (Ky. 1936) (allowing recovery of profits from use of a cave under the plaintiff's land). The remedy recognized by the *Restatement*, however, may not qualify as a true property rule; the comments refer to remoteness of profits and the "equitable positions of the parties" as possible qualifications, even when the defendant is a conscious wrongdoer. *See* RESTATEMENT (THIRD) OF RESTITUTION AND UNJUST ENRICHMENT § 40(2)(a), cmt. c, illus. 4, 7.

Another example is fungible goods. When a defendant misappropriates fungible property and "confuses" it with similar property of the defendant, courts are likely to limit the remedy to damages, rather than allow the plaintiff to recover the commingled mass, even when the taking was deliberate. *See, e.g., Somer v. Kane*, 210 N.W. 287 (Minn. 1926) (denying replevin of commingled logs). Similarly, when a defendant breaches a contract to deliver fungible goods, courts typically refuse to grant specific performance (or replevin) and instead limit the buyer's remedy to damages. *See* U.C.C. § 2-716(1), (3).

⁵⁸ Injunctive relief, in particular, is always subject to the defense of disproportionate hardship, even in categories of cases in which injunctions are otherwise the preferred method of enforcement. *See, e.g., Van Wagner Advert. Corp. v. S & M Enters.*, 492 N.E. 756 (N.Y. 1986) (denying specific performance).

⁵⁹ 563 N.W.2d 154 (Wisc. 1997).

⁶⁰ *Id.* at 166 (reinstating the jury's verdict).

were unlikely to apply. To obtain an injunction in advance, the Jacques would need to know of Sternberg's plans, and to prove both Sternberg's propensity to act and the comparative inadequacy of damages. Profit-based restitution probably was not a viable option, due to the difficulty of establishing the defendant's saved costs.⁶¹ The criminal penalty for trespass was \$30. Thus, even in the core case of entry onto private land, property rule protection may not be sufficiently certain and thorough to deter a unilateral violation of rights.⁶²

4. Implications for Economic Analysis

As administered by courts, property rules and liability rules often do not operate as rules. The paradigmatic property rule—an injunction—is a case-specific remedy, which is not easily predictable in advance of litigation. Standards for awarding for punitive damages are similarly indeterminate. Other potential property rules are more determinate in application but are limited in scope. Under current legal standards, therefore, the choice between property rule protection and liability rule protection for entitlements is most often a retrospective choice at the conclusion of litigation, the effects of which are limited to administrative costs and post-litigation decisionmaking by the particular parties involved.

As a result, much of the existing economic analysis of property rules and liability rules suffers to some extent, and possibly to a significant extent, from a descriptive mismatch with the law. Under existing remedial rules, private parties may be able to make a rough prediction of remedial probabilities. Still, the uncertainties of judicial practice in the area of remedies suggest that the impact of remedial choice on private decisionmaking may be considerably more modest than commentators have assumed.

One feature of the law of remedies may ameliorate the descriptive problem. The set of legal rules familiar to the public is not always the same as the set of rules that actually governs judicial decisionmaking.⁶³ As a result, private decisionmakers may

⁶¹ The Jacques' claim might also fail under the traditional rule that profit-based restitution is not available for trespass that causes no harm. *See supra* note 55.

⁶² Of course, Sternberg is unlikely to try this again.

⁶³ *See* ALEXANDER & SHERWIN, *supra* note 32, at 88 (discussing strategies of public deception to encourage conformity to rules); Meir Dan-Cohen, *Decision Rules and Conduct Rules: On Acoustic Separation in Criminal Law*, 97 HARV. L. REV. 625, 630-36 (1984) (discussing "selective transmission" of legal rules in the criminal law); Emily Sherwin, *Law and Equity in Contract Enforcement*, 50

expect to be governed by a somewhat different, and more clear-cut, set of remedial rules than courts would actually apply in litigation. For example, an actor with some awareness of law may understand that it is unlawful to enter another's land without consent, that violators are subject to criminal penalties, and possibly that continuing violations will be enjoined. But only those with significant legal experience are likely to know the amount of the penalty for criminal trespass, or to understand that a court adjudicating a trespass case will compare the efficacy of damages and weigh hardships before granting an injunction. Accordingly, potential trespassers who fall into the first category (some awareness) may choose their course of action as if a true property rule were in place. Gaps of this kind, between the "conduct rules" on which people act and the "decision rules" applied by judges,⁶⁴ are particularly likely to arise in the area of remedies, in which presumptive rules are often subject to arcane exceptions or judicial discretion. As a result, the actual prospective effect of property rules may be greater than the law of remedies might suggest.

Yet, the possibility that popular understanding of remedial rules may diverge from judicial application of remedial rules does not eliminate the descriptive mismatch between economic analysis of remedies and the practices of courts. The impact of popular understandings of law on decisionmaking is difficult if not impossible to assess, and in any event the rules applied by courts are accessible to those who receive competent legal advice. Moreover, popular understandings that diverge from judicial decision rules are inherently unstable: if decision rules come to light, popular understandings, and any expectations they may have generated, have no further effect.⁶⁵

If economic analysis of remedies fails as a matter of descriptive accuracy, it may nevertheless succeed on a normative basis. Current remedies doctrine may be too indeterminate to guide private decisionmaking in advance of litigation. But if remedies are capable in theory of generating efficient decisions, this may be a reason to adopt more determinate remedial rules.

The normative case for reforming remedies doctrine to accommodate economic insights depends in part on the general

MD. L. REV. 253, 263-64 (1991) (noting similar patterns in contract enforcement). *See also* GERALD J. POSTEMA, BENTHAM AND THE COMMON LAW TRADITION 403, 448-52 (1986) (discussing Bentham's theory of adjudication).

⁶⁴ These are Meir Dan-Cohen's terms. *See* Dan-Cohen, *supra* note 63.

⁶⁵ *See* ALEXANDER & SHERWIN, *supra* note 32, at 89 (discussing the dangers of public deception).

desirability of determinate rules in this area of law. Determinate rules provide guidance, coordination, and potentially beneficial incentives at the cost of underinclusiveness and overinclusiveness.⁶⁶ Because rules apply to classes of cases, a certain percentage of the outcomes prescribed by any rule will be mistaken when judged by the reasons underlying the rule.⁶⁷ If the benefits of the rule—in this case, more efficient private decisions—exceed the costs resulting from mistaken outcomes, the rule is sound and mistakes must be tolerated to preserve the integrity of the rule. If not, the rule is not a justified rule. Accordingly, the question to be asked, with respect to any proposed remedial rule, is whether a determinate rule will generate efficiency gains that exceed whatever losses in efficiency, or costs of other kinds, result from the bluntness of the rule.⁶⁸

The literature on property rules and liability rules has yielded a number of sophisticated proposals for rules designed to maximize efficiency gains by forcing parties to reveal private information.⁶⁹ Insights of this kind may limit the errors caused by overly blunt remedial rules. At some point, however, a rule may fail to provide effective guidance, not because it lacks determinacy but because it is too complex for private actors to understand and apply.⁷⁰

The unavoidable bluntness of rules also complicates the requirement that if remedial rules are to influence pre-litigation decisionmaking, they must be accepted as authoritative by future courts. From an economic standpoint, the errors that accompany determinate rules are simply costs that must be balanced against the benefits of remedial rules capable of eliciting efficient private

⁶⁶ For a full discussion of the benefits of rules, see Schauer, *supra* note 32, at 77-134. On the value of coordination, see, for example, JOSEPH RAZ, *THE MORALITY OF FREEDOM* 49-50 (1986); SCHAUER, *supra* note 32, at 162-66; Gerald J. Postema, *Coordination and Convention at the Foundation of Law*, 11 J. LEGAL STUD. 165, 172-86 (1982); Donald H. Regan, *Authority and Value: Reflections on Raz's Morality of Freedom*, 62 S. CAL. L. REV. 995, 1006-10 (1989).

⁶⁷ See SCHAUER, *supra* note 32, at 31-34, 48-54.

⁶⁸ See ALEXANDER & SHERWIN, *supra* note 32, at 54 (discussing the dilemma of rules); RAZ, *supra* note 66, at 70-80 (discussing the “normal justification” of rules).

⁶⁹ See, e.g., Ayres & Goldbart, *Optimal Delegation*, *supra* note 2, at 16-61; Ayres & Goldbart, *Correlated Values*, *supra* note 2, at 134-47; Fennell, *supra* note 2, at 1433-44; Krier & Schwab, *supra* note 2, at 470-75; Morris, *supra* note 2, at 849-75.

⁷⁰ See ALEXANDER & SHERWIN, *supra* note 32, at 32-34 (noting that rules that rely on objective criteria may nevertheless be indeterminate).

decisions. Judges, however, may find it irrational to follow a rule that prescribes an inefficient or unjust result in a particular case.⁷¹ Even for judges who appreciate the value of rules, the concrete facts of the case at hand may have a psychological salience that overshadows the comparatively remote economic benefits of reliable rules.⁷² Public dissatisfaction with bad outcomes in individual may also prompt judges to deviate from rules. If, in response to these pressures, judges regularly make exceptions in recalcitrant cases, the rules will be less reliable and consequently will have less effect on private decisionmaking.

If judges are unable to comply with determinate remedial rules, or if the costs of determinate rules exceed their allocative benefits, the project of eliciting efficient private decisions through remedial choice is not viable. At the same time, the current indeterminacy of remedial rules does not necessarily indicate that greater determinacy is undesirable or unfeasible. The path dependency of the common law, and the odd historical influence of the English Chancery court on the development of remedies doctrine, can easily explain why more determinate remedial rules have not evolved.⁷³ The normative question, therefore, remains open.

II. PROPERTY

To recap: the economic significance of the choice between property rules and liability rules as means of protecting entitlements is far greater when legal remedies take the form of *rules*. If a property rule is simply the remedial outcome of a particular litigation, its effects are necessarily limited to the costs it

⁷¹ On the rationality of judicial adherence to rules, see ALEXANDER & SHERWIN, *supra* note 32, at 77-86; HEIDI M. HURD, *MORAL COMBAT* 62-94 (1999).

⁷² Behavioral psychologists have noted that readily “available” facts tend to have a disproportionate influence on human decisionmaking, at the expense of background probabilities. *See, e.g.*, AMOS TVERSKY & DANIEL KAHNEMAN, *Availability: A Heuristic for Judging Frequency and Probability*, in *JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES* 163 (Daniel Kahneman, Paul Slovic & Amos Tversky eds., 1982); Jeffrey J. Rachlinski, *Bottom-Up versus Top-Down Lawmaking*, 73 *U. CHI. L. REV.* 933 (2006); Norbert Schwarz & Leigh Ann Vaughn, *The Availability Heuristic Revisited: Ease of Recall and Content of Recall as Distinct Source of Information*, in *HEURISTICS & BIASES: THE PSYCHOLOGY OF INTUITIVE JUDGMENT* 103 (Thomas Gilovich, Dale Griffin & Daniel Kahneman eds., 2002); SCOTT PLOUS, *THE PSYCHOLOGY OF JUDGMENT AND DECISION MAKING* 121-30 (1993).

⁷³ *See generally* 1 DOBBS, *supra* note 39, §1.2, at 55-66.

imposes on the parties and the court and the incentives or impediments it creates for post-litigation bargaining. To shape private decisionmaking at or before the time of taking, without judicial intervention, a property rule must be established by determinate legal rules that define the entitlement to be protected, the conditions on which the property-rule remedy is available, and the extent of the sanction it imposes on takers.

In the sections that follow I shall assume that it is possible to create property rules in this form and that the errors likely to result from blunt remedial rules are not prohibitive. The question I address here is whether there is any logical connection between property-rule rules and property rights.

A. *Property Rights*

The first step in examining the relationship between property rules and property rights is to explain what makes a right a property right. In this section, I set out my own views on the subject.⁷⁴ I begin, however, with the account of property rights developed by Thomas Merrill and Henry Smith, which has much in common with, and has contributed to, my own understanding of property.⁷⁵

Merrill and Smith defend a traditional definition of property rights as *in rem* rights with respect to things.⁷⁶ Property rights are standardized rights of control over resources, held by an indefinite class of rightholders and binding on an indefinite class of dutyholders. Rather than attaching directly to rightholders as personal rights, they attach by virtue of the rightholder's legal relationship to a thing—the relationship of ownership.⁷⁷

Property rights, understood as *in rem* rights over things,

⁷⁴ I have attempted in previous writings to define the essential characteristics of property rights, never with complete success. See Emily Sherwin, *Three Reasons Why Even Good Property Rights Cause Moral Anxiety*, 48 WM. & MARY L. REV. 1927, 1928-33 (2007); Emily Sherwin, *Two-and Three-Dimensional Property Rights*, 29 ARIZ. L. REV. 1075, 1077-80 (1997).

⁷⁵ Merrill and Smith have elaborated their theory in a series of articles including, among others. See Merrill, *supra* note 5; Merrill & Smith, *Optimal Standardization*, *supra* note 5; Merrill & Smith, *Property/Contract*, *supra* note 5; Merrill & Smith, *Law and Economics*, *supra* note 5; Smith, *Property*, *supra* note 2; Smith, *Exclusion*, *supra* note 2.

⁷⁶ See Merrill & Smith, *Property/Contract*, *supra* note 5, at 780-89; Merrill & Smith, *Law and Economics*, *supra* note 5, at 357-66, 385-94.

⁷⁷ See Merrill & Smith, *Property/Contract*, *supra* note 5, at 783-89. Merrill & Smith, *Law and Economics*, *supra* note 5, at 358-60. Merrill and Smith suggest that, while property rights are inherently *in rem*, not all *in rem* rights are property rights. See Merrill & Smith, *Property/Contract*, *supra* note 5, at 778.

have several distinguishing features. First, they take a limited number of forms, defined in simple terms that can easily be understood by owners and dutyholders.⁷⁸ Second, they establish a regime of “exclusion:” the rules of ownership give owners the right to exclude third parties from the things they own. The right to exclude others from a thing has the effect of “bundling” together different uses of resources.⁷⁹ In contrast to a “governance” regime, in which legal rules identify and regulate particular resource uses that may conflict, a regime of exclusion allows the owner of a thing to choose among a range of possible resource uses encompassed by the thing.⁸⁰

Merrill and Smith are primarily concerned with efficient use of resources. In particular, they argue that exclusionary property rights contribute to efficiency by reducing the costs associated with gathering and marshaling information about resources. Rules that assign rights over a simply defined thing make it easy for the indefinite class of duty holders to understand their legal positions, and thus to acquire, or to abstain from taking, the resources in question.⁸¹ Further, by delegating the choice among uses to a designated owner, exclusionary property rights avoid the need for legal officials to distinguish among and rank specific uses of resources.⁸² Courts (or other legal officials) make only the “second-order” decision to delegate, leaving more costly “first-order” decisions about which use is best to the owner.⁸³ Rights of this kind reduce the cost of information because the owner is ordinarily in a better position than officials to gather information about resource use. The owner is closer to the resources, and the owner is in a position to postpone decisionmaking and take advantage of future opportunities.⁸⁴

⁷⁸ See Merrill & Smith, *Optimal Standardization*, *supra* note 5.

⁷⁹ See Smith, *Property*, *supra* note 2, at 978-84, 1728, 1759-60.

⁸⁰ See Smith, *Exclusion*, *supra* note 2, at 1722-24; Smith, *Property*, *supra* note 2, at 1754-63.

⁸¹ See Merrill & Smith, *Optimal Standardization*, *supra* note 5, at 26-34; Merrill & Smith, *Property/Contract*, *supra* note 5, at 794.

⁸² See Smith, *Property*, *supra* note 2, at 1755-61, Smith, *Exclusion*, *supra* note 2, at 981-84.

⁸³ See Smith, *Property*, *supra* note 2, at 1760-61, Smith, *Exclusion*, *supra* note 2, at 975, 984.

⁸⁴ See Smith, *Exclusion*, *supra* note 2, at 985 (suggesting that owners are normally “the least-cost generators of information about assets” because they are close to the assets and receive offers from potential purchasers); Smith, *Property*, *supra* note 2, at 1763 (noting that the optimal time for valuing resources may be in the future).

Thus, for Merrill and Smith, information cost benefits explain and justify rights of exclusion, which are the essence of property. In Smith's words, "the traditional intuitions that property rules afford stability of expectations, permit planning, and allow owners to invest in assets are incompletely theorized versions of" the information cost argument for exclusionary property rights.⁸⁵ At the same time, Merrill and Smith also recognized that exclusionary property rights are not always adequate to bring about efficient resource use. When the value of resources can be increased by allowing multiple parties to make use of indivisible assets, the law may shift to a governance regime in which specific uses are regulated by contract or directly by courts or legislatures.⁸⁶

My own account of property also tracks the traditional notion of property rights as rights of control over things. For present purposes, my concern is with legal property rights, created by lawmaking authorities to serve various social ends.⁸⁷ One important objective of legal property rights is to maximize the value of scarce resources by giving individuals the means and incentives necessary for productive activity.⁸⁸ At minimum, a

⁸⁵ Smith, *Property*, *supra* note 2, at 1784.

⁸⁶ See Merrill & Smith, *Property/Contract*, *supra* note 5, at 790-99 (discussing the advantages and disadvantages of a regime of exclusion); Smith, *Exclusion*, *supra* note 2, at 981-82; 1024-45 (discussing conditions favoring governance rules). Smith does not make clear whether rights created by a governance regime for resources should also count as "property" rights. In the discussion that follows I assume that they do not.

⁸⁷ Private property may or may not have deontological moral foundations. I set this question aside for the purpose of analyzing legal rights. For discussion of the moral aspects of private property rights, see generally, LAWRENCE C. BECKER, *PROPERTY RIGHTS: PHILOSOPHIC FOUNDATIONS* (1977); STEPHEN R. MUNZER, *A THEORY OF PROPERTY* 292-314 (1990); JEREMY WALDRON, *THE RIGHT TO PRIVATE PROPERTY* (1988).

⁸⁸ See, e.g., BECKER, *supra* note 87, at 57-74; Jeremy Bentham, *The Theory of Legislation*, chs. VII-VIII (C.K. Ogden ed. 1931); John Stuart Mill, *Utilitarianism* ch. V (Oskar Pietsch ed., 1957); Harold Demsetz, *Toward a Theory of Property Rights*, 57 *AM. ECON. REV.* 347, 356-57 (1967). Legal property rights are consequentially related to several important ends of a liberal society. They contribute to welfare by supporting productivity, and they contribute to political freedom (which can be viewed either as a good in itself or a further building block for general welfare) by providing individuals with economic independence from government. See, e.g., BECKER, *supra* note 87, at 75-80; MILTON FRIEDMAN, *CAPITALISM AND FREEDOM* 7-21 (1962). At the same time, property rights may also contribute in various ways to the maintenance of bonds between individuals and the community. See, e.g., EDUARDO M. PEÑALVER, *THE PROBLEM WITH LAND* (forthcoming) (discussing various values landowners

property right capable of performing this function requires an ascertainable legal thing and an assignment of the thing to an ascertainable legal owner. The medium for creation of property rights is language: to define the objects of property rights (legal things) and assign them to owners, the law relies on rules that are determinate enough to be understood and applied by private parties who may be interested in the resources at stake.

Objects of property may be physical things recognized by law as the subject matter of property rights, or they may be conceptual things that exist only by virtue of the rules that define them, if their conceptual contours are clear. They are “things” in the sense that they are broader than, and exist independently of, particular activities in which the owner may engage or particular benefits the owner hopes to derive from their use. The legal things that form the basis of property rights are *subjects* of enterprise and choice by owners, which the owner can act on in various ways. This is another way of stating the point made by Merrill and Smith, that property rights “bundle” potential uses of valuable resources.⁸⁹

Objects of property include, for example, possessory interests in land or chattels; future interests; defined intangibles such as mortgages, patents, and copyrights; easements that allow the holder a range of use rights within a defined area of the servient owner’s land; and contract rights calling for future transfer of a legal thing under defined conditions. The component parts of one’s body are, potentially, objects of property, although current law is ambivalent about assigning the right of ownership.⁹⁰ What these various legal things have in common is that they provide objectively defined arenas for value-producing activity and choice.

Ownership is control of a legal thing. The law assigns objects of property to identifiable owners, and thus delegates to owners the choice among potential resource uses. As Merrill and Smith observe, the rules of property do not identify all possible uses of legal things and designate them as permissible or impermissible by owners. Instead, owners are permitted to make whatever uses of the legal things assigned to them are not otherwise prohibited by law. Ownership is, in effect, a range of choice about what to do with a legal thing.⁹¹

derive from their property, including membership in a community).

⁸⁹ See *supra* note 78 and accompanying text.

⁹⁰ See, e.g., *Moore v. Regents of the Univ. of Cal.*, 793 P.2d 479, 487-97 (Cal. 1990) (refusing to recognize a property right in cell lines derived from cells removed from the plaintiff’s spleen).

⁹¹ I do not mean to deny that legal ownership may carry responsibilities. Within

Determinacy is a fundamental characteristic of property rights.⁹² To permit private parties to make effective use of resources, the rules that define objects of property and assign them to owners must operate outside and prior to adjudication of particular conflicts. If property rights are conceived of merely as the outcomes of litigation over conflicting uses of resources, they lose both their capacity to support private productive activity and their distinctiveness from other legal rights.⁹³ Most valuable uses of resources can be the subject of rights; what distinguishes a property right is legal rules that define objects of property and assign control over those objects to owners *in advance of decisionmaking* about resource use.

My account of property rights intersects in several ways with that of Merrill and Smith. Property rights, as I have described them, are based on legal things, which naturally “bundle” together potential uses of resources. For the same reason, property rights as I have described them tend naturally to operate *in rem*. Legal things that encompass a variety of potential uses are likely to be of interest to a variety of potential users; therefore assignment of a legal thing to a given owner creates an indefinite number of dutyholders.

Most importantly, both accounts emphasize the form of property rights. For Merrill and Smith, highly determinate rights—specifically, simple rights of exclusion that rely on the boundaries of things to determine permissible uses—generate the information cost benefits that support property rights. In my account, determinacy is foundational. Highly determinate rules are the

a positivist and consequentialist account of property rights, the idea that property rights entail and protect a range of choice does not imply that they are entirely a matter of prerogative. The imposition of duties on owners is quite consistent with a set of rights created for social ends. Analytically, however, it seems to me that one must first define the minimum features of ownership—what the owner *has*—before determining what duties attach.

⁹² See Merrill, *supra* note 5 (discussing the function of determinate rules in property law); see also Carol M. Rose, *Crystals and Mud in Property Law*, 40 STAN. L. REV. 577 (1988) (noting the tension between rules and broader standards in property law).

⁹³ For particularly strong expression of the view that property rights are simply the outcome of legal disputes over use of resources, see Joseph L. Sax, *Takings and the Police Power*, 74 YALE L.J. 36, 61 (1964) (Property is “the value which each owner has left after the inconsistencies between the two competing owners have been resolved.”). See also Thomas C. Grey, *The Disintegration of Property*, in NOMOS XXII: PROPERTY 69 (J. Roland Pennock & John W. Chapman eds., 1980) (arguing that the property has no distinct meaning in modern law).

means by which diverse uses are bundled into legal things and assigned to owners; without the support of determinate legal rules, litigation-independent property rights of the kind I describe cannot exist.⁹⁴

The points that Merrill and Smith have made about property rights and information costs are quite persuasive. I would clarify, however, that determinate property rights do not simply capture an information advantage associated with ownership; they create the advantage. Fixed rights over determinate legal things establish both the special proximity of owners to resources and the long term interest that enables owners to make optimal choices over time. I shall return to this point in later sections.

B. Property Rights and Property Rules

I have characterized property rights as rights that define legal things and assign them to individual owners by means of determinate rules. Property rules are remedies designed to prohibit unilateral violations of rights; they stand in contrast to liability rules, which permit rights violations upon payment of a price. True property rules, defined in advance of litigation, must take the form of rules. Property rule *rules* impose fully deterrent penalties, under determinate conditions, for protection of determinate rights. In this section, I take up the question what relation, if any, property rules bear to property rights.

Despite the similarity of terms, property rules, at least as they are employed by courts, are not coextensive with property rights. Courts often grant prohibitive remedies at the conclusion of litigation to protect rights that do not involve control of legally defined things.⁹⁵ There are also instances of true property rule protection, or something close to true property rule protection, for non-property rights.⁹⁶ Yet, as noted earlier, true property rules are

⁹⁴ I am assuming that, at least within an important core of application, language is capable of conveying determinate meaning. *See, e.g.*, KENT GREENAWALT, *LAW AND OBJECTIVITY* 34-89 (1992); H.L.A. HART, *THE CONCEPT OF LAW* 132-44 (1961); Schauer, *supra* note 8, at 53-68; Jules L. Coleman & Brian Leiter, *Determinacy, Objectivity, and Authority*, 142 U. PA. L. REV. 549 (1993).

⁹⁵ To cite just a few examples, courts frequently enjoin civil rights violations and invasions of privacy. *See* 2 DOBBS, *supra* note 39, § 7.4(4), at 348-53; § 7.3(5), at 326-29.

⁹⁶ For example, courts routinely enter discovery orders to protect procedural rights. *See* FED. R. CIV. P. 37(a), (b) (authorizing discovery orders and imposing sanctions for failure to comply). They also routinely grant protective orders to prevent domestic violence. *See, e.g.*, JOHN DE WITT GREGORY, PETER N. SWISHER & SHERYL L. WOLF, *UNDERSTANDING FAMILY LAW* 221-22 (2005)

most common in the area of property rights.

1. Some Explanations for the Use of Property Rules to Secure Property Rights

Several commentators have offered explanations for the convergence between property rights and property rules. Kaplow and Shavell, for example, propose that property rules are likely to lead to more efficient resource allocation than liability rules in cases involving possession of physical things because of the special values associated with things.⁹⁷ Specifically, the value of a physical thing typically has a common component, shared by both owners and takers, and an idiosyncratic component, special to particular individuals. Idiosyncratic value is likely to be higher for owners than for takers, both because the owner selected the thing for reasons of importance to him or her and because the owner has already put the thing to use.⁹⁸ A well-designed liability rule will reflect both the average common value of the thing and the average owner's idiosyncratic value.

The potential for inefficient takings arises when the actual common value of a given thing exceeds the average common value reflected in liability-rule damages by an amount greater than the average owner's idiosyncratic value. In that case, takers have reason to take, because, by taking and paying the price (average common value plus average idiosyncratic value), they will realize the extra common value of the thing. Given the assumption that owners' idiosyncratic value is higher on average than takers' idiosyncratic value, the result is inefficient because the owner's combined value (actual common value plus his or her own, presumptively higher, idiosyncratic value) is higher on average than the taker's value.⁹⁹

(summarizing state statutes).

⁹⁷ See Kaplow & Shavell, *supra* note 2, at 759-63. In addition to the valuation problems discussed here, Kaplow and Shavell cite the difficulty that owners of things face in bargaining around a liability rule when the value they place on their property exceeds the price fixed by the rule: to protect their positions, they must bargain with an indefinite number of potential takers. *See id.* at 764-67. Kaplow and Shavell also argue that when bargaining is not possible (or fails) owners whose value exceeds the price fixed by a liability rule have reason to re-take their property, resulting in wasteful expenditure, or to invest in excessive precautions against takings. *See id.* at 767-69.

⁹⁸ *Id.* at 760.

⁹⁹ *Id.* at 761-62. Others have proposed that the problems of correlated value and reciprocal taking identified by Kaplow and Shavell can be addressed through refinements in liability rules. *See Ayres & Goldbart, Correlated Values, supra*

Henry Smith approaches the problem from a different angle. Smith is not primarily interested in which type of rule, as between property rules and liability rules, will produce the most efficient allocation of resources between parties when uses conflict. Instead, he is concerned with the costs of gathering information about the use and value of resources, and particularly with the question which among possible decisionmakers can gather and apply information about resources most effectively.¹⁰⁰ In a “governance” regime, government officials (courts or legislatures) define possible uses and decide which of those uses should have priority. In an “exclusionary” regime, officials confer rights of exclusion on private owners, and in this way delegate the task of identifying and choosing among possible uses to owners.¹⁰¹ Owners have informational advantages over official decisionmakers, both because they are closer to the resources encompassed by the things they own, and because their long-term interest in those things allows them to select among present and future uses of resources.¹⁰² Therefore, at least when there is no strong reason to permit (and regulate) multiple uses of indivisible resources by multiple users, a legal regime that relies on rights of exclusion reduces information-gathering costs.

Smith links property rules to rights of exclusion and the information cost advantages they produce. Owners of property are entitled to exclude the world from bluntly defined things that bundle together various uses and attributes of resources. Property *rules* refer to the same blunt standard of exclusion and prohibit acts that cross the legal boundary defined by the right.¹⁰³ Consequently,

note 2; Ayres & Goldbart, *Optimal Delegation*, *supra* note 5.

Keith Hylton offers another argument for property rules based on subjective (or idiosyncratic) value. *See* Hylton, *supra* note 2, at 151-68. Hylton argues that property rules are more effective in protecting actual subjective values. Therefore property rules are superior to liability rules in settings in which the costs that result from failure to protect subjective values (including weakened incentives for productivity, costs of owner self-protection) exceed the costs of misallocation. *See id.* at 167-68. Hylton, however, does not limit his argument to takings of things: he argues that subjective values are at least as significant in cases of harmful externalities. *See id.* at 168-70.

¹⁰⁰ *See* Smith, *Property*, *supra* note 2, at 1724.

¹⁰¹ *See* Merrill & Smith, *Property/Contract*, *supra* note 5, at 790-99; Smith, *Exclusion*, *supra* note 2, at 978-79; Smith, *Property*, *supra* note 2, at 1755-63.

¹⁰² *See* Smith, *Exclusion*, *supra* note 2, at 985; Smith, *Property*, *supra* note 2, at 1763.

¹⁰³ *See* Smith, *Exclusion*, *supra* note 2, at 1005 (“To implement a property rule, courts can just monitor the rough variable—such as entry— . . . without having to evaluate individual uses.”); Smith, *Property*, *supra* note 2, at 1753-54, 1758

courts applying property rules never become involved in identifying, comparing, and valuing particular uses of resources. A liability rule, in contrast, requires official decisionmakers to identify and value potential uses of resources in order to set an accurate price for violations of the right.¹⁰⁴

Much of the savings in information cost Smith cites derives from the right of exclusion itself, which delegates the choice among uses to owners. Yet, Smith also suggests two ways in which deterrent property rules contribute to, or capitalize on, the information cost benefits of exclusionary property rights. First, as just noted, property rules preserve the delegation of decisionmaking responsibility to owners while liability rules allow takers to force an official valuation of the resources at stake. Forced valuation has a number of adverse consequences. Most obviously, officials incur the direct costs of identifying and valuing particular uses.¹⁰⁵ Further, because the valuation and transfer occurs immediately, owners lose their ability to postpone decisionmaking and take advantage of higher-valued opportunities for future use.¹⁰⁶ Finally, the prospect that takers may force courts to value particular uses and attributes of resources may encourage owners or potential takers to manipulate the “signals” courts rely on to determine value.¹⁰⁷

Second, protecting exclusionary property rights with property rules rather than liability rules avoids wasteful maneuvering by owners and takers. One source of difficulty under liability rules is opportunistic taking.¹⁰⁸ Opportunism is a worry

(“Because the signals used in the exclusion strategy are on/off, they are naturally paired with property rules.”).

¹⁰⁴ See Smith, *Exclusion*, *supra* note 1, at 1005; Smith, *Property*, *supra* note 1, at 1758. Once rights of exclusion are in place, courts can refer to values the market has placed on the same bluntly legal package of uses. Yet, as Smith explains, the market measure is not an accurate measure of the value an owner places on the package because it does not capture uses that have not yet been discovered, or that the owner has discovered but cannot effectively communicate to the court. See Smith, *Property*, *supra* note 2 at 1775-76.

¹⁰⁵ Of course, even under a property rule *rule*, courts will have to incur the costs of valuation in accident cases, in which deterrence is not an option.

¹⁰⁶ See Smith, *Property*, *supra* note 2, at 1763-64.

¹⁰⁷ See *id.* at 1764-68. Smith also argues that the divided entitlement generated by a liability rule will add to the costs incurred by third parties who wish to acquire, or to avoid violating, a right. See *id.* at 1768-70; Merrill & Smith, *Optimal Standardization*, *supra* note 5, at 26-34. As long as the underlying right is a blunt right of exclusion from a determinately defined thing, however, a liability rule does not appear to pose a significantly greater risk of confusion.

¹⁰⁸ See Smith, *Exclusion*, *supra* note 2, at 985-86; Smith, *Property*, *supra* note 2,

because courts fixing prices for violation of exclusionary rights must rely on generalizations about classes of assets. Smith suggests, plausibly, that although owners have better information about their own assets than takers, takers are likely to have better information than courts about the assets they are considering taking. As a result, takers are able to make more refined generalizations than courts and to target assets that courts will probably undervalue. It follows that liability rules encourage wasteful investment by takers in information about vulnerable assets.¹⁰⁹ They may also discourage owners from investing in the information that makes their assets valuable, and therefore vulnerable.¹¹⁰ A related form of waste occurs when owners incur expenses to protect information they have developed about their assets.

It is worth noting that, although Kaplow and Shavell and Smith approach the problem of property rule protection for property rights in quite different ways, they concur in the assumption that courts have established true property rules, providing for protection of determinate rights, by fully deterrent sanctions under specified conditions. This is easiest to see in the case of Kaplow and Shavell: Kaplow and Shavell are concerned with inefficient takings by takers anticipating liability rules that systematically undervalue harm in cases of common value. Accordingly, their argument addresses the choice between a liability rule *rule* and a property rule *rule* that will effectively deter takings.¹¹¹

The relation between Smith's argument and the prospective effect of property rules is more complex. The primary set of reasons Smith offers in favor of property rules relates to the superior ability of owners, in comparison to courts, to identify and assess particular uses of resources.¹¹² It might appear, therefore, that the benefits he attributes to property rules come into play at the point of litigation: by adopting a property rule at the conclusion of litigation, the court avoids the need to determine and value the uses of assets.

Yet, Smith's arguments, like Kaplow's and Shavell's, ultimately depend on the presence of true property rules. Only a

at 1774-85.

¹⁰⁹ See Smith, *Exclusion*, *supra* note 2, at 986; Smith, *Property*, *supra* note 2, at 1780.

¹¹⁰ See Smith, *Property*, *supra* note 2, at 1785-90.

¹¹¹ See *id.* at 1785-90.

¹¹² See *supra* notes 99-101 and accompanying text.

property rule *rule*, providing for property rule protection in determinate classes of cases, can deter the *decision* to take and definitively prevent takers from forcing courts to engage in valuation. More importantly, the information cost advantages Smith associates with ownership depend in part on the presence of true property rules. One reason why owners are superior decisionmakers is that they can postpone decisionmaking and speculate on future uses of the resources they control. Yet, if the form of protection is not settled in advance, takings may occur, courts may choose to apply liability rules, and any future uses the owner had in mind may be preempted. Thus, in the absence of a property rule *rule*, the possibility of a liability rule decision in a particular case reduces the expected value of any future uses the owner has in mind and undercuts the information cost advantage on which the argument for property rules depends.¹¹³

2. The Interdependence of Property Rights, Property Rules, and Rules

The points made by Kaplow and Shavell and by Smith help to explain the convergence in practice between deterrent remedies and property rights. Of course, Kaplow and Shavell and Smith endorse property rules for quite different reasons: Kaplow and Shavell argue that property rules, applied to property rights, will result in fewer inefficient takings and therefore to a better allocation of resources between owners and takers. Smith argues that, apart from the final allocation of resources between parties, property rules, securing exclusionary property rights, promote efficiency by delegating decisions about the use of resources to the party best positioned to gather and deploy relevant information. There may, however, be common ground between the insights these authors provide. Moreover, the combined implications of

¹¹³ This point exposes a potential difficulty in securing the information costs and benefits that Smith associates with exclusion. As Smith recognizes, the law must employ both exclusion and governance strategies to maximize value in different settings. See Merrill & Smith, *Property/Contract*, *supra* note 5, at 790-99; Smith, *Exclusion*, *supra* note 2, at 981, 1024-45. Yet the respective domains of exclusion and governance may be difficult to capture in the form of a determinate rule. I am grateful to Eduardo Peñalver for this observation.

The second set of reasons Smith offers for property rules unquestionably relies on true property rules. Unless intentional takings are effectively deterred, takers will invest in information that will aid them in spotting owners whose interests are likely to be undervalued by liability rules, and owners will invest in preventative measures that would not be necessary under a true property rule. See *supra* notes 107-09 and accompanying text.

their arguments illustrate the importance, and the creative potential, of legal form.

Summarizing once again: Kaplow and Shavell show that property rules are superior to standard liability rules based on average victim harm because of the special combination of common values and idiosyncratic values likely to accompany possession of things. In cases of high common value, a liability rule will result in unilateral takings although the higher idiosyncratic value of owners makes taking inefficient.¹¹⁴ Kaplow and Shavell refer to rights to tangible things, but their argument can easily be extended to any legal thing that supports a range of uses and is the subject of exclusionary rights.

Smith observes that property rights operate by packaging an indefinite number and variety of potential resource uses into a bounded asset and giving the owner a right to exclude others from the asset. This effectively allows the owner to choose among the uses encompassed by the asset. Delegation of choice to the owner is efficient because the owner has special access to information about resource use.¹¹⁵

Here I would add the point made earlier, that the advantages of owners in gathering and processing information about resources are not natural facts about the world.¹¹⁶ The owner's information advantage comes from proximity to an asset and from a continuing interest in the asset, which allows the owner to compare present and future uses. Proximity and continuity of interest, however, are consequences of the owner's legal right of exclusion: they depend on the rules of law that "bundle" potential uses into recognized legal assets and give owners the right to deny access to others. In the terms I have used to describe property rights, proximity and continuity of interest, and therefore access to information, depend on legal rules that define determinate objects of property and assign those objects to owners.¹¹⁷

¹¹⁴ See *supra* notes 96-98 and accompanying text. A liability rule further along the continuum of deterrence might be optimal in theory. See Ayres & Goldbart, *Correlated Values*, *supra* note 5, at 135-46. But the ideal liability rule *rule*, capable of affecting decisions about taking, may be outside the practical capacity of courts.

¹¹⁵ See *supra* notes 99-109 and accompanying text.

¹¹⁶ See *supra* note 93 and accompanying text. Smith appears to recognize this but does not spell out its implications. See Smith, *Property*, *supra* note 2, at 1777 ("[T]he values of the parties . . . depend in part on the choice of rule that protects the entitlement.").

¹¹⁷ In this respect, property rights and contract rights are parallel. The core explanation for legal enforcement of contractual promises is reliance on the part

The advantages owners have in identifying and evaluating potential resource uses, which derive from determinate exclusionary property rights, make them superior decisionmakers in a range of cases. These advantages also help to explain the special components of value that Kaplow and Shavell cite in defense of property rule protection for possessory interests in things.¹¹⁸ A legal right to possession of a thing is, of course, a right of exclusion. The common value (shared by owners and takers) of a right to exclusive possession of a thing is likely to be based at least in part on the proximity to resources the rightholder enjoys. Similarly, the idiosyncratic value such a right holds for existing owners is likely to be based at least in part on investments the owner has made in the expectation of continued possession. In other words, the values that give property rules an edge over liability rules for purposes of resource allocation in property cases are based on the information-based advantages that ownership confers. These advantages, in turn, depend on the legal rules that create exclusionary property rights.

Thus, property rules are connected to property rights in two interrelated ways. First, property rules reinforce the delegation of decisionmaking authority to owners that accompanies property rights. They prevent takers from forcing courts to identify and value uses of resources, and they ensure continuity of control for owners. Second, given the information-based advantages that owners derive from exclusionary property rights backed by property rules, property rules can lead to a more efficient allocation of resources between owners and takers. In each case, however, the benefits of a property rule depend on its capacity to affect decisionmaking prior to litigation. In each case, therefore, only true property rules, embodied in determinate rules, will operate as desired.

of promisees. Justified reliance, however, is not an exogenous fact; it depends on the expectation that contractual promises will be enforced, which depends in turn on legal rules providing for enforcement. The independent reason for enforcement of contractual promises is not reliance itself, but the social value of reliance. Reliance leads to productive investment; therefore, to capture the value of reliance, lawmakers establish rules that define valid contracts and provide for their enforcement. The scheme, and the value it yields, depends on legal rules that are reasonably determinate in advance of agreement. See L.L. Fuller & William R. Perdue, Jr., *The Reliance Interest in Contract Damages*, 46 *YALE L.J.* 52, 63-64 (1946); Andrei Marmor, *Should Like Cases Be Treated Alike?*, 11 *LEGAL THEORY* 27, 33 (2005).

¹¹⁸ See *supra* notes 97-98 and accompanying text.

CONCLUSION

Property rights define legal things and assign them to owners. As a result, owners can choose among permissible uses of resources encompassed by the things they own, and their proximity to and continuing interest in those things equip them to choose efficiently. Deterrent property rules ensure the continuity that makes property rights valuable to owners and to society. Once property rights are securely in place, the value they generate also makes property rules a more efficient response to the possibility of unilateral taking. To achieve these results, however, both property rights and property rules must be implemented by general, determinate, and authoritative legal rules.

Coordination among decisionmakers is frequently cited as a beneficial consequence of general, determinate, and authoritative rules.¹¹⁹ The advantages of property rules identified by Kaplow and Shavell, Smith, and others are special types of coordination benefits associated with institution of property, which help to explain the special connection between property rights and determinate legal rules. Yet, because the benefits associated with property rights and property rules derive from legal rules, they depend on the ability of courts to establish and maintain rules.

A rule-based body of law faces two significant obstacles. First, determinate rules are naturally overinclusive and underinclusive, and it is difficult and possibly irrational for courts to apply them when the outcomes they prescribe appear contrary to the purposes of the rules, or simply unfair. Second, when judges themselves act as rulemakers, as they often do in the case of basic property rights and remedial rules, they are prone to make mistakes. Judges make rules in the context of adjudication, and their choice of rules may be affected by the facts of the cases before them. The facts of particular cases, however, are not always representative of the majority of cases that will be governed by the rule. When judge-made rules are influenced by the facts of unrepresentative cases, they may not perform well over the long run.¹²⁰

Both property rights and property rules are vulnerable to

¹¹⁹ See *supra* note 65.

¹²⁰ See Frederick Schauer, *Do Cases Make Bad Law?*, 73 U. CHI. L. REV. 883 (2006); see also Rachlinski, *supra* note 72 (noting different cognitive defects affecting judicial and legislative rulemaking). Schauer points out that the same case-specific biases that lead judges to craft less-than-optimal rules can also lead them to overrule sound rules. Schauer, *supra*, at 910-12.

problems of this kind. Property rights implicate questions of distributive justice, and their distributive consequences in particular cases may lead judges to make exceptions to rules or to announce unsound rules. Property rules come into focus at the remedial stage of litigation, when judges are especially likely to focus on the factual details of the cases before them.

Judges do appear to recognize the importance of rules in the area of property. Yet, particularly when it comes to remedies, there will never be perfect adherence to rules. This is a fact of legal life, which casts a shadow over enterprise of predicting the effects of remedial choice.