

## When Should We Prefer Tort Law to Environmental Regulation?

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There are two broad models of regulation: statutory schemes carried out by administrative agencies with the help of public enforcement agents, and highly discretionary common law rules developed over time through litigation. Environmental regulation is dominated by the first model, with relatively little of it done through litigation of tort claims. The reason may be largely historical: tort law has always been viewed as local in design and impact, while environmental law has always had a global aim. But it need not be this way. More than anything, tort law has been flexible, and thus capable of responding to new problems.

I will argue that tort law has some important properties that make it superior to statute-based regulatory schemes as a system of environmental protection. In the end, I will not argue that environmental law should be scrapped in favor of tort law. However, I hope to lay out some general rules for determining where tort law is potentially superior to statutory regulation.

### I. ENFORCEMENT REGIMES

Law enforcement regimes can be grouped into the public or private category, where public involves government enforcement agents, and private involves suits brought by citizens. These categories can be broken down further. Public enforcement can be geared toward requiring compliance with a set of conduct rules, or simply charging taxes or prices for every rule violation. Robert Cooter once described the choice as between “sanctions” and “prices.”<sup>1</sup> Under the sanctioning approach, the enforcement authority demands compliance with a particular rule, perhaps under the threat of incarceration. Under pricing, the enforcement authority leaves it up to the individual to decide whether he will comply, as long as he pays the price for non-compliance. This gives us two types of public enforcement regimes: public with controls, and public with prices.

The private enforcement category includes two important subdivisions. The state can grant private rights of action to collect damages from the entity responsible for a particular harm without requiring proof of illegal conduct. This is private enforcement with prices, and

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1. Robert Cooter, *Prices and Sanctions*, 84 COLUM. L. REV. 1523 (1984).

is commonly referred to as strict liability. The alternative is what we see more often in the common law; the right to sue for violations of common law rules, such as negligence, or nuisance, or defamation. This also involves prices, but the pricing rule is more complicated. In order to collect damages under most common law actions, the plaintiff has to prove that the defendant violated some conduct norm. This gives us two types of private enforcement regimes: private with strict liability, and private with conduct norms.

My rough categorization of enforcement regimes can be applied immediately to the regulation of environmental damage. The existing regulatory framework in the U.S. is much closer to the public-with-controls category than to the other three.<sup>2</sup> We have environmental statutes and administrative rules that specify emission levels for environmental pollutants, and enforcement agents that monitor compliance with specific emission requirements. A firm could, in theory, violate the rules and pay the fines, but the whole structure of environmental regulation has been aimed toward commanding compliance with rules rather than paying the price and getting on with your business. How would environmental regulation be implemented under the other three general categories?

Public-with-prices environmental regulation would require the government to determine the monetary costs of injuries connected to environmental harm. Thus, if an identified level of groundwater contamination raised the cancer rate by five percent, the government would determine the cost of this unit – in terms of forgone earnings, enjoyment of life, and other losses connected to cancer. Monitors who discover instances of contamination would simply tax the responsible firm an amount that internalizes this cost. Under this system, firms would be able to pay the price and get on with business. If the benefit to the firm (in terms of cost savings or increased revenue) of contaminating the ground water were greater than the harms imposed on others, firms would pay the price and continue to pollute. From a cost-benefit perspective, this result would be optimal: firms would pollute when, and only when, the benefits to them outweigh the costs to others. This regime would require a quite different regulatory philosophically from what we have today.

Now let us consider the private enforcement regimes. Private with strict liability would, as I suggested earlier, allow anyone harmed by environmental damage to sue for the amount of his harm. There would be relatively little inquiry in this system into whether the defen-

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2. For an analysis of the reasons why command-and-control dominates, see Nathaniel O. Keohane et al., *The Choice of Regulatory Instruments in Environmental Policy*, 22 HARV. ENVTL. L. REV. 313 (1998).

dant violated any particular legal standard regarding conduct. Ideally, this system would be equivalent to the public-with-prices regime. Knowing that they would have to pay the price for any harm, firms would pollute when and only when the benefit to them exceeded the harm to potential victims. Some might argue that the common law fits under this category, but I will argue below that it does not. Pure strict liability, in the sense that the potential defendant “acts at his peril,” is not observed in the common law.

The second private enforcement category, private-with-conduct norms, encompasses the common law. The common law rules governing environmental damage are primarily trespass, nuisance, and the *Rylands*-based (strict liability for abnormally dangerous activities) case law. Of these areas, trespass is the only one that approximates strict liability, though even here there has been a traditional requirement that the defendant be aware of his conduct and that it be voluntary. The nuisance and *Rylands* case law have developed rules, such as locality and coming-to-the-nuisance, which make liability for environmental damage far from strict. The primary difference between the common law regime and the hypothetical strict liability regime is that the common law involves a detailed inquiry into the defendant’s conduct or general activity.

The issues generated by these categories are pretty straightforward. First, is public enforcement preferable to private enforcement? In other words, are any of the two public regimes likely to be preferable to the two private regimes? Second, which type of private enforcement regime is preferable, strict liability or liability under conduct norms?

## II. THE CASE FOR PUBLIC ENFORCEMENT

Why should we have public enforcement at all? Probably the strongest argument is that a desirable degree of deterrence can be achieved only through public enforcement in some cases.<sup>3</sup> Suppose, for example, a firm carries drums of toxic chemicals across town and dumps them into a river in the middle of the night, when no one is around to see. People who live downstream are hurt, but they have no way of figuring out who is the responsible party. Suppose the likelihood of the responsible firm being caught is only one percent. Suppose the total harm suffered by victims is \$1 million. The firm’s

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3. For a brief discussion of the reasons for public enforcement generally consistent with the argument here, see A. Mitchell Polinsky & Steven Shavell, *The Economic Theory of Public Enforcement of Law*, 38 J. ECON. LITERATURE 45, 46 (2000). The Polinsky and Shavell review largely examines the optimal approach to public enforcement rather than the reasons for public enforcement.

expected penalty under a private enforcement regime (in which victims sue for the losses) is at most \$10,000.

Public enforcement is potentially superior in this scenario for several reasons. First, public enforcement agents can be paid to undertake the sort of investigation that private plaintiffs would be unwilling to make on their own. If there are one hundred victims in my “Midnight Dumper” scenario, so that the harm per victim is \$10,000, then no one would invest more than this amount into determining the identity of the chemical dumper. Moreover, given the high likelihood that the first person who identifies the dumper would be followed by ninety-nine others who would sue for the same harm, each victim has an incentive to wait for someone else to take on the cost of identifying the dumper. Public enforcement avoids these problems and therefore raises the likelihood of detection in cases involving low-detection-probability harms.

Second, suppose everyone knows the identity of the dumper, but the cost of bringing a lawsuit is \$10,000. In this case, even though every victim knows who dumped the chemicals, no one will bring a lawsuit because the maximum net award would be zero. Since no one will sue, the dumper’s expected liability is zero. Of course, the courts could permit a class action suit in this example, which is one way of solving the problem of low prosecution incentives. But some victims may choose not to join the suit and not to sue individually, and the lawyer may sell out his class for an inadequate settlement in return for a large fee. Public enforcement is an obvious alternative that could be preferable.

The third argument for public enforcement has to do with the size of the punishment. Again, assume the probability of detection is low, and yet the victims somehow identify the dumper. They all sue and each one collects his \$10,000 damage award. Is everything fine in this scenario? No. In order to deter future violations, punishment levels should be set so that the expected liability to the dumper is substantial. If the probability of detection is only one percent, total damages should be set at \$1 million per victim in order to raise expected liability to \$1 million, a level that equals the expected harm. At this level, the dumper would be deterred from dumping whenever his private benefits were too small to make it worthwhile for him to both pollute and compensate all of his victims in full. In theory, courts could achieve this result by awarding punitive damages in each case. But punitive awards are based on the defendant’s conduct (intentional,

malicious), not on the probability of detection.<sup>4</sup> Though conduct and detection probabilities are likely to be related, since people who harm intentionally will try to hide their activity, we cannot be sure that ordinary standards for punitive awards will be appropriate for the low-detection-probability case. Public enforcement is theoretically superior in this case.

More generally, public enforcement appears attractive whenever the probability of punishment under a private regime appears to be low. The probability of punishment is the product of three other probabilities: the probability of detection, the probability of prosecution (given detection), and the probability of punishment (given detection and prosecution). We see public enforcement of many common law crimes, such as murder, precisely because the probability of punishment is low under a private regime. Murderers are likely to hide their work, making detection difficult. Moreover, under a private enforcement regime, a murderer would have an incentive to kill off all of the people who would have an incentive to sue (family members of the target). Finally, given the low detection and prosecution probabilities, the damages assessed in the end in successful prosecutions would be far too small to serve as an adequate deterrent to future murderers.

As the Midnight Dumper example suggests, environmental regulation appears to be an ideal area for public enforcement. Detection probabilities are often low. If your well water has been contaminated, would you know whom to sue? Probabilities of prosecution conditional on detection are not generally subject to manipulation, as in the case of murder. However, given the widespread nature of the harms, a “Prisoner’s Dilemma” will often be observed at the enforcement stage. Each victim will have an incentive to wait for some other victim to bear the cost of bringing the first action. Moreover, if the cost of suit is substantial, a large percentage of the victims may never have an incentive to sue. Finally, simple compensatory damages may be insufficient in these cases to provide the appropriate level of deterrence, given the low level of detection.

Whether public enforcement should take the command-and-control or pricing approach is less clear, though this argument leans in favor of pricing. The pricing approach should require less information gathering by administrative agencies if those agencies have to monitor conduct at a detailed level — e.g., monitoring emission levels. In addition, it has the benefit of not leading to “inefficient enforcement”

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4. For a proposal to base punitive awards on the probability of liability, see A. Mitchell Polinsky & Steven Shavell, *Punitive Damages: An Economic Analysis*, 111 HARV. L. REV. 869 (1998).

where the costs of compliance are far greater than the benefits. On the other hand, the pricing approach can be difficult to enforce since it may require more information in some cases than is required under control schemes. It may be much cheaper to simply demand that a firm stop exceeding an emission standard than to find the price that internalizes the appropriate level of external costs. I will return to this later.

### III. TWO ARGUMENTS FOR THE COMMON LAW REGIME

Though the case seems straightforward for public enforcement, there are two powerful countervailing arguments for private enforcement. I think they dissolve the basis for any presumption favoring public enforcement, and provide a case for preferring the common law regime in some areas,<sup>5</sup> suitably updated.

#### A. *Malfeasance*

Public enforcement agents do not always have the right incentives. They are motivated by paychecks and promises of promotion within the public enforcement agency. However, unlike private plaintiffs' lawyers, there is no strong connection between their interests and those of the potential victims they are supposed to protect. Public enforcement agents are vulnerable to bribery from third parties or from the class of offenders they are supposed to monitor. To use Jensen and Meckling's terminology, there are substantial "agency costs" in the public enforcement system.<sup>6</sup>

One solution to the enforcer malfeasance problem was proposed by Gary Becker and George Stigler:<sup>7</sup> a scheme of private enforcement in which enforcement agents collect fines directly from offenders could be superior to the ordinary approach of salaried public enforcement agents. If the fines were set at the right level, the result would be optimal in the sense that potential offenders would violate the law only when their benefits exceeded the costs to others, and agents would not dilute the deterrence effect of enforcement by accepting bribes.

How does this work? Return to the Midnight Dumper hypothetical. The appropriate fine per injury, recall, is \$1 million. If we multiply \$1 million by one percent, we get \$10,000, which is the monetary

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5. For a strong version of the argument in favor of the common law, see Roger Meiners & Bruce Yandle, *Common Law and the Conceit of Modern Environmental Policy*, 7 *GEO. MASON L. REV.* 923 (1999). I agree with most of their argument, though my conclusions differ in some respects from theirs.

6. Michael C. Jensen & William H. Meckling, *Theory of the Firm: Managerial Behavior, Agency Costs and Ownership Structure*, 3 *J. FIN. ECON.* 305, 308 (1976).

7. Gary S. Becker & George J. Stigler, *Law Enforcement, Malfeasance, and Compensation of Enforcers*, 3 *J. LEGAL STUD.* 1 (1974).

level of harm in each case of injury. Imagine a system in which private enforcement agents are authorized to collect this fine for each injury they identify. Suppose the Midnight Dumper sees the private enforcer approaching his doorstep to serve him with a fine assessment. Midnight Dumper might try to bribe the enforcer by offering to pay him a substantial amount, say \$5000. Under the traditional public regime, a salaried public enforcement agent might accept the \$5000 and agree not to bother the dumper. Under the private regime the enforcer will not accept a bribe less than \$1 million. If Midnight Dumper chooses to bribe the enforcer by paying him \$1 million, then he has effectively paid the right level of the penalty. In other words, bribery is not a problem in the privatized enforcement regime.

We do not have a system in place that is a precise mirror image of the privatized enforcement regime I just described. However, private enforcement through tort litigation comes closest to this system. Although damages are not set by courts in order to correct for low detection probabilities, there is a fair chance that the damage levels set for these cases come close to the amount required to provide the appropriate level of deterrence. Offenders who hide their conduct (midnight dumping) are likely to be found by the court to have acted intentionally, which would justify a punitive award. As long as the punitive award is sufficient to wipe out any gains the tortfeasor may have gotten from midnight dumping, the litigation process will have worked as a deterrent.<sup>8</sup> There is evidence that punitive damage awards are aimed to wipe out tortfeasors' gains.<sup>9</sup>

Moreover, the private litigation system has the desirable property that overzealous (and potentially arbitrary) enforcement is unlikely to occur. By overzealous enforcement, I refer to the case in which enforcement agents spend \$1 million to stop a harm that costs \$10,000.

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8. One can easily find a justification here for novel approaches to damage awards, such as the notion of restoration damages. Consider the following example, described by Allan Kanner in his Ahrens seminar presentation. Suppose a firm faces the following choice: spend \$20 million to dispose of some chemical in a manner that complies with environmental regulations, or simply dump the chemical into the river, causing a loss of \$3 million to downstream property owners. The cost-minimizing course of action is to dump the chemicals into the river and let the property owners sue for their damages. Many would object to a scheme that provides merely compensatory damages to the downstream property owners, because that would in effect allow the polluting firm to condemn private property. But if we view the polluting firm's conduct as intentional, then a court would have a strong justification for awarding punitive damages to the plaintiffs. If the punitive award is designed to eliminate the gain to the tortfeasor, it would be set at a minimum of \$17 million in this example. However, the court could eliminate the defendant's gain and improve the plaintiffs' position by imposing restoration damages – the amount necessary to restore the plaintiffs to their position before the defendant dumped chemicals into the river. Alternatively, if restoration costs less than \$17 million, the court could improve the positions of both parties by offering the firm the alternative of paying restoration damages. Allan Kanner, *Toxic Tort Litigation in a Regulatory World*, 41 WASHBURN L.J. 535 (2002) (presented at the Ahrens Advanced Tort Seminar, Washburn School of Law, Fall 2001).

9. For the general argument that this is what punitive damages are designed to do, and specific examples in the case law, see Keith N. Hylton, *Punitive Damages and the Economic Theory of Penalties*, 87 GEO. L.J. 421 (1998).

The risk regulation literature has already shown that such cases exist: Viscusi and Hamilton found that the average cost per cancer case averted at a Superfund site is more than \$10 billion.<sup>10</sup>

How does the litigation system avoid the overzealous enforcement problem? The problem of overdeterrence — of forcing potential tortfeasors to spend \$1 to avoid a harm of ten cents — is handled very easily through liability rules. If the Midnight Dumper knows that his expected liability for dumping is \$1 million (which is the true harm), he will try to find a less expensive way to dispose of the chemicals. However, he will not spend \$10 million to avoid the harm.

In addition to overdeterrence, there is another feature of overzealous enforcement that private litigation avoids. I will call this second feature the *Bleak House* phenomenon.<sup>11</sup> I am referring to the case in which the *enforcement procedures* cost more than the harms they are designed to regulate. Just as the lawyers in Dickens' novel exhausted an estate with endless motions and arguments, a public or private enforcement system can become a full employment program for lawyers and regulators. Although the private litigation system is vulnerable to this critique, it is less so than the public enforcement system. The reason is that private enforcers are capable of waiving their rights *ex ante* (i.e., before any harm occurs) or agreeing to a cheaper dispute resolution forum and they, unlike public enforcement agents, have socially correct incentives to do so.

To see this, suppose the cost of legitimate disposal is \$5000 (per injury case) for the Midnight Dumper. If he were strictly liable for each injury, he clearly would choose to dispose legally rather than dump illegally — since the former costs \$5000 (in compliance costs) and the latter costs \$10,000 (in liability). Now suppose that the enforcement system also imposes “monitoring costs” on the firm of \$10,000. In other words, even if the firm disposes of the chemicals legally, it must still pay (on a per injury basis) \$5000 in avoidance costs and \$10,000 in monitoring costs. If the firm disposes illegally it will have to pay \$10,000 in damages (per injury) and an additional \$15,000 in inspection and defense costs. In this case the firm will have an incentive under private enforcement to pay potential enforcers/victims up front in exchange for an agreement either waiving the victims' legal rights or setting up a less expensive enforcement system. Note that if the firm dumps illegally, its cost will be \$25,000.<sup>12</sup> If it does not dump,

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10. W. Kip Viscusi & James T. Hamilton, *Are Risk Regulators Rational? Evidence from Hazardous Waste Cleanup Decisions*, 89 AM. ECON. REV. 1010, 1021 (1999).

11. See Keith N. Hylton, *Agreements to Waive or to Arbitrate Legal Claims: An Economic Analysis*, 8 SUP. CT. ECON. REV. 209 (2000).

12. The sum of \$10,000 in liability and \$15,000 in defense costs.

its cost will be \$15,000.<sup>13</sup> Clearly, the firm will choose compliance over dumping. But a superior choice for all parties is to sign a contract in which the potential victim-enforcer accepts \$11,000 in exchange for an agreement not to bring a claim. This is the best choice for both the potential injurer, who saves \$4000, and the potential victim, who gains \$1000.

The overdeterrence problem can be solved, as this discussion suggests, by switching from a public-with-controls to a public-with-prices (or taxes) regime. That has been the traditional case for regulating through taxes rather than command-and-control regimes. The argument for the common law regime advanced here goes a bit further. The novel part of this argument is that the *Bleak House* problem can be solved also, while at the same time providing private enforcers with appropriate incentives to hunt down and prosecute violations. The private litigation system has both advantages over the public enforcement systems.<sup>14</sup>

I have described the public malfeasance argument in terms of enforcement incentives. However, the malfeasance problem goes quite a bit deeper, and this suggests another argument in favor of the common law regime. Consider the framing of a regulatory system. The common law regime gave us a flexible, undefined structure. There are general rules in tort law, but no bright lines saying that certain types of injury cannot be brought into court.<sup>15</sup> The statutory process has more structure and definition, and often involves rules specifying the claims that can be compensated or conduct that will be immunized from liability.

This difference, between a system governed by the actions of private parties operating under general principles and a system controlled by certain actors framing targeted rules, makes the statutory regime relatively vulnerable to a deeper type of malfeasance problem. The firms who are likely to be regulated by a certain type of law — an environmental statute — have every incentive to bribe the legislators in order to shape rules to their liking. The legislators are motivated, as always, to meet the demands of their constituents. But constituents cannot see the fine print in legislation, while concentrated interest groups, specifically the regulated firms, can. This system is likely to

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13. The sum of \$5000 in compliance costs and \$10,000 in inspection costs.

14. This is a response to the argument that public-with-controls is potentially superior where the cost of enforcing a public-with-prices regime is relatively high. See EDWARD L. GLEASER & ANDREI SHLEIFER, A CASE FOR QUANTITY REGULATION (HIER Discussion Paper No. 1909, 2001), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=256743](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=256743). My disagreement with the Gleaser and Shleifer argument is that the probability of determining compliance is often endogenous, in the sense that it depends on the incentives to find violations. The private system is potentially superior because it rewards enforcers for finding violations.

15. Richard A. Epstein, *The Social Consequences of Common Law Rules*, 95 HARV. L. REV. 1717 (1982).

produce regulatory legislation that seems on its face to impose harsh controls while under the surface providing significant protective shields to the regulated industry.

This is arguably what has happened in the case of tobacco regulation. Although tobacco companies have been taxed and regulated (e.g., advertising) for several decades now, I don't think anyone believes that they were under any serious threat of being forced to make significant changes in their conduct under the statutory regulation regime. They had made their peace with Congress and the state legislatures, and they did not anticipate substantially stricter regulation or higher taxes. This state of affairs changed only when tobacco became a major subject of tort litigation in the past three years.

More generally, the statutory scheme is one in which we should anticipate laws that favor pressure groups over dispersed, unorganized parties. We should not assume that the regulations will burden well-financed industry pressure groups, such as tobacco. We should assume that dispersed landowners will lose out relative to organized environmental lobbies, as many have claimed happened with endangered species protection.

### B. *Information*

The second argument for the common law regime owes a great deal to Hayek, who saw better than anyone else the importance of decentralized schemes to the discovery of private information. Intelligent regulation has a utilitarian basis. It does not require people to spend \$5 to avoid losing \$1. Yet, in order to implement a utilitarian-defensible regulatory regime, we need information that is in the hands of private parties. Public enforcement agents cannot obtain enough information to design an intelligent scheme without access to private information.

To see the importance of private information in an intelligent regulatory design, take the simple case of negligence. Under the famous Learned Hand formula, a defendant will be held negligent if the burden of precaution is less than the avoided harms. In medical malpractice, courts generally follow the custom of the profession rather than trying to compare the (untaken) precaution burden with the avoided harms.

As Holmes suggested and Posner later argued explicitly, the negligence system is a large regulatory scheme that has worked with some success.<sup>16</sup> Negligence liability works as a deterrent and it has not

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16. For Holmes' arguments, see his chapters on tort law in OLIVER WENDELL HOLMES, *THE COMMON LAW* (Mark DeWolfe Howe ed., 1967) (1881). For Posner's view, see Richard A. Posner, *A Theory of Negligence*, 1 J. LEGAL STUD. 29 (1972).

driven legitimate activity out of the country.<sup>17</sup> The crucial feature that I want to highlight is its reliance on private information. The plaintiff knows more about his injury than any other party. The defendant knows more about his burden of precaution than anyone else. The negligence system gives both parties an incentive to persuade the court that their version of the appropriate regulatory rule is appropriate. Courts use their common knowledge, as well as information provided by the parties, to decide which parties' version is more persuasive, and to determine general conduct norms that will apply to future cases. In some cases, such as custom, a bright line rule favoring some defendants has emerged. In others, e.g., *res ipsa* doctrine, a rule favoring plaintiffs has emerged.

What emerges from negligence litigation is a set of conduct norms that are shaped by the private information of parties. Although courts decide only the individual cases in front of them, the decisions create precedents that shape specific conduct norms that apply to future cases. A decision that a firm, or a professional, is not negligent in conforming to industry custom is both a regulatory rule and a judgment based on an assessment of private information in one case. The court's decision to uphold the custom is inseparable from its examination of the information brought in by the parties.

A public regulatory scheme could not hope to match the negligence system in terms of its scope, detail, and encapsulation of private information. To do so would require public agents to discover *ex ante* how much a potential victim would be hurt by a specific injury, and how much it would cost a potential injurer to avoid the injury. Even if the parties were able to provide this information *ex ante*, their incentives to do so honestly would be weak.

The common law approach to environmental regulation, in large part embodied in nuisance law, reflects considerable sensitivity to private, local information. Nuisance law can be criticized for being too local, in the sense that it does not aspire to create general regulatory rules, such as emission standards. On the other hand, almost all reliable information is probably local. Nuisance law holds a defendant liable only when he has "unreasonably interfered" with the use and enjoyment of land by another. The unreasonable interference test ap-

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17. There are several good empirical papers demonstrating the deterrent effect of liability. For the most recent, and perhaps the best, see J. David Cummins et al., *THE INCENTIVE EFFECT OF NO FAULT AUTOMOBILE INSURANCE* (Working Paper, Feb. 26, 2001), available at [http://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=262304](http://papers.ssrn.com/sol3/papers.cfm?abstract_id=262304). See also Frank A. Sloan et al., *Liability, Risk Perceptions, and Precautions at Bars*, 43 J.L. & ECON. 473 (2000) (evidence that tort liability affects monitoring of drinkers by bar operators); Scott E. Harrington & Patricia M. Danzon, *Rate Regulation, Safety Incentives, and Loss Growth in Workers' Compensation Insurance*, 73 J. BUS. 569 (2000) (empirical evidence that insurance rate regulation impacts accident rates); Elisabeth M. Landes, *Insurance, Liability, and Accidents: A Theoretical and Empirical Investigation of the Effect of No-Fault Accidents*, 25 J.L. & ECON. 49 (1982).

pears to balance externalized benefits and externalized costs of the nuisance-generating activity.<sup>18</sup> Where there is reciprocal exchange, because the externalized benefits equal or exceed the externalized costs, courts do not find the interference unreasonable.<sup>19</sup> Courts find unreasonable interference only when reciprocity is violated because the externalized costs far exceed the externalized benefits. Nuisance doctrine looks into the utility to the locale of the underlying activity in comparison to its costs, the capacity of the plaintiff to bear the loss, whether the defendant's activity is common in the locale, the priority in time among competing activities, and the nature of the rights invaded.

In the standard case of the smoke-belching factory, nuisance law is designed to take private information into account. It has never been stated with the clarity found in negligence doctrine (due to Learned Hand's *Carroll Towing* opinion), and this has been a source of controversy. However, like negligence, it examines the plaintiff's proof of harm, which requires provision of some private information. The test, unlike negligence, seems to instruct courts to offset those harms by the unpaid-for benefits plaintiffs get from being in the same locale as the nuisance generator. Thus, under both nuisance and *Rylands* doctrine, courts refuse to find defendants liable when they deem their activities to be sufficiently valuable to the locale. No court has ever explained what this social utility comparison means, but the only sensible interpretation I can give to it is that it instructs courts to offset expected interference costs by the expected benefits externalized by the firm. This gives the firm an incentive to provide information to the court on the cost to itself and to the locale if it were forced to reduce the scale of its operations. And since nuisance litigation takes place in an adversary setting, the opposing party has an incentive to provide private information to the court challenging the cost-benefit assessments of a litigant.<sup>20</sup>

The externalized costs of a nuisance are obvious. The externalized benefits are not obvious, though courts have referred to them indirectly in many decisions. In the case of the smoke-belching factory its presence attracts factory customers and suppliers. This provides an external benefit to other businesses in the same locale that

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18. Keith N. Hylton, *A Missing Markets Theory of Tort Law*, 90 Nw. U. L. REV. 977 (1996).

19. *Id.* at 993-1002. For an analysis of pollution that focuses on the reciprocity issue, see Thomas W. Merrill, *Golden Rules for Transboundary Pollution*, 46 DUKE L.J. 931 (1997).

20. Though dealing with a different problem, one of Merrill's arguments for a reciprocity norm in transboundary pollution disputes is that it forces out more private information. My suspicion is that the arguments in favor of the reciprocity norm applied in nuisance disputes extend to the case of transboundary pollution (and conversely). A more general attack on the issue would show that both pollution problems, within- and across-boundary, can be regulated under the same nuisance principles appropriately modified.

rely on some of the customers or suppliers of the factory. For these other businesses, the demand for their goods and services increases and the cost of procuring supplies and employees falls. Indeed, the external benefit may take the form of the lower costs all parties incur when they agree to accept reciprocal low-level invasions without resorting to litigation. The same is true of families living in the area: their wages rise and their living costs, measured as the cost of finding items in a standard consumption basket, falls. The benefits to businesses and consumers can be described as agglomeration externalities, and they can be priced.<sup>21</sup>

*Rose v. Socony-Vacuum Corp.*,<sup>22</sup> one of the cases taught in first year torts courses, serves as an example of how courts apply the unreasonable interference test. Waste substances from the defendant's oil refinery escaped from the defendant's land by underground percolation. As a result, the well and stream on the plaintiff's land became polluted with gasoline, and some of his farm animals were killed. The court held that the interference was not unreasonable given the knowledge, locality, and social value components of the nuisance test. The court noted that the plant was "situated in the heart of a region [that is] highly developed industrially" and that "individual rights recognized in a sparsely settled state have to be surrendered for the benefit of the community as it develops and expands."<sup>23</sup> Although the plaintiff's injury was substantial, the court's conclusion that there was no unreasonable interference is justifiable on the ground that *in expectation*, there probably was a reciprocal exchange of low level invasions among the activities in the plaintiff's locale. If the plaintiff's activity, farming, was unusually sensitive given the locale, the plaintiff would have no right to claim damages under nuisance doctrine.

Although nuisance law does not aim to generate global emission standards, nothing in this framework suggests that this could not be the result. As a population grows richer, it will demand more in terms of environmental quality. The comparison of expected externalized costs and externalized benefits will change over time in favor of stricter regulations on smoke-belching factories. In this sense nuisance law can be viewed as a regulatory framework that encourages development in early phases, and then places greater restrictions later as the demand for environmental quality increases.

I noted that nuisance doctrine is controversial, and the same is true of *Rylands* doctrine, because both involve a social utility evalua-

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21. See, e.g., Paul Krugman, *Increasing Returns and Economic Geography*, 99 J. POL. ECON. 483 (1991). For a more recent contribution to the literature on the economics of industrialization, see Edward L. Glaeser & David C. Maré, *Cities and Skills*, 19 J. LAB. ECON. 316 (2001).

22. 173 A. 627 (R.I. 1934).

23. *Id.* at 631.

tion that many courts and commentators find troubling. The problem here, in my view, is not so much what courts have done, but their failure to explain what they have been doing. Nuisance law suffers from not having had a Learned Hand do for it what he did for negligence law.

Because of the squeamishness observers have about the social utility component of nuisance and *Rylands* doctrine, the American Law Institute is in the process, in the Restatement (Third) drafts, of weeding it out of the law. In its place, the nuisance and *Rylands* tests, as described in the Restatement, will rely largely on the locality or commonality criterion, i.e., whether the defendant's activity is common in the locale.<sup>24</sup> This is a questionable move for several reasons. First, there are activities that may be common and yet their expected externalized benefits may be far less than their externalized costs. Suppose, for example, we were to discover in the future that microwave radiation from cell phone towers causes significant injuries. Since cell phone towers are common today in most places, they will satisfy the locality criterion in the new Restatement tests. The new Restatement tests may effectively immunize these activities from strict liability under nuisance and *Rylands* doctrine, provided courts are persuaded to adopt the new interpretations.

The second reason to question the Restatement (Third)'s attempt to weed out social utility tests is that there may be cases in which the social value of the defendant's activity is substantial, but it is not common. The best examples are zoos and wildlife parks, which generally have been examined under negligence principles. The new Restatement's *Rylands* test could lead to a different result in these cases.

#### IV. COMMON LAW VERSUS PUBLIC ENFORCEMENT

I have suggested that the common law is preferable to statutory environmental protection regimes given the malfeasance and information-discovery problems of any enforcement system. Surely, one might respond, there is a limit to this argument. For example, one cannot imagine private class action suits being brought against the owners of polluting cars. I concede that there is a limit to my argu-

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24. In addition to the locality criterion, *Rylands* and nuisance doctrine under the new Restatement will rely on another factor: inability of the actor to eliminate the risk by the exercise of due care. This latter factor was emphasized in Judge Posner's treatment of *Rylands* doctrine in *Ind. Harbor Belt R.R. Co. v. Am. Cyanamid Co.*, 916 F.2d 1174 (7th Cir. 1990). Posner, relying on Steven Shavell, *Strict Liability versus Negligence*, 9 J. LEGAL STUD. 1 (1980), suggested that the inability factor should be the key determinant of strict liability, and largely ignored the social comparison and appropriateness-to-place factors in *Rylands* doctrine. The new Restatement is on a course to replace traditional *Rylands* and nuisance doctrine with the Posner-Shavell approach.

ment, and that the real question is precisely where the common law regime dominates the statutory enforcement framework.

I think it is easy to lay out some general principles. Public enforcement is preferable to private lawsuits in the cases of (1) real environmental crimes, (2) judgment-proof defendants, and (3) low detection probabilities. By “real crimes” I am referring to the cases in which someone poisons the environment with the intent of harming people — e.g., intentionally poisoning a community water source. Public enforcement is desirable in this case for the same reasons seen in the criminal law in general. Criminals tend to hide their activity and many are dangerous until they are incarcerated. It would make no sense to rely on private lawsuits to control this type of behavior.

The desirability of public enforcement in the case of judgment-proof offenders is also based on the same reasons that we see in the criminal law. Even if we could identify and find the judgment-proof polluters, they would not be able to pay for the total damages. Since they cannot pay the full cost, they would not be deterred by liability, and few plaintiffs would have an incentive to sue them anyway. Consider (again) the case of individuals who drive cars or trucks that put out filthy exhaust fumes.

The low detection probability case is probably the most general category in which public enforcement seems desirable. I have in mind cases in which the (1) identity of the pollution source is difficult to determine and (2) the nature of the harm requires research. The identification problem is captured in the Midnight Dumper example discussed earlier. In cases in which substantial resources must be invested into discovering the source of pollution, we should not expect the private lawsuit mechanism to work as a significant deterrent, for reasons we have already covered. The second case, in which the nature of the harm is difficult to determine, is illustrated by the emission standards we now have. Private individuals would be unwilling to invest resources into determining appropriate emission standards, or even to identify the potential pollutants that should be controlled.

Outside of these general cases, there should be a preference for private enforcement through the common law. Indeed, private *enforcement or prosecution*, in the sense of bringing a lawsuit, should be the rule even in the low-detection-probability cases, since the public role can be limited to the detection of the source or harm. This approach suggests a regime in which public agencies exist largely as a source of information and as residual or last-resort enforcers for those cases in which private parties are not up to the task. Standing the current regime on its head, public agencies would spend much of their

prosecution resources on small cases, leaving private parties to sue the large corporations.

The one major topic that needs to be addressed is that of emission standards. Under the principles suggested here, they would have to be determined by a public agency. But how should they be determined and how should they be enforced? More to the point, what is the difference between an emission standard and a garden-variety nuisance? The emission standard problem forces us to try to determine the relationships among nuisance law, property rights, and statutory environmental regulations.

#### V. LOCAL VERSUS GLOBAL STANDARDS

I have tried to stick with simple examples because I am not a specialist in environmental law. In keeping with this approach, let me describe two types of emission standards problems. The first is that of the smoke-belching factory. Nuisance law has dealt with this problem, providing a flexible regulatory framework that has allowed for variation over time and across regions. I will refer to this as the problem of defining a local emission standard.

There are many cases that create new local emission standard problems, some of which are regulated by federal agencies. Consider cell phone towers. The issue is whether the microwave emissions from these towers present health risks to nearby landowners or users. The federal government, specifically the Federal Communications Commission (FCC), regulates these towers and prohibits lawsuits challenging health effects under the federal emission standard. The cell phone tower problem is entirely local in the sense that the health risks, if they are substantial, impact people who live, work, or go to school close to these towers. In other words, there is no sense in which the government has to set a global emission standard in order to prevent some community from emitting so much microwave radiation that it adversely affects the health of other communities.

The second type of emission problem involves the case in which a global standard is arguably necessary. Consider the emission of a greenhouse gas, such as carbon dioxide. The controversial Kyoto Treaty involves a large-scale effort to set a truly global limit on the emission of greenhouse gases. We are not worried with local emissions in this setting. Unlike the cell phone tower case, the greenhouse gas problem does not involve NIMBY (not-in-my-backyard) arguments. The concern here is that everyone might be complying with a standard that works well in each local community, and yet the *total* emission of greenhouse gases may be too much. The total emission may be so great that it traps heat in the atmosphere, raising tempera-

tures over time, which, in turn, may produce worrisome environmental consequences in the long run.

#### A. *Local Emission Standards*

Nuisance law is both capable and a preferable method of enforcing local emission standards.<sup>25</sup> This is not a controversial claim in the case of the smoke-belching factory, since nuisance law has dealt with these cases for many years. It is more controversial in the case of the cell phone tower, because the tower is operating under a federal emission standard. A superior regime, in my view, would not preempt nuisance suits challenging the effects of emissions that meet a federal standard. People who live or work near cell phone towers, for example, should be allowed to bring nuisance suits challenging the health effects of microwave emissions from the towers.

In the case of cell phone towers, the existing regulatory scheme reveals both of the malfeasance and information problems that make public statute-based regulatory schemes inferior to the common law in important respects. Because one federal agency, the FCC, controls the emission standard, we have to worry about whether this agency will be captured by the regulated parties. At the least, its standard should not be held to preempt local tort suits unless courts can be confident that the standard was set by a group of independent experts rather than industry insiders. The information problems are also troubling in this case. The health effects of emission standards clearly will vary depending on the nature of the area in which the tower is sited. If the tower is set on a roadside surrounded by a forest, there will not be any serious health effects. On other hand, if the tower is sited next to a grade school, we should be more concerned.

One response to this concern is that the FCC has set a standard for cell phone towers that is safe for all locations, no matter what the surrounding land uses. Even if this were true, we should still be concerned as a systemic matter with a regulatory structure that removes power from communities to regulate on the basis of local information. And the total safety claim is a doubtful proposition anyway. With every technology that involves some risk, the question is always a comparison of costs and benefits. Even if the probability of an injury is extremely low, we should consider the expected harm, conditional on an injury, in deciding whether the benefits outweigh the costs. It is hard to see how local information could be considered irrelevant to this test.

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25. Though examining a different problem – zoning – this is pretty much the conclusion Bob Ellickson offered in 1973. Robert C. Ellickson, *Alternatives to Zoning: Covenants, Nuisance Rules, and Fines as Land Use Controls*, 40 U. CHI. L. REV. 681 (1973).

There is a converse proposition to my claim that all local emission problems, even those regulated by the federal government, should be subject to nuisance litigation. It is that federal regulation that goes too far, in the sense of going well beyond what is justifiable in terms of nuisance law, should also be subject to challenge. In order to force landowners to comply with a regulation that goes well beyond the requirements of nuisance law, the federal government should provide compensation. For example, a statute prohibiting the siting of a cell phone tower on private property would require compensation as a taking, unless the government could show that the tower would be a potential nuisance in its area.

### B. *Global Emission Standards*

Let us return to the problem of regulating global emission standards, such as one governing the emission of greenhouse gases. The global emission standard problem is new. Nuisance law has not dealt with the problem of defining global standards.<sup>26</sup> The global standard problem is also quite general, and seems to be at the core of endangered species protection. To take the notion to its logical extreme, suppose we were to pass a law regulating the destruction of “carbon dioxide” sinks — trees and big plants. A landowner would not be able to chop down a tree in his yard without getting the approval of the government. At this level of regulation the notion of property rights seems meaningless. This example suggests that it is difficult to get far on the notion of global emission standards without confronting the property rights issue.

Is it possible to use lawsuits to enforce global emission standards? Frank Michelman looked at this question many years ago.<sup>27</sup> The approach I will suggest looks similar to his, though with important differences. Michelman was concerned with applying Calabresi's framework to environmental law. The private class action lawsuit, in which victims sue to collect fines determined in advance by a government agency, works in Michelman's framework as an efficient, reliable cost internalization mechanism. The government should be able to determine appropriate internalizing fines under this scheme, given that some research into health costs had to go into the setting of an emission standard in the first place. Using this research, fines could be determined so that they internalize the incremental cost of a violation of the emission standard.

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26. And nuisance law is arguably incapable of being the sole regulatory mechanism in this setting. *See id.*

27. Frank I. Michelman, *Pollution as a Tort: A Non-Accidental Perspective on Calabresi's Costs*, 80 *YALE L.J.* 647 (1971) (book review).

The more troubling problem in my view, and where I differ from Michelman, is trying to decide the role traditional nuisance doctrine should play in such a scheme. Michelman's scheme assigns no role to traditional nuisance doctrine. I think traditional nuisance doctrine should continue to play a role, the same role it played in my cell phone tower example. Communities should be allowed to challenge emission standards as inadequate on nuisance grounds. Thus, even if a firm complies with emission standards, it could still be found liable for a nuisance. Alternatively, regulated parties should be allowed to challenge the same standards on nuisance grounds, though subject to a higher standard of proof. If the regulated party wins its suit, the government would be required to compensate the regulated party in order to continue to demand compliance with the standard. The trading of emission rights can be folded into this framework easily. If a firm buys additional rights from another firm, it will still be subject to nuisance litigation if it creates a serious local interference with property rights.

My proposal differs from Michelman's by using nuisance law to maintain background property rights. The concern my scheme addresses is that of government that sets a standard that effectively destroys a significant property right. For example, in the case of law regulating the destruction of carbon dioxide sinks, the regulated party would have the right under my proposal to challenge the law on nuisance grounds. If the regulated party succeeds, the government would have to either compensate him for the taking imposed by the law, or exempt him from compliance. Conversely, if because of the political influence of producers or a certain community (e.g., midwestern utilities) the global standards were set too low,<sup>28</sup> a community could challenge the regulated parties' emissions on nuisance grounds.

The reader may recognize this proposal as a generalized version of the regulatory takings doctrine suggested by Justice Antonin Scalia in his *Lucas v. South Carolina Coastal Council* opinion.<sup>29</sup> It employs nuisance law as an equilibrating mechanism on government regulation. Nuisance law protects property rights while at the same time preventing certain intangible invasions of these rights. Its utilitarian structure provides a test for determining when such invasions go too far and when regulations go too far. If a government agency attempts

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28. See, e.g., Merrill, *supra* note 19, at 982 ("Acid rain in the United States is a complex transboundary pollution problem in which midwestern states . . . are seen as predominant source states, and states in New England and Adirondack regions are seen primarily as affected states. For nearly two decades, the midwestern states consistently blocked any meaningful federal regulation of acid rain, because they perceived that their citizens would end up paying higher utility bills while the benefits would largely inure to the citizens of New England and Adirondack states.")

29. 505 U.S. 1003 (1992).

to force a landowner to supply a public good, as opposed to the prevention of a public harm, the nuisance model requires public subsidization of this supply in the form of compensation. Conversely, if because of malfeasance in the legislative or enforcement process government enforcers fail to regulate appropriately, nuisance law provides a ready regulatory backup in the form of damages liability.

#### VI. CONCLUDING REMARKS

Like negligence law, nuisance law is a sophisticated, information-rich regulatory scheme that has evolved over many years of trial and error. By balancing external costs and external benefits, it has protected rights to develop and to enjoy property, without presenting a serious obstacle to economic growth. Environmental law has taken a different track, relying on statutes and minimizing the common law's input. Nuisance law has advantages over the statutory framework in terms of its treatment of local information and enforcement incentives. I have suggested that environmental law enforcement could be improved by returning to some of the principles embodied in nuisance law.