



PROPERTY RIGHTS, STATE OF NATURE THEORY, AND ENVIRONMENTAL PROTECTION

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Introduction	2
I. State of Nature Theory	4
A. Temporal Externalities	7
B. Commons Problems.....	11
C. Spatial Externalities	12
1. Symmetrical Cases	13
2. Asymmetrical Initial Position.....	19
II. Movement into the Public Sphere.....	28
A. Nuisance Regulation.....	28
B. Takings and Just Compensation	30
III. Conclusion.....	34

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INTRODUCTION

Questions about property rights, their origin, and their measure have been at the forefront of serious political discourse since ancient times. Classical writers usually approached the topic from an immutable and enduring state of nature theory.¹ This theory asks: should all people *en masse* be just placed down on earth, what principles should decide the proper configuration of property rights? This initial inquiry addresses the distribution between those rights which are held in common and those which, although unowned in the state of nature, are subject to individual ownership.² This question always poses challenges because either extreme solution—all one, none of the other—is likely to lead to serious allocative errors. A mixed system is likely to produce the optimal results, but only if the lines are drawn in the correct position.³ It is first necessary to explain, for example, why rivers should be governed by regimes of common rights while land should be privatized. With respect to common property, there are no rules of priority, for all individuals have equal access to the common resource no matter when they arrive to the commons.⁴ With respect to private property, however, the rules on acquisition—“prior in time is higher in right”—adopt a strict temporal priority that explains *which* individuals are entitled

¹ See J. INST. 1.2.11 (J.B. Moyle trans., 5th ed., Clarendon Press 1913):

But the laws of nature, which are observed by all nations alike, are established, as it were, by divine providence, and remain ever fixed and immutable: but the municipal laws of each individual state are subject to frequent change, either by the tacit consent of the people, or by the subsequent enactment of another statute.

The obvious difficulty in this passage is that it gives no hint as to which matters are governed by natural law, and which by positive law. The best answer, I think, is that the natural law sets out the basic framework of obligations—respect for autonomy, property, and contract. The positive law changes the formalities needed to implement agreements and property transfers, and refines the basic framework for particular situations.

² See *id.* at 2.1.1.

³ See Richard A. Epstein, *On the Optimal Mix of Private and Common Property*, in PROPERTY RIGHTS 17 (Ellen Frankel Paul et al. eds., 1994).

⁴ See *State ex rel. Wood v. Consumers' Gas Trust Co.*, 61 N.E. 674 (Ind. 1901) (holding that a corporation on public grant to supply natural gas is required to serve all inhabitants of the community, irrespective of whether an individual is an existing customer or a new arrival).

to *what* property. This maxim assumes that exclusion is the applicable legal norm and joint-ownership is created solely by agreement, and not by government fiat.

In modern times, however, state of nature theory takes on a different coloration. It starts from the assumption that the traditional rules of allocation set out above give an initial definition of property rights, which, while better than the unregulated state of nature, is capable of further improvement.⁵ As is common in all societies, an increase in overall wealth tends to lead to a greater concern for environmental values, as a preoccupation with short-term survival gives way to a public commitment to long-term resource management. Given our collective concern with nature, it is now fair to ask three questions. First, do the older views of property rights advance these environmental concerns? Second, if they do not, what system of property rights and/or regulation best preserves our environment for the present inhabitants of the world, and for posterity? And, third, what social arrangements should secure the sensible transition, if needed, from the present to a preferred system of property rights?

It is often assumed that there is little overlap between the one inquiry, which asks about the historical origins of property, and a second that seeks to improve the system in light of today's new-found objectives. I think that this separationist impulse is misguided. The historical evolution of property rights sheds more light on the modern inquiry than is commonly supposed. One central function of property rights is to economize on scarce resources. Early societies often had to combat conditions of radical scarcity that were far more stringent than those which we face today. As a result, any accurate account of how property rights emerge from a state of nature tells us much about what "use rights" any property owner should have vis-à-vis his neighbors and the public at large, with their obvious environmental implications. Defining these use rights clarifies the role of state enforcement and helps answer one key question of institutional design: which restrictions may the state impose on an owner's use of property without cost, and which restrictions require the payment of compensation? These issues are

⁵ I develop this theme in Richard A. Epstein, *One Step Beyond Nozick's Minimal State: The Role of Forced Exchanges in Political Theory*, SOC. PHIL. & POL'Y, Jan. 2005, at 286.

broadly theoretical and their proper analysis does not depend on the constitutions or laws of any nation, including the United States.⁶ The central thesis is simple enough to state. All private law deviations from the state of nature work an improvement both in global efficiency and in the standard forms of environmental protection. Yet, at the same time, cautious legislative intervention can, in some cases, make further substantial improvements, so long as it is constrained by a constitutional order that takes seriously the risk of uncompensated takings.

In order to execute this program, this paper is divided into four parts. The first deals with an overview of the state of nature theory. The second part examines how the theory of property rights that emerges deals with the temporal externalities that are so important for understanding environmental concerns. The third part deals with matters of spatial externalities toward the same end. In both cases the progression runs as follows. I first address situations where the parties are in symmetrical positions with each other. I then address the additional complications that arise when they stand in asymmetrical positions, both in time and in space, toward each other. Thereafter, I explore the permutations of the common pool problem as it arises in both the spatial and temporal dimensions and the two together. The fourth part then speaks about the role of government regulation to advance environmental objectives, subject to the prohibitions against taking, or regulating, private property without just compensation. A short conclusion follows.

I. STATE OF NATURE THEORY

Let us start with state of nature theory. That theory first asks how any person gains any rights in land against the rest of the world, without the consent of anyone else. There are really only two basic approaches to this problem. The first, which dates back to Roman times, holds that—excluding common property like air and water—all land, chattels, and animals are unowned in a state

⁶ For a fuller exposition from a theoretical and American perspective, see generally, Richard A. Epstein, *Nuisance Law: Corrective Justice and Its Utilitarian Constraints*, 8 J. LEGAL STUD. 49 (1979) [hereinafter Epstein, *Nuisance Law*]; RICHARD A. EPSTEIN, *TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN* (1985) [hereinafter EPSTEIN, *TAKINGS*].

of nature, and that any individual keeps what he can take.⁷ In contrast, the second approach assumes that all property in the state of nature is held in common, so that individual capture to some extent necessarily trenches on the property rights of others. There are clear signs of this way of thinking in the Lockean theological pronouncement that God gave earth (and the animals that live on it) to mankind in common, so that it now becomes necessary to devise some rule—adding labor to things—that separates private property from the commons.⁸ Note that, notwithstanding the differences between these two approaches, they stand in opposition to any top-down account of rights creation which, as with feudal systems, starts from some recognized legal authority (whose own sovereign position rested usually on conquest).

This bottom-up approach was by necessity and not by choice, and the differences in the two variations count for less than their similarities. The creation of rights by central legal command was not feasible in the chaotic circumstances of primitive times, in which no single person or group exerted effective and permanent control over any territory. Nor was it possible in these settings to adopt any requirement of universal consent before one person could take something from the commons for his private use. Bottom-up theories thus won without a contest. Locke, who prized the consent of the governed over any assertion of royal power,⁹ makes that point most vividly when he observes that the acorn belongs to the person who takes it from the tree. Note his reasons: “Was it a robbery thus to assume to himself what belonged to all in common? If such a consent as that was necessary, man had starved, notwithstanding the plenty God had given him.”¹⁰ Forget about all the problems of strategic bargaining. Practically no one could line up all the part-owners of the common even for the most harmonious of deliberations. Locke well understood that any system that required universal consent for the privatization of resources would be so clumsy that people would just take first and ask questions later,

⁷ See G. INST. 2.66 (W.M. Gordon & O.F. Robinson trans., Gerald Duckworth & Co. 1988).

⁸ See JOHN LOCKE, SECOND TREATISE OF GOVERNMENT § 25, at 18–19 (C.B. MacPherson ed., Hackett Publ’g 1980) (1690).

⁹ See *id.* § 28, at 19–20.

¹⁰ *Id.* at 19.

which is a point in favor of the less theological Roman view that land, things, and animals were not owned by anyone in the initial position. Historically, there was no alternative to acquisition by unilateral action, whatever its theoretical imperfections.

The major problem in this system was the difficulty in justifying how unilateral actions could legitimize the creation of property rights against the entire world. Blackstone speaks about “a tacit and implied assent of all mankind” in these cases,¹¹ but with a gnawing awareness that this argument finds no support in historical practices. He therefore declines to choose between it and the Lockean theory of taking by occupation alone, without exploring any of the subtleties of the Lockean proviso that one must leave behind as much and as good for others.¹²

Blackstone’s other answer is both blunter and more persuasive, and it hearkens back to the quote from Locke above: “[n]ecessity beget property.”¹³ In more modern terms, the basic argument is that in an environment with high transaction costs, a focal point equilibrium is reached if it is widely understood that the party in possession is entitled to ward off all others. There is no other rule that has the clarity to organize connections between unrelated persons. The limitations on human power necessarily imply that no one person, or even small group of persons, can take all the needed resources. No one has a first mover advantage that allows him to stake a claim (which requires more than words) to all the land. Nor is anyone strong enough to defend such extended territories. Nor does anyone try. The rule of acquisition looks highly individualistic, but the property acquired by occupation or capture does not have to remain in that simplistic state, and usually does not. Once people take possession of particular resources, they introduce voluntary sharing arrangements within families and clans, which commonly gives them enough of an advantage to defend themselves against external attack. The produce of that property can in turn be sold in voluntary exchanges so that the others can share by contract in the gains that are obtained through initial possession. It is the prospect of that long-term diffusion of benefits that lends modest analytical credibility to the claim that outsiders

¹¹ WILLIAM BLACKSTONE, 2 COMMENTARIES *9.

¹² See *id.* at *8–9.

¹³ *Id.* at *8.

give their “implied” consent to an occupation, given that the consequences systematically redound to the benefit of all, outsiders and insiders alike.

Once the system is created, however, its key characteristics have to be understood. On this point it is again useful to revert to Demsetz’s point “[a] primary function of property rights is that of guiding incentives to achieve a greater internalization of externalities.”¹⁴ It is instructive to see how this is done by looking at those negative externalities that lead to environmental issues. The next section deals with *temporal* externalities, which can compromise sustainable yields. The third section deals with *spatial* externalities, which likewise can lead to excessive consumption of resources.

A. TEMPORAL EXTERNALITIES

The first simple question asks: when a person takes possession of an acorn or an acre of land, what interest does that possession give? The short answer was, and is, that possession gave (and gives) ownership of an indefinite duration, for both chattels and land. This assignment of rights meant that people did not have to, in order to preserve their rights as a matter of law, keep their acorns in hand or prowl the boundaries of their land. They retained ownership of land and chattels until they consumed it, sold it, or evinced some clear and unambiguous sign of abandonment. This theme was evident historically to both Blackstone and Bentham. Thus Blackstone wrote:

As human life also grew more and more refined, abundance of conveniences were devised to render it more easy, commodious, and agreeable; as, habitations for shelter and safety, and raiment for warmth and decency. But no man would be at the trouble to provide either so long as he had only a usufructuary property in them which was to cease the instant that he quitted possession; — if, as soon as he walked out of his tent, or pulled off his garment, the next stranger

¹⁴ Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347, 348 (1967).

who came by would have a right to inhabit the one, and to wear the other.¹⁵

The same theme is found in Bentham:

There have been from the beginning, and there always will be, circumstances in which a man may secure himself, by his own means, in the enjoyment of certain things. But the catalogue of these cases is very limited. The savage who has killed a deer may hope to keep it for himself, so long as his cave is undiscovered; so long as he watches to defend it, and is stronger than his rivals; but that is all. How miserable and precarious is such a possession! If we suppose the least agreement among savages to respect the acquisitions of each other, we see the introduction of a principle to which no name can be given but that of law. A feeble and momentary expectation may result from time to time from circumstances purely physical; but a strong and permanent expectation can result only from law. That which, in the natural state, was an almost invisible thread, in the social state becomes a cable.¹⁶

The obvious import of both passages is the fatal institutional weakness that comes from defining possession to cover only cases in which a party exerts immediate physical control over property. That definition, even if an accurate account of the meaning of the term, carries massive inefficiencies that no legal system could long endure. From the earliest times, the law was concerned with the security of possession. Possession could be governed by a variety of different legal arrangements, including the “seisin” of land, as protected by the writ of novel disseisin, or the possession of chattels, as protected by trespass *de bonis asportatis*.¹⁷ Should the definition of possession be confined to its narrow literal sense of “in the grasp,”

¹⁵ BLACKSTONE, *supra* note 11, at *4.

¹⁶ JEREMY BENTHAM, *THEORY OF LEGISLATION* 112–13 (R. Hildreth trans., 4th ed., Trübner & Co., Ludgate Hill 1882) (1789).

¹⁷ For discussion, see F.W. MAITLAND, *Lecture III*, in *THE FORMS OF ACTION AT COMMON LAW* 23–26 (A.H. Chaytor & W.J. Whittaker eds., 1916).

these remedies would correspondingly shrink with its evanescent scope. The person who covets the land or chattels need only lie in wait until the owner lets some of his possessions out of his reach or sight, and the coveter could, as of right, take it. But why bother to pounce if the possession that you acquire is equally unstable? The response to this problem was to alter the definition of possession, which—under Roman law and probably before—covered cases where the proud possessor did not keep his object within his grasp. Thus the owner who left his house filled with his possessions (note the choice of noun) retained possession “for it is settled that we remain in possession until either we voluntarily abandon it or we are ejected by force.”¹⁸ This point has a nice economic ring; this revised definition of possession (whereby it is kept until abandoned) constitutes a strict Pareto improvement (whereby someone is better off and no one is worse off) over the more literal definition. Everyone is better off with this system-wide security that is only possible when this expanded definition of possession sets the new baseline against which all further alterations in the law of property should be measured.

The obvious response is that even this expanded definition does not address all the risks relating to the security of possession. Marauders could still come. But the best should never be the enemy of the good. A move is always judged by whether it makes the overall social situation better, not whether it solves all problems with a single act. The broader definition of possession has the salutary consequence of expanding the situations where the state could be called on for assistance, which could not happen if physical separation was tantamount to abandonment. And the revised formulations—which track much of ordinary language, English and Latin—are deeply embedded in the ordinary sentiments of mankind; they shape social expectations of right or wrong conduct. This sense of

¹⁸ See DIG. 41.2.3.9 (Paul, Edict 54) (Charles Henry Monro trans.); see also BARRY NICHOLAS, AN INTRODUCTION TO ROMAN LAW 114 (1962) (The author grasps but does not explicate the efficiency advantages: “For obvious reasons of convenience the requirements of the law are not so strict for the retention of possession as they are for its acquisition. I do not lose possession of my house and its contents merely by going away for a short time, nor do I lose possession of a book which I have put in a cupboard and forgotten.”).

unquestioned legitimacy reduces the pressure on legal remedies to keep property safe from others.

The expanded definition of possession, which makes permanent ownership possible, also has powerful positive implications for environmental protection.¹⁹ Its long time horizons allow owners to make intelligent choices between investment, consumption, and saving, just as Blackstone predicted.²⁰ A farmer who would sow seed could now harvest the crops. As owner of both crops and the land, he fully internalized any decision to compromise the value of the land to increase crop yield. No one has an incentive to trash the land because he cannot assure his use of it tomorrow. The environmental soundness of the temporal decisions of private owners is evident when one looks at the harvesting programs allowed today on government-owned land.²¹ Commercial firms have a built-in incentive to clear-cut on public lands because they do not own the long-term interest and any reduction in land value falls on the public at large. The same timber companies operate more prudently on their own private lands where the needed internalization takes place as a result of longer-time horizons.²² If these companies cut down timber prematurely, they will pay the price on their own private lands. Should timber companies invest the net cash received from premature timber in risk-free securities, this return would always be less than the anticipated increase in value from allowing the timber to mature. The point here is simple but critical. Securing environmental protection by having environmental laws that are specifically addressed to that end is not the only way to respond to temporal challenges. In some contexts, the correct definition of property rights can also create a *general* improvement.

¹⁹ See, e.g., Elizabeth Brubaker, *The Common Law and the Environment: The Canadian Experience*, in WHO OWNS THE ENVIRONMENT? 87 (Peter J. Hill & Roger E. Meiners eds., 1998).

²⁰ See BLACKSTONE, *supra* note 11, at *4.

²¹ See John A. Baden, *The True-Mann's West: Endangered and Forsaken?*, in THE NEXT WEST: PUBLIC LANDS, COMMUNITY, AND ECONOMY IN THE AMERICAN WEST 107, 120-25 (John A. Baden & Donald Snow eds., 1997).

²² The point is an old one. See BLACKSTONE, *supra* note 11, at *4.

B. COMMONS PROBLEMS

The solution that works well for land, however, may not perform as well for other resources. It is clear that the capture of animals is necessary for food and clothing, but a rule of capture for such resources ignores interdependencies of great long-term importance. The capture rule for wild animals also creates, under both the Roman and Lockean views, an absolute interest in animals. But it leads to a serious disability that does not arise with land: it fails to cope with the commons problem. Since capture of individual elements does not allow for the preservation of the common pool, some form of privatization or regulation is needed. If territories are established for non-migratory animals, their use could obviate the problem. But, for fish that inhabit unowned waters, detailed systems of direct regulation are needed to ensure sustainable yields, and for these, the choice of institutional design matters greatly.²³

It is sometimes said that the commons problem can also arise on land, when the optimal scale changes as land is used for different purposes.²⁴ But in these instances, the problem does not call for additional regulation. As long as individuals can keep outsiders from entering, they should be capable of reorganizing their affairs to adapt to the exigencies of particular situations. One illustration of this situation is what Henry Smith has termed the “semicommons.”²⁵ In this context, different land uses take place at different seasons, on a predictable and recurrent basis. Land needed for crops during the growing season is subject to private ownership during that period. Collective management does not produce any efficiency in production, but rather complicates key investment decisions. Yet, for the grazing of cattle outside the growing season, these same small plots of land become nonproductive. It is better for two hundred head of cattle to roam on one thousand acres than for twenty cattle to be confined to each of ten one-hundred acre

²³ See R. Quentin Grafton et al., *Private Property and Economic Efficiency: A Study of a Common-Pool Resource*, 43 J.L. & ECON. 679 (2000).

²⁴ Henry E. Smith, *Semicommon Property Rights and Scattering in the Open Fields*, 29 J. LEGAL STUD. 131, 131–32 (2000); see also Martin J. Bailey, *Approximate Optimality of Aboriginal Property Rights*, 35 J.L. & ECON. 183, 186 (1992).

²⁵ Smith, *supra* note 24, at 131; see also Bailey, *supra* note 24, at 183 (making the same point about aboriginal societies).

farms. Here is a case where it is possible to reap and to sow in short compass, so that the creation of a voluntary commons increases the value of lands. But this arrangement creates additional problems of strategic behavior. Various owners might seek to concentrate the wear and tear on sections that they do not own, which was historically avoided by scattering the tracts of land on which each person could grow and harvest crops.²⁶ Wholly without regulation, the permanent possession of land facilitated a system of mixed uses to respond to the temporal challenges. But if these commons were open to others at any point in the cycle, the entire system would no longer be sustainable.

C. SPATIAL EXTERNALITIES

The mismatches over resources do not occur only in time. They also occur in space, where they again place additional challenges on the system of private ownership. Traditional legal systems used three bodies of law to deal with these problems: trespass (i.e. unlawful entrance) into the land of another; cattle trespass (unlawful entrance by one's animals); and nuisance (creation of noxious conditions—discharges, odors, noise and the like).²⁷ These bodies of law set the stage for determining the appropriate scope of government regulation. To see how they function, it is useful to examine two separate states of the world. The first involves *perfect symmetry* in the positions of two or more landowners. In its most exacting conditions, landowners take possession of their neighboring properties at the same time and adopt identical land use patterns. Neither party is higher or lower, or upstream or downstream, from the other. The more difficult cases introduce some asymmetry between the two parties on use, timing, or physical descriptions of the property. Solving these problems paves the way for dealing with the more complex issues involving multiple parties (as in pollution cases) where private litigation is less effective in curbing potential problems.

²⁶ Smith, *supra* note 24, at 131–33.

²⁷ For the laws on trespass, see RESTATEMENT (SECOND) OF TORTS §§ 157–64 (1965); for the rules on animals, see *id.* § 504 (1977); and for the laws of nuisance, see *id.* §§ 822–40. The parallel provision for animals in the RESTATEMENT (THIRD) OF TORTS (Proposed Final Draft No. 1, 2005) is §21.

1. Symmetrical Cases

The first task of land law is to settle the boundary conditions between two individuals who take possession of neighboring lands for the same use at the same time. A brute fact of nature makes it impossible for either landowner to move away to avoid potential land-use conflicts. Abandoning property or restricting its use each carries real costs. The laws of trespass and nuisance control these conflicts between users of resources fixed in space. Both bodies of law are generalizable. No one, consistent with the rule of law, can harm a neighbor in ways that the neighbor cannot harm him. So the first inquiry is: how would two people who own identical plots of land choose by agreement the rules that would allow them to maximize the joint value of their holdings subject to this basic equality constraint? In each case, the assumptions of this model put them behind a perfect Rawlsian veil of ignorance.²⁸ Any effort to expand their rights as land users hurts them when others make parallel uses of their own lands. Thus, all persons have the proper incentive to make honest revelations of preference in the choice of rule, since they all are in identical position with respect to future benefits and burdens. All choices under this constraint that yield positive private results will also yield positive social results, given the precise linkage between them.

This simple model explains why the rules against trespass to land enjoy such widespread support. Free entry to the land of others makes it unlikely that anyone will invest in clearing land, planting crops, or building structures. Good fences turn out to make good neighbors. Even factoring in the (relatively low) costs of enforcement, each neighbor will be better off with an injunction against trespass except in rare cases. Thus, in general, a person may enter the land of another only if doing so allows him to escape some imminent peril to life or limb.²⁹ Likewise, it has long been held that a party who enters the land of another to save goods that are at risk of destruction by water or fire does not commit a trespass.³⁰ These

²⁸ See JOHN RAWLS, *A THEORY OF JUSTICE* (1971).

²⁹ See, e.g., *Ploof v. Putnam*, 71 A. 188 (Vt. 1908).

³⁰ See, e.g., *Proctor v. Adams*, 113 Mass. 376 (1873). There the defendant entered the plaintiff's land to save a boat that might have otherwise been washed out to sea. He then returned the boat to its owner, for which he received a salvage fee. The plain-

exceptions—from the *ex ante* perspective—increase the value of entitlements for all persons.

The destruction of another's property, as opposed to a minor trespass, raises somewhat different issues. The entrant is generally allowed to destroy another's property in order to save himself, but that right is typically subject to a duty to compensate for inflicted losses.³¹ These cases present the risk that the entrant will not take sufficient care to minimize the loss to the owner's interest unless that duty is imposed. Although the rule is generally wise, it is hardly inevitable. An alternative rule could hold the entrant responsible for only those damages which exceed those which a careful owner would inflict on his own land to save his own life.³²

Cattle trespass, both to and by animals, was also critical in early agrarian societies. Hence the law quickly evolved to hold owners strictly liable for cattle that entered other people's property.³³ In addition, landowners could hold cattle as security for payment of the damages so caused, thereby lowering the costs of enforcement.³⁴ Netting out gains and losses, the prohibition against cattle trespass provides an overall benefit to society under a regime that tolerates forced exchanges from the strong boundary conditions. The control of animals has obvious environmental benefits.

tiff's entry was held justified under an "implied license," which was clearly created not by course of dealing but by the necessity of the situation. Note that there was no reason for the landowner to receive any portion of the salvage since he contributed nothing to the rescue and did not suffer any harm. In addition, no necessity should be found if the owner was ready and able to effectuate the rescue as well.

³¹ See, e.g., *Vincent v. Lake Erie Transp. Co.*, 124 N.W. 221 (Minn. 1910).

³² See, e.g., *id.* For a defense of the negligence position, see Ernest J. Weinrib, *Causation and Wrongdoing*, 63 CHI.-KENT L. REV. 407, 425–29 (1987).

³³ See RESTATEMENT (THIRD) OF TORTS § 21 (Proposed Final Draft No. 1, 2005).

³⁴ See GLANVILLE L. WILLIAMS, *LIABILITY FOR ANIMALS* 106–19 (1939). The ability to hold animals for the payment of amends has been long established. See, e.g., *The Tithe Case*, Y.B. Trin. 21, Hen. 7, fol. 27, pl. 5 (1506), reprinted in C.H.S. FIFOOT, *HISTORY AND SOURCES OF THE COMMON LAW* 197–98 (Greenwood Press 1970) (1949) ("[I]f I have beasts *damage feasant* [causing damage], I shall not justify my entry to chase them out unless I first tender all amends."). The landowner could also hold the animals for payments of amends but was under a duty to release them once the amends were paid. Note that there could be disputes over the extent of damages, but this version of the necessity rule is also intended to eliminate the holdout value when the value of cattle as security exceeds the amount of the harm caused, which is the usual case.

Nuisance cases are the most difficult because no single approach covers all cases. Actual nuisances come in all sizes and shapes, including odors, discharges, and noises, which can be large or small. As a matter of pure theory, these differences should not matter, at least for the imposition of damages. Punish each nuisance for the harm that it caused, no more, no less. But the transaction costs of this approach would exceed any gains that it could possibly generate, and in practice it becomes imperative to differentiate among nuisances based on their incidence and severity. Where runoff fouls soil and blocks agriculture, prompt action is needed (and is typically provided). In such cases, damages are not enough, and injunctive relief that obviates the need for the calculation and collection is preferable. The same can be true of foul stench and noise from sledgehammers. The basic legal rule treats these high-level nuisances just like trespasses and subjects them to a *per se* prohibition. This allows the owner to collect damages for past harms and to obtain an injunction against future ones.³⁵

Nonetheless, injunctions for nuisance are more complex than those against trespasses for reasons that cut across time and location, in line with the general natural law theory. Demanding a complete cessation of harm places a huge crimp on productive activity. Across the board, the extreme precautions needed to stop the last tiny bit of pollution dwarf the gains obtained by the innocent party. The strong on/off switch that works for actual entry fails in nuisance cases. Hence, at some point, most legal systems recalibrate their baselines and require an injured party to tolerate at least small levels of harm.³⁶ From behind the veil of ignorance this rule works because, given the symmetrical position of the parties, no one knows which side of any interaction he or she will be on. Denying complete injunctions thus increases the value of all land from the *ex ante* perspective, which obviates any distributional worries.³⁷

This treatment of small residual harms in major nuisance cases helps explain the proper treatment for minor nuisances. If any

³⁵ See generally Thomas W. Merrill, *Trespass, Nuisance, and the Costs of Determining Property Rights*, 14 J. LEGAL STUD. 13 (1985).

³⁶ See, e.g., *Bamford v. Turnley*, [1862] 122 Eng. Rep. 27, 32–33 (Ex.) (Bramwell, B., concurring).

³⁷ Epstein, *Nuisance Law*, *supra* note 6, at 76.

smell, noise, or discharge counted as a nuisance, no one could barbecue in the backyard, talk on his front patio, or farm. To head off those results, a strong live-and-let-live principle allows all low-level nuisances to continue without compensation, and this creates uniform Pareto improvements that should be welcomed on all sides. As Baron Bramwell wrote in 1862:

It is as much for the advantage of one owner as of another; for the very nuisance the one complains of, as the result of the ordinary use of his neighbour's land, he himself will create in the ordinary use of his own, and the reciprocal nuisances are of a comparatively trifling character. The convenience of such a rule may be indicated by calling it a rule of give and take, live and let live.³⁸

Thus far the analysis has covered only cases of physical invasions of another's property. *Noninvasive* conduct often causes serious dislocations. Here are two examples that call for different solutions. The first situation involves lateral support.³⁹ Dig out your land and the nearby land will fall over. The same logic that governs the live-and-let-live cases takes over, so that both landowners on level land cannot dig out to the boundary line if nearby land will fall. That obligation, however, does not extend to cases where the support is required for structures built close to the boundary. Here the fear is that the unilateral action will give the first builder rights over a neighbor who—for all practical purposes—is powerless to stop their creation. Hence the law only requires an excavator to give notice before his work begins so that his neighbor can shore up his own foundations. Once the rule is in place, the first builder can negotiate for a covenant of support or build back from the property line to minimize the risk. This treatment of noninvasive nuisances improves overall social welfare.

The second instance deals with claims for an easement of light or view. When one person builds so as to block the light and view

³⁸ *Bamford*, 122 Eng. Rep. at 33.

³⁹ See *Corp. of Birmingham v. Allen*, [1877] 6 Ch.D. 284, 288–89 (discussing the rights of owners of mines to extract coal, preventing the extraction of coal from neighboring mines).

of another, should that be treated as a nuisance to neighbors whose land value declines? That contention has been widely rejected in the judge-made law tradition of most countries, and for good reason—this rule encourages premature development.⁴⁰ That rule allows the first to build to stop the second from building. If that situation is acceptable, then why couldn't the neighbor stop the original building? The explanation lies in the parity in position, which can only be preserved if either both or neither have the right to build. In general, both plots of land are worth more with development rights. What is true for two neighbors also applies to many. Could the first to build stop twenty nearby owners from exercising the same privilege? Clearly the answer is no.

The overall analysis, however, is not complete. Even if parties are in identical positions at the outset, their differential investment strategies could easily alter that balance. Clear rules governing boundary disputes usefully set a baseline for further negotiations that allow one landowner to buy out rights from another. The simplest way to avoid conflict is an outright purchase of land. In this case the sole owner would suffer the harm when runoff or pollution from one portion of the land harms another part of his land. The purchase internalizes the externality.

Sometimes an outright purchase is not feasible, however, because the neighbor has made distinctive investments in his land that are of little value to a potential purchaser. To deal with that problem, most legal systems allow owners to partition their assets by selling off only part of the land rights and retaining the remainder. Thus the law of easements allows one person the right to walk or ride over the land, to pollute, or to impose height or setback conditions to preserve light and view.⁴¹ These transactions do not allow either party to increase burdens on third persons, so that any mutual gain between the parties creates a social benefit. Since land use arrangements are of long duration, virtually all legal systems allow any easements or covenants so created to bind subsequent buyers

⁴⁰ See *Fontainebleau Hotel Corp. v. Forty-Five Twenty-Five, Inc.*, 114 So. 2d 357 (Fla. Dist. Ct. App. 1959).

⁴¹ For a discussion of the permutations, see Susan F. French, *Tradition and Innovation in the New Restatement of Servitudes: A Report from Midpoint*, 27 CONN. L. REV. 119 (1994).

who have notice of the restrictions. These voluntary contracts help correct any misallocations of resources created by the basic system of land law.

Frequently, neighboring landowners find it difficult to negotiate these deals, especially if the cooperation of many parties is needed, for example, to preserve views. Nonetheless, in planned unit developments, a single initial owner can, at low cost, divide property among many private owners and reserve areas for common use. These projects reflect the income preferences of the prospective buyers. Thus, in modern times, gated communities and condominium associations use elaborate governance mechanisms that stem from a common landlord whose function is, to paraphrase Harold Demsetz, to “internalize the externalities” from inconsistent land uses.⁴² The practice is especially instructive because it adopts a mixed solution on the nature of property rights. These planned unit developments give individuals fee title to their homes and surrounding lands, but institute a system of roads that is closed to outsiders but open to all members within the gated community. And they often set aside certain areas to be held in common for recreation or park uses. Once again, a system that starts out as exclusively private under a single owner transforms itself—through contract—into one that consciously introduces collective elements, and the value of these elements are preserved by restricting entry, as with the medieval semicommons.⁴³

Understanding the interplay between these separate and common elements gives us a window into organizing modern environmental laws, which typically offer more environmental amenities to purchasers with high income levels. Generally speaking, these agreements rarely, if ever, cut down the level of protection between neighbors from the background nuisance. Rather, they typically add many restrictions on land use in order to maximize owner satisfaction at low cost. Since these deals all involve contracting parties, all externalities are internalized. The single initial owner adopts a development strategy that maximizes sale value to all potential buyers so that private incentives are aligned with social ones. In addition, any external effects on third persons are likely to be *positive*, as the public

⁴² See Demsetz, *supra* note 14, at 357.

⁴³ See Smith, *supra* note 24.

can free ride on the stricter land use practices while retaining all of their previous protections against what few nuisances remain.

2. *Asymmetrical Initial Position*

Let us now turn to cases of asymmetrical land use. These harder cases make it more difficult to apply the basic rules of nuisance and trespass outlined above because they require an examination of these interactions in both the temporal and spatial dimensions. When all parties engage in the same activities—say, industrial—a greater tolerance of neighboring nuisances generally works to the advantage of all parties.⁴⁴ Yet once the different parcels of land are amenable to different use patterns, should the level of reciprocal harm be calibrated to the high-intensity or the low-intensity nuisance-type use? Usually, the low-level user wins, but a single low-intensity user in a district with many high-intensity users may not prevail.⁴⁵ Rather than shut everyone else down, the low-intensity user should be given an incentive to sell to someone who wants to use the property in a way compatible with the basic regional pattern. The legal rule sensibly induces a greater homogeneity of uses, and this in turn allows other areas to impose stricter uniform standards. In effect, the right live-and-let-live rule sorts land uses by neighborhoods, and in doing so, minimizes the social costs of any given level of pollution.

a. *Physical Asymmetries*

One common definition of fairness speaks of creating a level playing field so that neither side has the upper hand. Unfortunately, nature does not always provide that level playing field for upstream and downstream riparians (that is, those whose lands border rivers or lakes) or for landowners on the top and bottom of a hill. How should nuisance law respond? One possibility is to make no allowance at all. The party at the top of the hill, *T*, has a more limited set of uses because of the harm his

⁴⁴ See RESTATEMENT (SECOND) OF TORTS § 831 (1977) (locality rule).

⁴⁵ See *Bove v. Donner-Hanna Coke Corp.*, 258 N.Y.S. 229, 234 (N.Y. App. Div. 1932); see also UTAH CODE ANN. § 78B-6-1103 (2008).

conduct causes to the landowner at the bottom of the hill, *B*. The legal system thus offsets *T*'s natural advantage by, for instance, holding the defendant strictly liable for any discharge that floods the mines below.⁴⁶ But here again the situation is likely to prove more nuanced. In *Middlesex Co. v. McCue*,⁴⁷ Justice Holmes was faced with the question of whether to enjoin the defendant from filling up the plaintiff's mill pond with the runoff created when the defendant gardened on his plot. In denying the plaintiff an injunction, he posited that the case was too clear for dispute on the ground that:

a man has a right to cultivate his land in the usual and reasonable way, as well upon a hill as in the plain, [so] that damage to the lower proprietor of the kind complained of is something that he must protect himself against as best he may. The plaintiff says that a wall would stop the trouble. If so, it can build one upon its own land.⁴⁸

The decision is notable for two points. First, the construction of the wall does not require joint care, as either party can build it as cheaply as the other. Putting this burden on the downhill owner eliminates the litigation costs and will tend to spur action where such is necessary. Indeed, *B* already has good reason to build that wall for, on any theory, *B* gets no protection against any flood or natural disaster that starts on *T*'s land, because there is no act of the defendant on which to predicate liability.⁴⁹ In similar fashion, the uphill owner gets no protection against the loss of support from below. Yet it hardly follows that the no-liability rule is maintained in all other cases. Holmes was careful to note that his rule would not protect against the release of offensive materials into the drainage system, even though these might not migrate to the plaintiff's land if both were on level ground.

The one difficulty with the Holmes rule is that it does not develop any clear liability rule to shape conduct where the efficient

⁴⁶ *Baird v. Williamson*, [1863] 143 Eng. Rep. 831 (C.B.).

⁴⁷ 21 N.E. 230 (Mass. 1889).

⁴⁸ *Id.* at 231.

⁴⁹ *See, e.g., Smith v. Kenrick*, [1849] 137 Eng. Rep. 205 (Q.B.).

solution would require coordinated actions to be taken at both the top and bottom of the hill. The test here is whether a single owner of both plots of land would divide his precautions between the upper and lower portions of the land. It is not surprising therefore that legal systems divide on whether the law should require *B* to take just those precautions with her land, which is the result that exists under various reasonable user systems.⁵⁰ The problem becomes even more complex if *B* builds before *T* because precautions against natural runoff will often not suffice against the increased runoff after construction. Again the question is close, but the more numerous the parties, the stronger the case for putting modest affirmative duties of self-protection, perhaps by statute, on *B* and others similarly situated to deal with the joint-care problem.

The issue here is similar to the famous question of whether the owner of flax is under an affirmative duty to store it at a remote distance from the track. The danger here is the risk that fire will spread over land, as it can easily do in dry conditions, when cut grass acts like a fuse across which any flame can race. The common law response is divided, and in the most famous of these cases, *LeRoy Fibre Co. v. Chicago, Milwaukee & St. Paul Railway Co.*,⁵¹ the majority took the position that the plaintiff owed no duty to protect against a future wrong on the grounds that no landowner (or railroad) can—by threat—impose affirmative duties on his neighbor. Yet a clear statutory duty to provide these setbacks could reduce the losses by gravitating toward a more efficient solution that requires both parties to take some degree of care. This is the thought that lies behind Holmes's dissent in *LeRoy*, where he would have essentially imposed on the flax owner the risk of loss in any case where the flax would have been destroyed by the low-level spark emissions from a well-operated train.⁵²

b. Temporal Asymmetries

Thus far the analysis has dealt with temporal externalities only insofar as they relate to the same parcel of land. But the question of temporal sequencing also arises between neighbors. In many cases

⁵⁰ See, e.g., *Keys v. Romley*, 412 P.2d 529 (Cal. 1966).

⁵¹ 232 U.S. 340 (1914).

⁵² *Id.* at 352–53.

the parties arrive simultaneously. In others, however, temporal asymmetries arise. For example, one of two established landowners may develop his property before the second. The most common version of this “coming to the nuisance” problem has one party, *D*, engage in an intensive land use with negative spillovers, such as running a mine or a pig farm.⁵³ At the inception of the activity, his neighbor, *P*, is doing nothing with her land that is compromised by that normally noxious use. Subsequently, *P* changes her use so that *D*’s conduct now has a negative effect on the new use, as when a neighbor builds a private home next to the piggery. Can the home owner close down the piggery?

The usual and correct answer is yes, subject to a transitional period to phase out the piggery. The explanation for this rule requires an optimization strategy that spans both periods of development. The law could allow *P* to enjoin the use before she suffers any physical harm: all invasions are nuisances—period. But now we have the unhappy specter of stopping a high-valued use to protect no use at all, and this makes little sense given that there is, by definition, no environmental degradation. So it makes sense to postpone any injunction until the time of actual conflict (which may never occur). Yet the law cannot ask *P* to stop her action at the outset if she will be time-barred at some later time: to do so is to admit that there is a grievance, only to find no time at which it may be properly brought. So the statute of limitations starts to run only with actual conflict in neighboring uses.⁵⁴ From the perspective of that later time, it appears as if the dislocations of an injunction are excessive. But that rule is surely preferable to the two alternatives: (1) shutting down the piggery before any harm happens, or (2) letting the piggery operate, unless *P* decides to build a house that is not needed today to preserve the option to use it tomorrow. On balance, the current rule makes sense.

⁵³ See, e.g., *Pendoley v. Ferreira*, 187 N.E.2d 142 (Mass. 1963); *Ensign v. Walls*, 34 N.W.2d 549 (Mich. 1948) (concerning a kennel for St. Bernard dogs).

⁵⁴ See *Sturges v. Bridgman*, [1879] 11 Ch.D. 852, 859 (concerning the point at which complainant may bring action to court).

c. Common Pool Problems

One major obstacle to the effective regulation of oil and gas pools is that their large size frequently precludes a single surface owner from controlling their exploitation in rational fashion.⁵⁵ The simple prohibition against slant drilling, for example, does not stop excessive drilling that siphons off oil underneath adjacent plots. The consequent risk of premature exploitation has obvious relevance to conservation, but it has equal implications for the standard form of environmental harm; rapid exploitation leads to excessive pollution from uncapped wells. Nor should there be reflexive preference for either common law or statutory solutions on matters of this sort.

Historically, the inconveniences attendant to excessive drilling were intuitively understood, as were the limits on the common law tools available to combat wasteful behavior that did not invade ordinary private rights. These points are all evidenced in *Hague v. Wheeler*,⁵⁶ where the defendant's drilling for gas caused damage both above and below the surface, neither of which could be effectively addressed by the traditional common law remedies that governed relationships between neighbors. Here are two instructive passages. The first reveals the inability to bring these cases into the field of invasive nuisances.

Does the maxim, *sic utere tuo ut alienum non laedas*, require us to grant the relief sought in this case? If in burning the gas from their well the defendants should direct the jet towards the plaintiff's buildings or timber, or should leave it uncontrolled so that the wind might drive it against or towards the plaintiff's property so as to injure or endanger it, a case would be presented in which the maxim would be applicable and we should take pleasure in enforcing it. If the defendant's well produced nothing and they were leaving it without plugging so that the water might find its way into the sand-rock to the injury of others, we could punish them under the statute which prescribes the manner of plugging an unproductive well, and makes it obligatory on

⁵⁵ See *Hague v. Wheeler*, 27 A. 714 (Pa. 1893) (involving a release of gas which resulted in both pollution and deterioration of the common pool).

⁵⁶ *Id.* at 718–19.

the owner to adopt it. But we have a well drilled for a lawful purpose, in a lawful manner, and actually producing gas which is not directed towards the property of another, or so consumed as to affect the buildings, timber, or crops of any adjoining owner.⁵⁷

The passage is quite correct in its conclusion that the case does not fall into the usual categories of invasive nuisance because the siphoning off that takes place did not stem from extending the defendant's drilling apparatus below the plaintiff's land. The alternative theory urged in *Hague* insisted that the presence of the defendant's "malice" should tip the balance against the defendant, to which the court replied:

[T]he fact that it was drilled at the request of the company and not of the mere motion of the defendants was an answer to any allegation of malice or negligence on the part of Hague as well as on the part of the company, since it accounted for the act of drilling by assigning a motive therefor both lawful and neighborly.⁵⁸

This argument reflects a common preoccupation with an expanded role for "malice" during the 1890s when the question of how to regulate various commons came before the courts in large numbers.⁵⁹ The difficulties of importing this notion are legion, however. Traditionally, the role of malice is as an intensifier. Hitting

⁵⁷ *Id.* at 719.

⁵⁸ *Id.* at 718.

⁵⁹ For academic accounts, see J. B. Ames, *How Far an Act May Be a Tort Because of the Wrongful Motive of the Actor*, 18 HARV. L. REV. 411 (1905); Oliver Wendell Holmes, Jr., *Privilege, Malice and Intent*, 8 HARV. L. REV. 1 (1894). For relevant cases, see, for example, *Bradford Corp. v. Pickles*, [1895] A.C. 587 (H.L.) (appeal taken from Eng.) (U.K.), which held that a malicious diversion of water from a downstream user was not actionable. See also *Tuttle v. Buck*, 119 N.W. 946, 948 (Minn. 1909) (Elliott, J.), which accepted the proposition that "when a man starts an opposition place of business, not for the sake of profit to himself, but regardless of loss to himself, and for the sole purpose of driving his competitor out of business, and with the intention of himself retiring upon the accomplishment of his malevolent purpose, he is guilty of a wanton wrong and an actionable tort" only to decide that this claim could not be made out in the absence of proof that the defendant ran its business at a loss.

someone is bad; hitting them with malice is inexcusable and thus prompts the award of punitive damages. Malice does not make the tort; it aggravates the situation.⁶⁰ Given the relationship between malice and the traditional torts, the next generation of cases does not explain why malice is needed in some cases when it is not needed in others. More specifically, all the actions that cover invasions of person and property are usually actionable under a strict liability theory⁶¹ or require, at most, proof of negligence, which is then made easier by using *res ipsa loquitur* to shift the burden of proof.⁶² But where these physical invasions do not take place, it is wholly unclear why—or when—an allegation of malice should fill the gap.

Nor, it turned out, was the problem confined to land use disputes. The resort to malice in *Hague* has its exact contemporary analogue in trade cases dealing with unlawful competition or “predation,”⁶³ as well as in cases of collective refusals to deal in connection with union boycotts.⁶⁴ That connection is not accidental; in each case there was an acute sense that the common law prohibitions against the use of force and fraud came up short against any then-nascent standard of social welfare. In both cases, the purported reliance on malice was too restrictive, for it only covered those situations in which the defendant hurt the plaintiff solely without any prospect of tangible or economic gain to himself. That account of malice is not quite an empty set, but it is close. Cases of resource exploitation and economic competition almost never fall into that category given the close correspondence between individual self-interest and economic advancement.

⁶⁰ See, e.g., *Day v. Woodworth*, 54 U.S. 363, 371 (1852) (tying punitive damages to trespasses that are, of course, independently actionable).

⁶¹ See, e.g., *Rylands v. Fletcher*, [1868] 3 L.R.E. & I. App. 330 (H.L.) (appeal taken from Eng.) (U.K.), *aff'g* *Fletcher v. Rylands*, [1866] 1 L.R. Exch. 265.

⁶² For one early suggestion of that approach in *Rylands*-type situations, see Ezra Ripley Thayer, *Liability Without Fault*, 29 HARV. L. REV. 801 (1916).

⁶³ See, e.g., *Mogul S.S. Co. v. McGregor, Gow & Co.*, [1889] 23 Q.B.D. 598.

⁶⁴ See *Allen v. Flood*, [1898] A.C. 1 (H.L.) (headnote: “An act which in itself is lawful cannot be converted into a legal wrong because it was done with a bad motive.”); *Quinn v. Leathem*, [1901] A.C. 495 (H.L.) (appeal taken from Ir.) (holding that a collective refusal to deal with a business is unlawful where there is an intent to harm, and that the rule in *Allen* that motive is irrelevant applies only to a person acting alone).

The larger question, however, is this: why should self-interest count as a justification for a defendant's action at all in situations like *Mogul* when it is never allowed in cases of assault and battery? This disparity is never explained, chiefly because the underlying conception of social welfare, with its attendant coordination problems, was not understood.⁶⁵ The correct response involves answering this question: does the private right of action created advance or retard some overall notion of social welfare? In dealing with the assault cases, the answer to that question is that allowing the private suit advances social welfare. Hurting another individual creates not only a private loss to that person, but also a private loss to all those persons who choose to deal with him, of which only a small fraction—chiefly spouses who sue for loss of consortium, a cause of action denied to children⁶⁶—are allowed to bring actions for themselves. It follows therefore that the administrative-cost constraint against allowing these second-tier actions means that any compensation that is afforded to the accident victim represents only part—and not all—of the relevant social losses. But for these purposes, the correct question is not whether the common action leads to social optimality; this is impossible to obtain under ordinary circumstances. Instead, the correct question is whether allowing that action *improves* the prior state of affairs, which the ordinary suit for assault and battery does, by reducing the frequency of these attacks and, with it, the collateral harms to third persons.

⁶⁵ See *Mogul S.S.*, 23 Q.B.D. at 614:

To the argument that a competition so pursued ceases to have a just cause or excuse when there is ill-will or a personal intention to harm, it is sufficient to reply . . . that there was here no personal intention to do any other or greater harm to the plaintiffs than such as was necessarily involved in the desire to attract to the defendants' ships the entire tea freights of the ports, a portion of which would otherwise have fallen to the plaintiffs' share.

The question that Lord Justice Bowen does not answer in *Mogul* is why the definition of an intentional or malicious wrong is more demanding in the trade cases than the physical injury cases. See also Richard A. Epstein, *Intentional Harms*, 4 J. LEGAL STUD. 391, 420–41 (1975) (also discussing these cases).

⁶⁶ See, e.g., *Hitaffer v. Argonne Co.*, 183 F.2d 811 (D.C. Cir. 1950) (allowing actions for husbands as well as wives); *Borer v. Am. Airlines, Inc.*, 563 P.2d 858 (Cal. 1977) (denying actions to children for loss of parental consortium).

Using that test with respect to competitive harms yields the opposite conclusion. In ordinary situations, competition produces net social gains which cannot be topped by various forms of regulation. Allowing actions for unfair competition that do not involve the use of force or fraud thus reduces overall social welfare. Invoking the notion of malice in these contexts is presumptively a mistake. Stated otherwise, allowing an ordinary action for assault and battery normally has a *positive* impact on the interests of third persons. Yet allowing actions against competitive harms normally has a *negative* impact on those same interests. More precisely, the anticompetitive action produces social losses while the anticoercive action generates social gains. It is only when the discussion turns to common pools and monopolies that there is a positive correlation between allowing suit and the systematic improvement of third parties, so only in those situations should the action be allowed. At this point it becomes clear why the trade cases and the oil and gas case each attracted the use of malice. The former raises the question of monopoly and latter the problem of overextraction. In effect, both types of actions emerge because of the shared perception that a breakdown in bargaining directs the law in the wrong direction. Consumers cannot organize themselves to insist on competition, and landowners cannot organize themselves to limit production. This is why malice turned out to be a poor tool to fill a deep void in the common law structure and why, once specific schemes to regulate common pools and monopoly were developed, malice receded mercifully into the background.

The weakness of these conceptions was not lost on the courts. In *Hague*, for example, the court did not indulge in any dubious presumption that its common law rules, however useful, were beyond improvement through regulatory devices: "Now it is doubtless true that the public has a sufficient interest in the preservation of oil and gas from waste to justify legislation upon this subject."⁶⁷ As the earlier discussion of the *sic utero tuo* maxim pointed out,⁶⁸ the common law rule against invasive nuisances does respond to serious environmental dislocations. But its strength has to be put into context. The move to create strong possessory rights is only a useful first

⁶⁷ *Hague v. Wheeler*, 27 A. 714, 719 (Pa. 1893).

⁶⁸ See *supra* notes 56–62 and accompanying text.

step to controlling abuses along the spatial dimension, which in this instance led to the premature exhaustion of the field. Strong possessory rights are necessary, but not sufficient, to avoid abuses of this sort. The larger logic parallels the changes in the temporal elements of possession. Look for Pareto improvements through regulation, and be skeptical about the ease with which these could be obtained.⁶⁹ And when obtained, the restrictions on each surface owner may impose a taking on some, or even all, members of the group, as I have argued elsewhere.⁷⁰ But, if so, the acid test is whether the overall scheme provides implicit-in-kind compensation by allowing each landowner an appropriate fraction of the resulting gain.⁷¹

II. MOVEMENT INTO THE PUBLIC SPHERE

A. NUISANCE REGULATION

It is now necessary to briefly discuss how these principles translate into a coherent policy of environmental law. In dealing with this issue, one obvious parallel is to public nuisances, a well developed area of law, that arise when a private party pollutes, say, a river or lake that has no private owner, or creates social disamenities that have strong negative effects on large a number of landowners. Here, one possibility allows all riparians or other injured individuals to mount a class action with its immense procedural complexities. Alternatively, the state could sue to enjoin the nuisance, so long as it meets the same requirements for a private nuisance in terms of the level of offense.⁷² The emphasis here should be on substance, and the key rule of transformation from the private to the public space is this: *the state has the same rights, no more and no less, as any private owner under the law of trespass and nuisance.* The

⁶⁹ For a more theoretical account of the process, see Richard A. Epstein, *supra* note 5.

⁷⁰ See, e.g., RICHARD A. EPSTEIN, *SUPREME NEGLECT: HOW TO REVIVE CONSTITUTIONAL PROTECTION FOR PRIVATE PROPERTY* (2008).

⁷¹ For discussion, see EPSTEIN, *TAKINGS*, *supra* note 6, at 219–23. For a case that upheld these statutes, see *Ohio Oil Co. v. Indiana*, 177 U.S. 190 (1899), which on closer examination turned out to skew in favor of gas drillers at the expense of oil owners, for which a public choice explanation about favoring local interests is in fact correct. See Richard A. Epstein, *The Modern Uses of Ancient Law*, 48 S.C. L. REV. 243, 254–58 (1997).

⁷² See, e.g., *People v. Mason*, 177 Cal. Rptr. 284 (Cal. Ct. App. 1981) (allowing state standing to sue for individuals inconvenienced by loud music coming from the defendant's bar).

efficient rules for dealing with private/private interactions set the stage for private/public interactions. The objective is not to expand the definition of nuisance, but to find additional ways to supplement individual lawsuits when they are insufficient to stop the nuisance at hand.

Similarly, air pollution is the combination of many low-level nuisances. Again the social response could use either class actions or direct regulation. But again the procedural issues are second-order. The first-order considerations involve the interaction between damages and injunctions. On this issue, the total elimination of all pollution makes no more sense in the public arena than in the private. The trick is to reduce the pollution to acceptable levels, which are positive and not zero. What that proper level is may often be a subject of dispute. As the discussion of the locality rule suggests,⁷³ higher levels of affluence call for lower levels of pollution. That same principle should apply to public nuisances. And as with live-and-let-live regimes, regional variations in pollution levels make sense if they lead to intelligent groupings of high- and low-intensity activities. Again, modern environmental law should be a sound descendant of ordinary private law principles.

The problems in the public sphere are also compounded by temporal and spatial asymmetries. But again the private law offers useful guidance. If the state wants to impose emissions control on a piggery or a foundry because new development has taken place in the neighborhood, the coming-to-the-nuisance cases supply useful precedents so that these restrictions (subject to a caveat about transitions) could be imposed without compensation, as they generally are.⁷⁴

Yet, in other cases, the temporal and physical asymmetries can lead to major environmental distortions. The Supreme Court case of *Tahoe-Sierra Preservation Council, Inc. v. Tahoe Regional Planning Agency* raised both forms of asymmetry.⁷⁵ The incumbent landowners had built first on hillsides from which excessive runoff polluted Lake Tahoe (known for its dark blue color), resulting in great environmental loss. But which landowners, the early arrivals or the latecomers,

⁷³ See *supra* notes 44–45 and accompanying text.

⁷⁴ See *Hadachek v. Sebastian*, 239 U.S. 394 (1915).

⁷⁵ 535 U.S. 302 (2002).

should bear the heaviest burdens? The principles discussed earlier give a clear clue.⁷⁶ Earlier polluters should receive no preference since that just creates an incentive for them to engage in the nonstop paving that generated the excessive pollution. We thus have a situation where the poor design of rules governing the commons creates an additional environmental risk. If the Planning Agency wishes to force the neighbors to leave their plots unbuilt, or to require them to adopt expensive construction techniques (for example, building on stilts) for modest buildings, they should be required to compensate for regulatory losses imposed. Why? To create the proper rate of substitution between early- and late-users, which eliminates this environmental distortion. Thus if the early builders laid down extensive asphalt of little value, they will dig that up and restore the land to its original condition rather than pay a fortune to block a neighbor from using a buildable lot. But the Supreme Court, which revealed no grasp of these intertemporal issues, upheld the extra regulatory burdens on the latecomers, giving no one any incentive to undo any inefficient overdevelopment.⁷⁷ This broad use of regulatory power thus creates an enormous risk of implicit transfers between different parties subject to a unified regulatory scheme, which puts real pressure on the twin issues of takings and just compensation, discussed next.

B. TAKINGS AND JUST COMPENSATION

Any system of public enforcement should respect the difference between nuisances that may be enjoined as of right and land use restrictions that private parties must acquire by easement (to cause nuisances to neighbors) or covenant (to enjoin conduct, such as that pertaining to air and light). This one principle has enormous implications for the entire field of environmental law because it reduces the range of cases in which state regulation should be allowed without just compensation to the aggrieved owner.

First, should the state be able to impose height- and setback-restrictions on individuals in order to improve the views or light of others? To resolve this question, we have to distinguish between

⁷⁶ For further elaboration of this view, see Richard A. Epstein, *The Ebbs and Flows in Takings Law: Reflections on the Lake Tahoe Case*, 1 CATO SUP. CT. REV. 5, 23–28 (2002).

⁷⁷ See *Tahoe-Sierra*, 535 U.S. 302.

two cases, recognizing that some intermediate cases will occur. The first situation involves the so-called “average reciprocity of advantage” where each party benefits from the restrictions imposed on others.⁷⁸ At that point, the regulation itself contains, as I am fond of saying, *implicit-in-kind* compensation. All group members are left better off than before, so that the regulation overcomes the transactional obstacles that prevent cooperation without disadvantaging some individuals for the benefit of others. The prospect of uniform improvement across all class members thus sharply reduces the danger of factional struggle. It also gets a better judge of environmental amenities for, in the typical case, the new construction that blocks the views of people who live elsewhere also creates new views, and hence new environmental amenities for the persons who live in the new structure. Typically, we can be confident that the established owners will not be willing to pay to stop the new construction, the value of which reflects the views that would be created for its new tenants. From that position we can infer that the total value from both plots of land is greater if each can build. In order to prevent premature construction solely to protect future rights, the proper response is that no person gets to limit the construction on a neighbor’s land solely by making like use of his own first. Freed of that strategic risk, parties can wait to develop land until the time to do so is optimal.

In the second situation, the regulations hurt some landowners but help others. Now the danger is that cohesive interest groups will seek through regulation—for which they pay nothing—benefits that would require compensation if done privately. No private landowner can tell his neighbor not to build in ways that block his view of the sea. Why then allow a zoning ordinance to achieve that result in the public arena, without paying compensation?

In principle, of course, there is a sensible justification for *some* zoning laws; they replicate the outcomes from a sound system of easements and covenants in circumstances where high transaction costs prevent their voluntary creation. But here is the stern warning that goes with the program: in practice, this result can—“will” is always too strong—be achieved only if the political process could duplicate the results that are achieved in private planned-unit developments, where

⁷⁸ See *Pa. Coal Co. v. Mahon*, 260 U.S. 393, 415 (1922).

unanimous consent is routinely obtained. It is just at this point where public processes diverge from private ones. Zoning rules are imposed through majoritarian processes. If they are not constrained by any form of constitutional restriction, nothing prevents the zoning boards from imposing regulations that do not create overall improvements, but create instead transfers from one group to another through political clout. That result can happen if restrictions prevent a new development by one landowner that could go into economic competition with those that exist, causing a predictable decline in social welfare. It could also lead to forms of environmental dislocation if certain landowners are exempt from sensible controls that are applied to others.

There is only one approach that offers some counterweight to the zoning difficulty, which is to subject the winners of these implicit wealth transfers to an explicit just compensation requirement, measured by the net loss in land value to members of the losing faction. That financial requirement means that the winners will be forced to take into account the position of the losers, which creates a fair chance that one would recreate the same set of overall improvements that private developers achieve when they use these covenants. Of course, the antinuisance prohibitions should remain in effect, but these are typically not hot-button issues in these zoning cases, where new entrants never come within a country mile of a violation of the common law rules. The shift in arenas should not put the development rights of all landowners up for grabs in the political process. The no-compensation rule also aggravates all the temporal issues by giving the first to build a first-mover advantage over the second, which the private law has systematically denied, and for good reasons. Hence the basic rule should enjoin regulations with disproportionate impact unless the losers receive full compensation. That compensation rule has more than simple distributional effects. It also sets prices and creates incentives for beneficial political behavior, thereby applying rules that work in the private sector.

This general approach questions today's dominant view that allows regulations—without compensation—to restrict the ability to build ordinary homes in coastal areas, to require habitat to be set aside for endangered species, to limit construction in or drainage of wetlands, and to require no-growth or development zones.

The objection here does not go to the *Kelo*⁷⁹ question of whether these regulations may be imposed. We can freely concede that the regulations are intended to advance a public use. But the absence of compensation encourages government regulators to push for regulation with positive value to a political majority because the regulators will perceive any cost to the regulated parties as carrying a zero price. Yet any sound social calculus cannot ignore costs to the losers and look solely at gains to the winners. Nor can local governments excuse themselves on the ground that they cannot afford to pay for changes they need, given their taxing power. Any undue concern for the uncompensated loss of amenities for the public has to make peace with the disproportionate impact that local governments wish to throw on individual landowners who do not have the taxing power to ease their burdens. The takings law is intended to induce responsible political decisions, which won't happen if all losses that are compensable as between citizen and citizen become uncompensable as between citizen and state.

This concern is not just theoretical, and a real life story helps put matters into context. In the famous 1992 decision *Lucas v. South Carolina Coastal Council*,⁸⁰ the Court struck down a regulation that prohibited a landowner from building on coastal dunes when it reduced the value of a plot from \$250,000 (a real social loss) to zero. In consequence, the Coastal Council was required to purchase the land outright for its market value. It now had to internalize the full costs of its decision. What did it do next? It sold the land, of course. And to whom? Not to the neighbor who would pay \$150,000 because he could use it as a side yard, but to an outsider, for the full \$250,000, who was allowed to build (as Mr. Lucas, the original landowner, had intended to do). The moral: talk here is cheap, but taxation is not. People will talk expansively about benefits they get from quiet and solitude, but not when they have to pay for them by raising taxes. Put otherwise, the power of any community to tax for its benefit necessarily eliminates the claim that these programs should be allowed to go forward without compensation, which is the only way to get

⁷⁹ *Kelo v. City of New London*, 545 U.S. 469 (2005).

⁸⁰ 505 U.S. 1003 (1992).

an honest revelation of value. And that is what environmental law is about: getting the right incentives, by following the patterns developed with care and sensitivity to private disputes.

III. CONCLUSION

The purpose of this essay has been to explore the effect of sound systems of property rights on matters of environmental concern. The development and protection of private property rules was often done for reasons that had little explicit connection to modern notions of environmental protection. But that hardly means that they did not make contributions to the overall improvement of environmental conditions through the use of damages and injunctions under common law principles, which they did. The initial stage in this evolution was the recognition that possession taken today would last forever until it was transferred or abandoned. That one rule cut out many of the perverse incentives that lead parties in possession to wreck the land. Instead, with long-term ownership, patterns of use and disposition take into account future values along with present ones. The next key stage of development involved the articulation of principles for trespass and nuisance to deal with cases between neighbors. The easier situations are those which operate in conditions of rough parity. But further modifications can take into account asymmetrical cases between neighbors by the use, for example, of such techniques as the coming-to-the-nuisance defense. And, lastly, common owners who are able to coordinate their activities can develop rules and institutions that allow them to deal with the common-pool problems that they face, be it with the medieval semicommons or the nineteenth century oil and gas field.

The development of these rules, of course, does not create a social optimum, for three reasons. First, common law judges often get lost in the complexity of the situations, as evidenced by the uneasy effort to resolve these disputes by appealing to principles of malice that have little traction in this area. Second, the widespread diffusion of nuisances can neutralize the effect of ordinary private rights of action, which in turn calls for the introduction of different procedural devices, such as public nuisance suits and direct regulation. Third, while none of these rules show that the movement from the state of nature to common law reduced social value, they do show

that the rules have not exhausted the potential level of social improvements that are available through government intervention. Yet here the risk of public choice breakdown is serious, and that breakdown carries with it the risk of both competitive dislocations and environmental reversals, for which a sensible but insistent system of takings rules offers the best line of defense. Forcing the government to compensate for takings will ensure that it follows the efficient principles that have been developed to regulate the actions of private parties. In a sentence, the sound principles of limited government are better able to meet the challenges of environmental protection than any alternative theories that can be identified in the welfare state.