

Book Review

Too Pragmatic by Half

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Eco-Pragmatism: Making Sensible Environmental Decisions in an Uncertain World. By Daniel A. Farber. Chicago: University of Chicago Press, 1999. Pp. 210. \$23.00.

I. AN ENVIRONMENTAL BASELINE?

The environment has always been with us; but environmental law, as a unified and self-contained discipline, is a social construction—perhaps *the* social construction—of the last thirty years. The field, qua field, received its first visible external boost with Earth Day in 1972, two years after Congress passed the National Environmental Policy Act.¹ More than any other event, that Act transformed the ambition, structure, and scope of environmental law. Haphazard reliance on common-law remedies, specialized statutes, and sleepy administrative oversight were replaced by a new, comprehensive set of legislative initiatives. From their incubation in the early 1970s, environmental protection programs have proliferated at the national, state, and local levels, and today virtually every proposed use of land, water, or air runs headlong into one or more complex environmental statutes or regulations.

In the abstract, it is hard to say whether this environmentalism is a good or a bad thing. The nub of the difficulty is that the term

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1. 42 U.S.C §§ 4321-4370d (1994). For a discussion of the passage of the NEPA, see William L. Andreen, *In Pursuit of NEPA's Promise: The Role of Executive Oversight in the Implementation of Environmental Policy*, 64 IND. L.J. 205 (1989).

“environmentalism” has no traction until it is placed in opposition to some other movement or world view. By parity of reasoning, unless it is viewed as an epithet, the term “antienvironmentalist” also has no particular content. So-called antienvironmentalists generally oppose pollution, just as the National Rifle Association is on record against gun violence. But with environmental (and gun) regulation, the real battle is over two familiar questions. First, *what* counts as the proper mix of government and private remedies: private damage actions, class actions, injunctions, fines, inspections, and the like? Second, *who* should have the power to address environmental issues: Congress, the EPA, state agencies? Should other parties be added to the mix, such as nongovernmental organizations, private conservation groups, and ordinary businesses that find it useful to adopt a pro-environmental stance?

These sprawling and complex topics cannot be resolved by a set of ad hoc political compromises, nor can the central principles of an environmental program be successfully encapsulated in a few stale slogans. The fate of the nation—and, one is often reminded, that of the world—deserves a more systematic and hard-headed examination. Yet too often environmental issues evoke inconsistent forms of quasi-religious fervor. On one side stand those individuals and groups who insist, with Vice President Al Gore,² that stringent environmental measures such as the Kyoto accords³ are needed to save the planet from destruction by its most notorious species. On the other side, many commentators with equal intensity bemoan the bloated, officious, and heavy-handed bureaucracy that comes in the wake of high-minded environmental regulation.

This contentious battlefield seems to cry out for some comprehensive and detached overview. One recent effort is Daniel Farber’s book *Eco-Pragmatism*,⁴ which carries with it the ponderous, if soothing, subtitle *Making Sensible Environmental Decisions in an Uncertain World*. This title sets out Farber’s overall take on environmental issues. He places himself squarely in the environmentalist camp, but tries at every stage to distance himself from what he perceives, rightly, as the mindless fervor of some of the movement’s zealots. The word “pragmatism” in his title conveys his two joint commitments: unflagging support for the environmental cause and

2. See AL GORE, *EARTH IN THE BALANCE: ECOLOGY AND THE HUMAN SPIRIT* (1992). For an acerbic but fully justified response by that inveterate optimist, the late Julian Simon, see JULIAN SIMON, *HOODWINKING THE NATION* 87-90 (1999), which skewers Gore’s claims about the increased rate of farmland erosion, the harmful effects of DDT, and the ostensible damage to humans at Love Canal.

3. Descriptions of the Kyoto accords are found in Clare Breidenich et al., *The Kyoto Protocol to the United Nations Framework Convention on Climate Change*, 92 AM. J. INT’L L. 315 (1998); and Paul G. Harris, *Common but Differentiated Responsibility: The Kyoto Protocol and United States Policy*, 7 N.Y.U. ENVTL. L.J. 27 (1999).

4. DANIEL A. FARBER, *ECO-PRAGMATISM: MAKING SENSIBLE ENVIRONMENTAL DECISIONS IN AN UNCERTAIN WORLD* (1999).

allegiance to the institutional and political safeguards needed to curb the excesses of the environmental movement. Farber's "sensible" pragmatism always seeks refuge in some safe middle ground; it is animated by his keen awareness of the massive uncertainty that plagues all large-scale environmental decisions. His program searches diligently for the right mix of abstract principle and practical wisdom. Farber's pragmatism cuts an uncertain path between two extremes. In one breath, he recoils from "ad hoc decision making [and] raw intuition."⁵ In the next, he derides the use of "mechanical technique to give cut-and-dried answers to hard policy questions."⁶ Commendably, Farber sees no shortcuts; a successful environmental policy requires one to marry shrewd political judgments to solid empirical work.

To deliver on this avowedly middle-of-the-road observation, Farber cautions us repeatedly on the limitations of stripped-down economic cost-benefit analysis in guiding our social decisions. In line with fashionable neo-republican sentiments, he constantly exhorts us to go beyond cost-benefit analysis by taking into account the political sensibilities generated through democratic institutions: Dialogue and deliberation not only record and tally individual preferences, but they also shape and enrich them. Farber claims that a national consensus backs his overall position, and, too quickly for my taste, he invokes the republican "we" by opening his book with the portentous statement, "We have made a profound national commitment to environmental protection."⁷ He then backs this claim by noting that Republicans and Democrats alike embrace the environmental agenda: In 1988 George Bush ran, and won, in part as the "environmental president."⁸ Seven years later, he reports, the Republicans learned to their sorrow that neither party can afford to abandon an environmentalist image.

For Farber, the difficult task is how to cash out this national commitment in a pragmatic way. With evident pride, Farber is an "on-the-one-hand, on-the-other-hand" kind of guy. He champions an "environmental baseline" for testing all forms of private and governmental behavior, but in the next breath, he seeks to avoid excessive expenditures that produce only marginal environmental benefit. The sentence that best captures both his conciliatory tone and his wobbly thesis reads: "To the extent feasible without incurring costs grossly disproportionate to any benefit, the government should eliminate significant environmental risks."⁹ It is within the context of this thesis that his environmental baseline takes

5. *Id.* at 10.

6. *Id.*

7. *Id.* at 1.

8. *Id.* at 2-3; see also Jonathan H. Adler, *Clean Fuels, Dirty Air*, in ENVIRONMENTAL POLITICS: PUBLIC COSTS, PRIVATE REWARDS 19, 21 (Michael S. Greve & Fred L. Smith, Jr. eds., 1992) (discussing the political aspects of environmentalism).

9. FARBER, *supra* note 4, at 131.

hold. Like other baselines, Farber's sets the default position in the event that the evidence is uncertain. As with other presumptions, that baseline controls unless and until it is displaced by further evidence that suggests that some other interest should be paramount (or at least respected) in any given case. Given his baseline, ties go to the environmentalists, both for statutory construction and for factual disputes.

At one level it is hard to dispute so reasonable a thesis, stated at such a high level of abstraction. But there is much to be troubled by in his soothing proposition. At a theoretical level, pragmatism is hardly an uncontested philosophy. Its lack of coherence and structure frustrates the articulation of any set of principles—such as those based on justice or utility—to guide our basic inquiry. This want of structure permits Farber to overestimate the social consensus behind his own preferred outcomes, so that he never articulates or responds to views that are foreign to his environmental parade. For those of us schooled in the laissez-faire tradition, it is easy to envision yet another presumption: Government intervention is an evil unless and until it can be shown to be a good.¹⁰ That presumption is often more easily rebutted in environmental cases than in other contexts, but it still sets the default position 180 degrees opposite Farber. Yet Farber never so much as addresses the relative strengths of that alternative baseline (or the case for having no baseline at all). Nor does he examine any of the arguments of writers who see in the self-professed environmental movement an arrogance that results in the trampling of individual liberty and ordinary communities without advancing any legitimate environmental ends. Strong feelings run in both directions, yet Farber imagines a tranquil environmentalist consensus that keeps him aloof from today's contentious struggles.

Within the compass of a single review, it is difficult to develop an alternative environmental framework that addresses both the conceptual and political issues. But I do hope to demonstrate why Farber's approach should be rejected. I see no reason for any special baseline for environmental interests, any more than I accept a "labor" baseline that favors workers over employers, a "health" baseline that favors patients over physicians and managed care organizations, or an "agricultural" baseline that favors

10. For an expression of this attitude, see, for example, Aaron Director, *The Parity of the Economic Market Place*, 7 J.L. & ECON. 1, 2 (1964): "Laissez faire has never been more than a slogan in defense of the proposition that every extension of state activity should be examined under a presumption of error." In truth, I think that this formulation understates the connection of laissez faire with substantive commitments to private property and freedom of contract, for it is those principles that erect the presumption of which Director speaks. They do so because it is thought that these principles will serve the public better than any alternative conception of the proper role of government. Thus, a normative approach that emphasizes these substantive commitments would look with skepticism on *existing* programs that were in conflict with these substantive commitments.

farmers over industrialists. Quite the opposite: I am deeply suspicious of any and all forms of special pleading that claim exemption from the general rules of property, contract, and tort. In taking this position, I do not wish to claim that no government intervention (including intervention supported by taxes) is appropriate. Rather, I take a position that comes closer to that associated with the traditional accounts of *laissez faire*, that government intervention (being costly) is an evil until it is shown to be a good. But that proposition in turn yields to one that treats it as a proper function of government to protect the common-law property rights of ordinary individuals. Under this proposition, the government also should provide some mechanism to deal with common-pool assets that are neither owned by any individual nor, under many circumstances (as with the open seas), subject to reduction to private ownership at all.¹¹

I believe that this standard common-law approach to property rights, which draws heavily on economic literature, is more likely to achieve the results that Farber desires for environmental reasons than the shapeless environmental baseline he champions. The basic position here is that the modern environmental movement has fundamentally misperceived the source of environmental difficulty. Rather than denigrating the common-law system of rights and duties, it ought to build upon them in order to remedy the weaknesses that arise in any system that relies on individual remedies to enforce property rights.

On this view, the basic set of rights and wrongs stems from the common law of nuisance, with its initial emphasis on the physical invasion of the property of one person by discharges from the land of another. It hardly matters for these purposes that early pollution cases may have involved sewage while modern cases may involve nuclear waste. In each case we should focus on stopping the harms by one person to another. This system will break down, to be sure, when the pollution in question is of public waters, but once again novelty is not the source of difficulty. In both early and modern times, the key task has been to devise mechanisms for the regulation of the commons, ones that allow the state to sue for the pollution of private property as though it were the owner of the resources that were harmed by the pollution in question. Now that we are richer as a nation than we were in earlier times, we should expect the overall tolerance for environmental harms to diminish. But that systematic change in expectations does not cash itself out upon the adoption of some brand-new paradigm complete with its own baseline. It has never been possible to stop all pollution; with increasing wealth, the appropriate social response is to

11. For a version of this account of *laissez faire*, see Jacob Viner, *The Intellectual History of Laissez Faire*, 3 J.L. & ECON. 45 (1960). For a fuller account, see RICHARD A. EPSTEIN, *PRINCIPLES FOR A FREE SOCIETY: RECONCILING INDIVIDUAL LIBERTY WITH THE COMMON GOOD* (1998).

reduce our common expectations of the acceptable level of background pollution.

No environmental policy, however, is complete with the use of legal sticks alone. Legal carrots are important as well. The effort to obtain higher environmental standards does not stop with the prevention of pollution. It may also involve setting aside a larger fraction of social resources for environmental use. But it hardly follows that we should not have to pay for the resources that we as a nation take. Although Farber spends virtually no time explaining when regulation ends and the duty to compensate begins, that question is critical to the overall operation of any sound environmental system. And on that vexed issue, once again the older understandings should be preferred to the newer ones. When the government restricts private use of land to serve environmental objectives, compensation is appropriate unless the government can bring itself within the traditional justifications for the operation of its police power.

The major program of this Review, therefore, is to contrast two approaches to environmentalism: an approach that sees no legal novelty in environmental issues and that uses traditional techniques to address them, and Farber's approach, which sees his distinctive pragmatism, with its environmental baseline, as the key to success in any modern vision of environmentalism. In pursuing this program, I shall follow the course that Farber sets. In Part II, I examine the case that Farber treats as the leitmotif for his book, the protracted struggle in *United States v. Reserve Mining Co.*¹² At bottom, our approaches to this case are remarkably similar, so my major purpose is to explain why the property baselines of the common law give a better theoretical explanation of the problem than does Farber's revised baseline. Thereafter I turn to issues on which the two approaches tend to diverge in both outcome and approach. Part III expands the discussion to cover other forms of common-pool assets, most notably those pertaining to fisheries and air quality. In it I argue that the traditional principles of private nuisance law carry over to unowned assets, so long as the state is in the position to act as the protector of these assets as if it were their private owner. Part IV addresses the question of whether—and if so, how—to discount environmental losses to future generations. In it I argue that it is a mistake to plan for the indefinite future, and far wiser to make sure that we place our own children in a position to carry out as best they can a sensible regime of environmental protection. Part V explores the role of just compensation for individuals or groups that are adversely affected by environmental issues. In it I argue that the compensation requirement,

12. 380 F. Supp. 11 (D. Minn. 1974), *rev'd sub nom.* *Reserve Mining Co. v. EPA*, 514 F.2d 492 (8th Cir. 1975) (en banc). My summary of the facts closely follows Farber's excellent account in Chapter 1, fittingly described as "A Case of Uncertainty."

rightly applied, serves both political and instrumental ends. By forcing the government to respond to price information, the compensation requirement can limit the amount of political adventurism in environmental regulation and facilitate the responsible trade-off between environmental and nonenvironmental goals.

II. LEARNING FROM ONE CASE

Reserve Mining arose out of the government's effort to stop the massive discharge of tailings (twenty-five million tons per year) into Lake Superior—a practice that the Reserve Mining Company had engaged in for a number of years. These tailings were the wasteful by-product from mining and purifying taconite, a low-grade iron ore found in extensive concentrations near Duluth, Minnesota, on the north shore of Lake Superior. When Reserve built its plant in the mid-1950s, the enterprise was greeted warmly by its neighbors as the economic savior of a depressed community. But as the years wore on, the evident environmental spillovers led to governmental efforts to abate the company's discharges into public waters. The discharges created a plume of "green water"¹³ that extended for a distance of eighteen miles. The concentrations of iron, lead, and copper were above state-allowed levels, and those for zinc and cadmium were above state-recommended levels. Notwithstanding the aesthetic harms, no one could pinpoint any ecological damage caused by these discharges, nor could anyone predict with confidence whether harms to health and safety might materialize in the future. The mining operations presented familiar risks with which the local citizenry had grown comfortable, perhaps too comfortable, over time. The government's case, however, was transformed just before going to trial in 1973, when asbestos was found in the drinking water in Duluth. That dramatic disclosure raised serious public health concerns. By 1973 everyone knew that airborne asbestos posed major health risks, but it was at best unclear whether asbestos was harmful if swallowed. The district court's task was to resolve the uncertainties.

The high stakes at the trial were further raised because Judge Miles Lord (known as "Miles the Lord")¹⁴ presided over the proceedings. Lord had strong conceptions of right and wrong and would not, it was said, let anything so trivial as a statute or an appellate court stand in the way of justice. After a series of protracted legal battles with Reserve, Judge Lord ordered an immediate shutdown of the mine, without allowing Reserve any time to arrange an alternative system for land-based disposals. A flurry of

13. FARBER, *supra* note 4, at 19.

14. *Id.* at 20.

appeals followed, and the Eighth Circuit eventually conducted an extensive review of the available evidence: animal studies, epidemiological studies of Duluth residents, and studies of asbestos workers.

Farber's able and balanced review of the complex and inconclusive evidence on all these points seems to confirm the court's conclusion that, from the available evidence, "it cannot be said that the probability of harm is more likely than not."¹⁵ On that state of the record, the Eighth Circuit held that it was improper to order an immediate shutdown of the plant. Accordingly, it allowed Reserve a reasonable period of time to switch to a land-based system of disposal. The decision represented only a conventional balancing of hardships in a case in which injunctive relief was sought, given that a plant shutdown would have resulted in massive dislocations for shareholders and workers. Nor was this just a trade-off between money and health. Health issues were, at least indirectly, on both sides of the matter, because any drastic cut in workers' income could have indirectly generated health problems of its own. After the Eighth Circuit's decision, Judge Lord was removed from the case because of his repeated judicial outbursts against Reserve. The conversion to land-based disposal took several years and was completed in 1980. Yet the plant closed two years later, a victim of declining market demand for its products.

To Farber, the case fits neatly into his theory of presumptive state intervention given the high level of uncertainty about the consequences of further discharges: Better safe than sorry. Rather than giving us a swift, clean answer as to how he would have disposed of the case and why, Farber launches into a prolonged discussion of the limitations of economic analysis in weighing the competing interests on each side of the question. This quickly leads into consideration of the limitations of the Pareto concept of efficiency,¹⁶ a discussion of the value of Lake Superior to nonusers,¹⁷ and a lengthy examination of "contingent valuation" techniques, by which ordinary people are asked to state how much they would pay to be rid of certain environmental hazards.¹⁸ But once he has completed this large detour, he reaches some sensible conclusions. He notes that an immediate closure of the plant would have created massive dislocation for workers and their families, and he observes correctly that any sharp shift in their income could have had negative health consequences for members of the affected community. He further observes that any alternative systems of land-based disposal would themselves have created some environmental risks for what

15. *Reserve Mining*, 514 F.2d at 520.

16. See FARBER, *supra* note 4, at 44-48.

17. See *id.* at 48.

18. See *id.* at 49-51. For an exhaustive account of the uses and limitations of the technique, see John M. Heyde, *Is Contingent Valuation Worth the Trouble?*, 62 U. CHI. L. REV. 331 (1995).

appear to be at most uncertain benefits.¹⁹ But in the end, he favors closing down the plant after some reasonable delay because of the environmental presumption. The choice boils down to one between two kinds of error. He asks us which would cause us a larger pang of regret: shutting down the plant and discovering that the precautions were not necessary, or keeping it open and discovering that many lives were lost.²⁰ To Farber, the uneasiness with the second form of error clinches the case for using the environmental presumption.

The question then arises, how ought this case to be dealt with under the alternative property-rights approach? On this view, the first step is to break the broad class of environmental harms into three distinct categories. The first arises when one individual inflicts harm on either the person or property of a stranger. The second situation includes harm inflicted on the "environment" writ large, with no particular individual claiming exclusive property rights to the thing that has been taken or destroyed. This problem arises whenever a factory emits pollutants into the air or water, resources that have common ownership. The third involves individual harms arising out of a consensual arrangement, as when a factory worker agrees to work in a less-than-ideal work environment.

Generally speaking, these three situations call for different institutional responses. I put to one side the third class of cases on the ground that it raises the question of whether private contracts can properly allocate risks between consenting parties, for which I think the answer is generally yes.²¹ Turning to the first class of cases, environmental harms caused by physical invasions to private property have long been addressed by the law of

19. See FARBER, *supra* note 4, at 71.

20. See *id.* at 71-72.

21. The mutually agreeable allocation can reduce the risk in question or place it on the party who is best able to bear it. This contractual combination of incentive and insurance functions requires both the firm and the worker to make unavoidable and uncertain trade-offs. It could involve predetermined damage payments patterned on a workers' compensation system. See Richard A. Epstein, *The Historical Origins and Economic Structure of Workers' Compensation Law*, 16 GA. L. REV. 775 (1982). Alternatively, it could adopt various risk-reduction mechanisms such as training, inspections, and safety devices. Firms could pay risk premiums to workers who are forced to accept (even with compensation *ex post*) higher risk levels. See W. KIP VISCUSI, *RISK BY CHOICE: REGULATING HEALTH AND SAFETY IN THE WORKPLACE* 43-44 (1983). In some cases individual workers or consumers might lack sufficient information to make intelligent choices, but in general I believe that these difficulties with the contractual mechanism are overstated and that legislative efforts such as OSHA are often more notable for their anticompetitive effects than for their economic efficiency. See, e.g., Ann P. Bartel & Lacy Glenn Thomas, *Direct and Indirect Effects of Regulation: A New Look at OSHA's Impact*, 28 J.L. & ECON. 1 (1985). But the issue is one on which opinion is, to say the least, sharply divided. For a more recent account of the cost-benefit calculations implicit in these workplace issues, see Lisa Heinzerling, *Regulatory Costs of Mythic Proportions*, 107 YALE L.J. 1981 (1998), which discusses the implicit cost-benefit issues that dominate once the matter is treated as a subject for direct government regulation.

trespass and nuisance.²² While any physical invasion by way of pollution or discharge presumptively creates an actionable wrong, two refinements to this common-law baseline are necessary to develop a coherent legal approach. First, some nuisances are sufficiently small and widespread that everyone is better off in the long run if all forms of relief—self-help, damages, and injunctions—are denied: Backyard noise, barbecues, burning leaves, and the like are all covered by the live-and-let-live rule.²³ Everyone sacrifices some security of property against external invasion in return for greater freedom of action with his or her own land. Ideally, if everyone is better off, and no one is worse off, it is difficult to imagine any policy argument that drives us toward some contrary rule. The second refinement renders certain forms of *noninvasive* behavior actionable on the same theory of reciprocal benefits and burdens. Thus, individuals are required to support adjacent land in exchange for a like obligation on their neighbors, with both sides gaining.²⁴ This obligation does not require any landowner to take affirmative steps to support his neighbor's land, but it does impose the obligation not to remove soil from one's own land to an extent that would cause subsidence to the neighbor's land. The obligation is perfectly reciprocal so that on average both sides are better for having it than not, as the rule avoids the need to negotiate complex support easements with multiple neighbors in order to keep one's own land intact.

For these purposes, the refinements in boundary disputes take a back seat to the major discharges that damage the property and well-being of other people. Ironically, within this domain, Farber weakens the case for environmental protection by underplaying the standard common-law approach, which presumptively grants injunctive relief whenever the plaintiff suffers a substantial invasive harm, wholly without regard to whether the defendant's use of the property was reasonable under the circumstances.²⁵ Under this rule, once substantial harm is established,

22. For a more detailed account of the law, see RICHARD A. EPSTEIN, TORTS §§ 14.9-10 (1999).

23. See *Bamford v. Turnley*, 122 Eng. Rep. 27, 32-33 (Ex. 1862) (developing the basic rule by which reciprocal low levels of nuisance are ignored for the mutual benefit of all parties); see also RESTATEMENT (SECOND) OF TORTS § 822 cmt. g (1977) (giving the American reception). For a defense, see EPSTEIN, *supra* note 22, § 14.9.

24. See *Corporation of Birmingham v. Allen*, 6 Ch. D. 284 (1877) (Eng.). For discussion, see Richard A. Epstein, *Nuisance Law: Corrective Justice and Its Utilitarian Constraints*, 8 J. LEGAL STUD. 49, 96-98 (1979).

25. See, e.g., *Jost v. Dairyland Power Coop.*, 172 N.W.2d 647, 650-652 (Wis. 1969). For the opposite view, see *Copart Industries v. Consolidated Edison*, 362 N.E.2d 968, 971 (N.Y. 1977), endorsed in the RESTATEMENT (SECOND) OF TORTS, *supra* note 23, § 827. Note that the idea of reasonableness can enter into the nuisance calculus in one of two ways. First, the idea covers only the case of low-level reciprocal harms that make both sides better off, as in *Bamford*. Second, it operates in a fashion more closely akin to negligence law, under the Hand formula, see *United States v. Carroll Towing*, 159 F.2d 169, 173 (2d Cir. 1947), such that the defendant's gains can be set off against the plaintiff's losses without compensation. In principle, both formulas could achieve acceptable social results, but the first formula is on balance more likely to reduce the

relatively little attention is paid to the “balance of equities” between the parties, and hence to the dislocations brought by injunctive relief.

This common-law approach should have been applied in cases like *Reserve Mining*. Consider, for example, the one nuisance case that Farber does discuss, *Boomer v. Atlantic Cement Co.*,²⁶ which weakened the level of environmental protection by refusing to grant injunctive relief for a substantial environmental harm. There the question before the court was whether an injunction or only damages should be awarded to the neighbors of a cement plant who suffered the indignities of noise, vibration, and filth in their homes. The traditional common-law approach recognized no ostensible parity of interest, no neutrality between an aggressor on the one side and a victim on the other. Only with the modern skepticism about unidirectional causation, which received its academic canonization in Ronald Coase’s *The Problem of Social Cost*,²⁷ does the outcome hang in the balance. Coase downgraded the importance of the common-law physical invasion so that it became possible, indeed necessary, to ask who had caused this harmful interaction: the owners of the cement plant or the people who lived near it? But under the older common-law approach, the physical invasion test clearly resolves that question, and the legal advantage shifts to the neighbors who suffer from the noise and filth.

At this point, the common-law court should stick to its traditional rule and issue an injunction against the cement factory instead of allowing it to escape with the payment of permanent damages. To be sure, that rule could cause dislocation to the local communities whose plants are closed down. But it is most unwise to evaluate the soundness of automatic injunctive relief simply by looking at its consequences for community life only after the construction of the cement plant. If the common-law rule were clearly established before plant construction, Atlantic Cement would pursue an appropriate development course. No longer would it simply construct expensive facilities in the hope that it would be able to tough out the legal challenges down the road. Now it would seek to resolve the conflicts with neighbors before a sorry impasse of the sort found in *Boomer* arose. The Atlantic Cement Company could have constructed its plant in a more remote location so as to avoid the conflicts; it could have purchased the

amount of environmental harm. The strict-liability rule imposes clearer obligations, which in turn reduces the uncertainty associated with lawsuits.

26. 257 N.E.2d 870 (N.Y. 1970).

27. R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960). The judicial skepticism preceded Coase. In *Miller v. Schoene*, 276 U.S. 272 (1928), the Supreme Court professed indifference as to whether the pests that inhabited the defendant’s cedar trees and infected the state’s apple trees counted as a common nuisance. By making the matter purely legislative, the Court blocked any possible claim for compensation by the individual owners of cedar trees who were forced to cut them down in order to halt the infectious cycle. For a discussion, see RICHARD A. EPSTEIN, *TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN* 113-15 (1985).

nearby lands or servitudes over them, so as to internalize the losses before the plant went into operation; or it could have had the state condemn the nearby lands to make way for plant construction—at least if that initiative could pass muster under the “public use” limitation of the Takings Clause.²⁸ To this last tactic, one might protest that the construction of a private cement plant (as opposed to a grist mill obliged to take all customers)²⁹ does not pass the public-use test. But if this objection to legislative condemnation is valid, then it cannot be skirted by allowing judicial action to step in where legislative action would be unconstitutional.³⁰

At this juncture, the ironies only mount. A tough reading of the public-use requirement supplies greater, and more grounded, environmental protection than the new pragmatic approach. A more lenient reading of the clause still results in substantial damages against the defendant for the discomfort and anxiety of the injured. How the choice of remedies shakes out is not entirely clear, but the property-rights analysis strongly points toward awarding some multiple of provable damages to compensate both for the loss of amenities that such nuisances entail and for the insult of invading the plaintiff's space without first procuring his permission. Of course, the common-law system does not require an automatic injunction in all cases, but it reaches Farber's preferred end point by a straightforward application of battle-tested principles.

That Farber gravitates toward this approach is to his credit. But his rhetoric is too tentative: “In analyzing *Boomer*, I would favor a baseline of protection against such invasive activities. Rather than leaving the remedy to the unrestrained balancing of the court, I would begin with a presumption in favor of injunctive relief.”³¹ The mystery is how his pragmatism gets him there. Earlier on, he endorses Cass Sunstein's well-known skepticism about the modern application of common law by noting that “Sunstein rightly says that the common law baseline is often inappropriate in the post-New Deal world.”³² In this case, however, that skepticism leads to weakening environmental protection. It is not surprising, therefore, that in his next

28. U.S. CONST. amend. V (“[N]or shall private property be taken for public use, without just compensation.”). Note that the “public use” component of the Takings Clause has largely been read out of the modern law by judicial interpretation. See *Hawaii Hous. Auth. v. Midkiff*, 467 U.S. 229, 241 (1984) (“But where the exercise of eminent domain power is rationally related to a conceivable public purpose, the Court has never held a compensated taking to be proscribed by the Public Use Clause.”). The use of the rational-basis test sounds the death knell for a serious exploration of the use of this clause.

29. See *Head v. Amoskeag Mfg. Co.*, 113 U.S. 9 (1885).

30. See *Boomer*, 257 N.E.2d at 876 (Jasen, J., dissenting) (“Nor is it constitutionally permissible to impose servitude on land, without consent of the owner, by payment of permanent damages where the continuing impairment of the land is for a private use.”).

31. FARBER, *supra* note 4, at 113 n.36.

32. *Id.* at 103. For Professor Sunstein's own criticism of the common-law baselines, see CASS R. SUNSTEIN, *AFTER THE RIGHTS REVOLUTION* 210-33 (1990).

sentence Farber shies away from any fatally alluring “‘neutral’ normative baseline, which treats entitlements as initially unassigned, so that neither party begins with any presumptive claim.”³³ Last, he notes that “we can assign the presumptive entitlement to the beneficiaries of the regulatory program.”³⁴

Thus our mystery deepens. Farber rightly concludes that the neutral stance falls flat in cases like *Boomer*, where the facts suggest only “a false symmetry”³⁵ between parties—because, one presumes, of the obvious physical invasion, which allows us to call one party innocent and the other wrongful. A moment’s reflection confirms that Farber’s third formulation is useless in common-law disputes in which neither side is the beneficiary of a statutory program. Worse still, that standard is perverse in any legislative struggle. Farber would lead the charge against a “Cement Industry Protection Act” that sought to insulate the cement companies from vexatious litigation by small landowners who should know better than to live side by side with large industrial producers. So, by process of elimination, the only approach that justifies Farber’s substantive outlook is the system of common-law property rights that he peremptorily dismisses, for only that system rejects the false symmetry raised by the Coasean view of causation—the system rejects the idea that my nose got in the way of your fist. If these arguments are misguided, then at least Farber should offer an account as to why the physical invasion test fails in *Boomer* or elsewhere. Instead, he gives us silence.

For ordinary private disputes, then, the property-rights analysis supplies Farber’s pragmatic environmentalism with the principled foundation it lacks. How does this analysis apply to *Reserve Mining*? Obviously, Reserve’s discharges were a physical invasion of property *not* owned by the mining company. *Reserve* differs from *Boomer*, however, because Lake Superior has no private owner. Yet if such a private owner could be found, as is the case with many private lakes, does anyone doubt, at least before *Boomer*, that the owner would be entitled to enjoin these massive deposits, whether or not they caused some separate and incremental environmental damage? That case would be no harder than one in which an inconsiderate neighbor decided to dump huge loads of trash in your backyard because he could demonstrate that shipping the trash to the landfill would be too expensive. The waste-generator’s willingness to abandon ownership would not excuse him from having to remove the material, nor would it offer a reason for denying an injunction against further dumping.

33. FARBER, *supra* note 4, at 103.

34. *Id.*

35. *Id.* at 112.

Once that point is established, it becomes incumbent upon us to fill the void created by the absence of private champions for public waters. A sensible approach might be to treat the state as owner of these waters, perhaps as their trustee for the public at large. But Farber's rhetorical stance precludes him from asking how well this characterization succeeds, either as precedent or analogy. Thus, his book contains no discussions of common-pool problems, the public trust doctrine, or any kindred subjects. But these private categories give us a useful insight into—though not a knockdown solution to—*Reserve Mining*.

The first task of the state, as owner of public waters, is to defend those waters against all comers, by bringing ordinary tort actions to enjoin the spillage of waste materials into private waters. The situation is really no different from the state's enjoining as a matter of right the diversion of water from an established riverbed. In either case, the state prevents one person from unilaterally destroying or appropriating a common-pool asset. It is no different from a situation in which an owner of a private pond keeps out waste and gunk for the benefit of his nonexclusive licensees, none of whom can maintain nuisance actions against outsiders.³⁶

The inquiry becomes more complicated because the state as a trustee for individual members of the public must also acknowledge the limited use rights that members of the public enjoy over the common water resource. Treating the term "public trust" not in a metaphorical, but in a literal fashion, raises the question: What should the trustee do with public assets when its diverse beneficiaries clash with each other, as in *Reserve Mining*?

To evaluate this skein of events, one must go back to the beginning and ask whether Minnesota acted consistently with its trustee obligations in 1947 by issuing a permit that allowed Reserve Mining to dump its wastes in public waters free of charge. I believe that the state did not act properly, for it is a presumptive misuse of public power to give away some disproportionate use right of public waters that an ordinary private trustee would part with, if at all, only for a fee.³⁷ The point has some clear historical precedent in that the common practice is, for example, to hold competitive bids for oil leases, and not simply award them to a party that the state deems on some objective criteria to be the most worthy recipient. The compensation requirement, and not some public cost-benefit analysis, drives the process, as it should, given the risks of major abuse to the integrity of public waters.³⁸

36. The *Restatement (Second) of Torts* takes the common view by limiting the cast of characters that constitute proper plaintiffs for a nuisance action. This includes the owner of the fee, possessory, and nonpossessory estates, but excludes the ordinary licensee. See RESTATEMENT (SECOND) OF TORTS, *supra* note 23, § 821E cmts. c, f.

37. For my views, see Richard A. Epstein, *The Public Trust Doctrine*, 7 CATO J. 411 (1987).

38. For a detailed history of the leasing of public lands in Florida, see *Watson v. Hollan*, 20 So. 2d 388 (Fla. 1945). Note that the general rules called for competitive bids for leases, but

By this standard, it is not clear that Minnesota could license the pollution of public waters even if it received compensation. But assuming that the state would be allowed to trade off environmental losses against other gains when compensation were received, in the absence of a competitive market it is not obvious how that fee should be determined—but it should cover at least the anticipated damage to the lake and its other users, including, of course, damage to amenities. Even if it is difficult to assign a precise value to these losses, the fee should not, under any circumstances, be reduced or waived because of the collateral benefits that employees, suppliers, and shareholders receive from dumping wastes into Lake Superior. These groups can, if they so choose, internalize these environmental costs by taking lower wages for services, charging higher prices for goods, or accepting lower returns on stock. But the permitting process observed none of these concerns, so matters got off on the wrong foot when Reserve Mining received its sweetheart deal in 1947.

This initial gaffe set the stage for the subsequent confrontation in *Reserve Mining*. A fee per unit of dumping would have reduced Reserve's discharge level, both cumulatively and currently, thus dampening fears of environmental disruption and asbestos contamination. Any sensible strategy, moreover, would have denied Reserve a perpetual, unconditional license to dump in public waters, but would have retained the state's right to alter the fee structure or to reduce or suspend output in the light of any new information about the anticipated level of harm. Once again, the classical property-rights approach moves us closer to the right result, without invoking a special environmental baseline. As ever, it might remain an open question whether Reserve could be held liable in tort if its dumping caused health problems that were unknown at the time of dumping but that manifested themselves thereafter. But no matter which way that question were resolved, the introduction of any fee structure would be likely to reduce the level of dumping and thus the severity of any unknown consequences.

Further difficulties would loom if the discharges into public waters caused tangible harm to fish or other marine life. To the extent that the damage took its toll on state-owned property, the ordinary tort law should supply the appropriate remedy. But the logic of state ownership does not carry over to fish and wildlife, which, generally speaking, are unowned until the moment of capture. In this context, why should the state treasury

required that they be structured so that the leases did not interfere with other public uses of the waters in question, such as bathing, fishing, recreation, and navigation. *See id.* at 391-93.

recover the losses sustained¹ by individual fishermen or others, such as processors, who are dependent on their catch?³⁹

One conceptual difficulty is that private tort actions are normally brought only by people who have been deprived of established property rights. The response is that someone has to be able to bring actions for the loss of unowned, but valuable, fish, for otherwise no polluter will have the proper incentive to avoid these economic losses. In response to this problem, in the absence of legislative intervention, the case law has evolved to allow these actions.⁴⁰ Yet at the same time courts are reluctant to allow any action by parties located within the second tier—such as processors deprived of their local source of supply—for three reasons. First, the proliferation of interested parties creates administrative difficulties in handling the suit. Second, the damages to entities in the second tier are much more difficult to assess. While a fishing operator with a local license can do little to avoid losses if his potential catch is destroyed, processors typically purchase from multiple markets and are in a much better position to mitigate their loss. Third, the refusal to allow actions in the second tier does not create a legal void, since the defendants already have strong incentives to limit their pollution, given that they are already exposed to private tort actions and state fines, which are both sensitive to the level of discharges. On balance, it looks as though convenience favors allowing actions by immediate parties with large stakes, such as fishermen or owners of lakes, but denies them to parties one step removed, such as processors and retail fish stores. Perhaps all this analysis is wrong in the light of the environmental presumptions that Farber wishes to establish. But it is hard to tell his views because he never gets down to the level of detail that this problem requires.

III. BEYOND *RESERVE MINING*

This analysis of *Reserve Mining* represents one response to one type of environmental problem. The lessons learned from this exercise should, in principle, carry over to other issues. In this Part, I shall briefly consider two such issues: fisheries and air pollution. The first, like *Reserve Mining*, involves water-based resources. The second is also connected to *Reserve Mining* in that it involves pollution of a common resource. In both contexts,

39. See generally EPSTEIN, *supra* note 22, §§ 21.1-12; Victor P. Goldberg, *Recovery for Economic Loss Following the Exxon Valdez Oil Spill*, 23 J. LEGAL STUD. 1 (1994) (discussing the optimal regime for compensating economic losses attributable to pollution in public waters).

40. See *In re The Exxon Valdez*, 104 F.3d 1196, 1197-98 (9th Cir. 1997) (accepting claims for economic losses but disallowing claims by Alaska natives to recover noneconomic claims for cultural damage); *Union Oil Co. v. Oppen*, 501 F.2d 558, 570 (9th Cir. 1974) (allowing commercial fishermen to recover from oil companies for the negligent diminution of aquatic life).

the overall lesson is the same: Neither the environmental baseline nor the pragmatic approach provides sufficient guidance. Only a patient examination of the details of institutional structures can fill that void. So it is appropriate here to make a few remarks about the regulation of fisheries and air pollution, followed by a comparison of the two.

A. *The Fishery*

In dealing with pollution, the point of departure was the common law of nuisance as used to protect private lands, air, and water. When turning to the fishery, the point of departure becomes the common-law rules of acquisition of property.⁴¹ By those rules, fish (and all other forms of wildlife) in the state of nature are regarded as unowned but subject to ownership through the rule of first possession. With fisheries, this is embodied in the rule of capture: The first to gain possession of the fish owns it, and may kill, keep, use, or sell it at his free will and discretion. A similar rule applies to land, where the first occupant obtains exclusive rights to the land in perpetuity, with the standard incidents of ownership: the rights to exclude, possess, use, and dispose of the land in question.

The first-possession rule has the virtue of assigning a single owner to a valuable asset and allows that asset to enter the stream of commerce in a quick and efficient fashion. But as with all legal rules, its strengths should not blind us to its weaknesses. The large prize that is attached to gaining ownership leads individuals to accelerate their efforts to take possession of things with value. With land, these costs are usually less critical, because premature ownership of land does not entail its premature destruction. But with fish and wildlife, the risks are more acute. When the levels of capture are low, the first-possession rule tends to work fairly well because small captures do not threaten the stock.⁴² But when capture rates are high, private activity sparks the tragedy of the commons. Each individual fisherman gains all the benefit from his premature action, but suffers only a small portion of the overall loss from a reduction in the common stock. Taken over all individuals, the excessive patterns of capture can destroy the resource base. None of the individual players desires this outcome, but each acting alone is powerless to prevent it. This obvious prisoner's dilemma is a sensible ground for government intervention: State coercion can leave each player better off than he would be if free to act without limits in the short run.

41. For a discussion of this topic, see Richard A. Epstein, *Possession as the Root of Title*, 13 GA. L. REV. 1221 (1979).

42. Such is the lesson from Harold Demsetz, *Toward a Theory of Property Rights*, 57 AM. ECON. REV. 347 (1967).

Rationales for catch limitations have been part of the legal culture since the nineteenth century. The real payoff, however, comes from the details of system design. What specific limitations on the right of capture best preserve the natural resources in the common pool? One recent real-life system, fishing for halibut, has been exhaustively analyzed by R. Quentin Grafton, Dale Squires, and Kevin Fox.⁴³ It neatly illustrates how apparent details determine the success or failure of a system intended to ward off the tragedy of the commons. Quite simply, even though everyone today recognizes the need for regulation of the commons, the choice here is not simply between regulation and nonregulation. Rather it is about the specific set of regulatory initiatives that best achieves its objective, a subject on which Farber generally has very little to say.⁴⁴

Halibut are caught by longline gear. A set of baited hooks is attached to short lines, which are in turn connected to a main fishing line and a series of buoys. During the 1980s, the effective public constraint on the number of fish caught was the number of days that a vessel was allowed to run lines. As these days were reduced from sixty-five to six, the size of each catch increased by over fifty percent. Crews increased in size; certain areas were overfished; lines crossed and tangled; and baited lines continued to catch fish after they had been severed from boats. The catch was concentrated within a few days, which compromised prices to processors and resulted in a lack of fresh halibut for much of the year. By 1988, when the situation reached crisis proportions, a different mode of allocation was imposed, whereby individual vessel quotas (defined as a percentage of the total allowable catch) were determined by vessel length and best catch in the previous four years. The authors summarize their results as follows:

The "privatization" of the [British Columbia] halibut fishery is a natural experiment of the effects of changes in property rights in a common-pool resource. The introduction of private harvesting rights in 1991 led to an important transformation in the industry and the behavior of fishers. In particular, the creation of an exclusive harvesting right allowed for an increase in the fishing season from just six days in 1990 to over six months in 1991, and over eight months since 1992. A longer fishing season has allowed fishers to increase the quality of the fish landed and enabled them to sell almost all of their harvest as a higher priced fresh product. As a result, unit quota rents and producer surplus per pound

43. See R. Quentin Grafton et al., *Private Property and Economic Efficiency: A Study of a Common-Pool Resource*, 43 J.L. & ECON. (forthcoming Oct. 2000) (manuscript at 27, on file with *The Yale Law Journal*).

44. This is a point for which he has been harshly, perhaps too harshly, criticized in David Roe, *Green Scholarship*, 3 GREENBAG 2D 97 (1999), which notes that *Eco-Pragmatism* "avoids grappling with experience, case law, and scholarship over the last twenty years that could have supported its argument and given content to its intellectual goal." *Id.* at 98.

significantly increased between 1988 and 1991, and again between 1991 and 1994. Surveys of fishers also indicate that private harvesting rights made fishing safer, reduced losses of fishing gear, and decreased wastage of fish. Further, a shift in the property-right regime led to greater cooperation or co-management between the fishers and the regulator. Such improvements would not have been possible under the previous property-rights structure where fishers tried to catch as many fish as possible in a very limited period of time.⁴⁵

That said, the difference between the unadorned property approach and Farber's more nuanced pragmatism is striking. Grafton, Squires, and Fox do not rely on any special environmental baseline in their analysis. Nor do they dwell on how the tragedy of the commons propels the need to regulate the catch in the first place. The differences they report result from different systems of environmental control, and not simply from the differences between the common-law rule of capture and just any old system of common-pool regulation.⁴⁶ The more detailed the information, the better the choice, and the less the environmental baseline matters. I am hard-pressed to see what Farber's pragmatic environmentalism adds to the overall analysis.

B. *Air Pollution*

The same critique of Farber's position applies to air pollution, where once again the details of the system are critical. In dealing with the 1990 Clean Air Act, Farber offers cautious remarks about the importance of marketable sulfur-dioxide allowances.⁴⁷ But his remarks are bloodless at best. In this context, let me relate Jonathan Adler's informative account of the fierce legislative wrangling surrounding the passage of the 1990 Clean Air Act Amendments (CAAA).⁴⁸ This tale has no happy ending, given the massive political pressures that systematically forced the statute down self-destructive environmental paths.⁴⁹ The major changes mandated under the CAAA are costly to implement and often produce no effective reduction in the level of noxious pollutants. Part of the difficulty stems from the success

45. Grafton et al., *supra* note 43 (manuscript at 27).

46. The common-law rule of capture awards the animal, regarded as unowned in the state of nature, to the first taker of it. The rule goes back to Roman times, *see* G. INST. 2.66, and has been adopted in the common law as well. The best-known case on the subject is *Pierson v. Post*, 3 Cai. R. 175 (N.Y. Sup. Ct. 1805).

47. *See* FARBER, *supra* note 4, at 180-81. For more discussion of air pollution generally, *see* ROBERT PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 755-865 (2d ed. 1996).

48. Pub. L. No. 101-549, 104 Stat. 2399 (codified as amended in scattered sections of 42 U.S.C. and 29 U.S.C.).

49. *See* Adler, *supra* note 8, at 26.

of earlier state initiatives, which introduced the easy fixes that have a high ratio of marginal benefit to marginal cost. Additional improvements do not come cheap, because the 1970 Clean Air Act initiatives have already eliminated around ninety-six percent of hydrocarbons and carbon monoxide in tailpipe emissions.⁵⁰ Further technical complications arise because efforts to curb one form of pollutant may raise the levels of a second. Adding ethanol to gasoline, for example, could cut carbon dioxide emissions by up to twenty-two percent nationwide, but only at the cost of a fifty-percent increase in total volatile organic compounds.⁵¹ The relevant tradeoffs are between different environmental risks, a task for which Farber's presumptive environmental baseline provides no guidance. Nor, it appears, did public deliberation, which Farber praises,⁵² do much to improve matters. Adler describes the consequences:

The RVP exemption [a standard measure of fuel volatility] illustrates that legislators were prepared to go to extraordinary lengths in creating a market for ethanol, regardless of the environmental results. However, it is not the only such illustration. The oxygen standards, the credit-trading program, the definition of "no NOx increase" in the EPA's simple model—all were driven exclusively by political considerations. The result was a regulatory regime of mind-boggling complexity, a web of standards, mandates, requirements, and timetables that is incomprehensible to all but a handful of bureaucrats and to the representatives of the interests that are being regulated or served. Attached to this comprehensive management plan, for the sole benefit of certain industry interests, is an oxygen credit-trading program, which is proudly presented as evidence of regulatory flexibility and incentive-based regulation.⁵³

The failures of air pollution regulation are not confined to the domestic arena. The proposed Kyoto accords dealing with the question of international air-pollution control have generated a storm of controversy, yet Farber has nothing to say about these issues in light of his program. Three questions are at issue. The first is how much pollution should be generated *in toto*. It necessarily raises the technical and economic issues that Farber likes: those shrouded in uncertainty. But for these purposes, one can assume that some measure, any measure, of net pollution can be found. The second issue is who gets what right to generate that pollution. Taking the simplest assumption that all pollution is equally dangerous regardless of

50. See *id.* at 22.

51. See *id.* at 22-23.

52. See FARBER, *supra* note 4, at 54-58.

53. Adler, *supra* note 8, at 39.

its source, the answer seems clear: Allocate the pollution rights to those parties who can generate the largest net social product for any given level of pollution. In principle, an auction should determine those participants.

These preliminaries lead to the third question: Who gets the proceeds from the sale? Here there is no “natural” answer because no one knows the initial distribution of air rights in the first place. So the lack of any baseline means that the proceeds should be divided among the nations in accordance with some political solution. But which? Population and industrial yield generate, to say the least, very different answers. Matters are worse because this pure question of distribution drives a strong wedge between developed and undeveloped nations. The efficient producers are located in wealthy nations, but the strongest claimants on need are the more backward nations with the least-efficient producers and the lowest standards of living.

Some of this problem could be alleviated by making pollution-emission rights tradable across nations. But once again, politics makes sales from undeveloped to developed nations unpalatable, given the reluctance of poorer nations to be relegated to a passive role in the international political arena. Yet another proposal is for undeveloped nations to invite large multinational companies to help them efficiently use their own development rights, which in too many cases runs smack into a wall of local chauvinism and protectionism. Matters are made still more complicated because there is no way (short of war) for one nation to enjoin the excessive air pollution caused by a second: Each nation’s threat position is high levels of unilateral emissions, which dares other nations to follow suit. The upshot is that the technical solution is at hand, but the political one is not. Hence the United States representatives at Kyoto gave their provisional agreement to a system of pollution control that acknowledges a system of common but differentiated responsibility, yet locks us into a situation in which the most efficient producers are required to make the most substantial cutbacks in production. In consequence, the United States takes on a disproportionate burden of the anticipated reductions, even though it is one of the most efficient producers of industrial goods. The injection of distributional concerns and weak political oversight sets us on a course for failure.

C. The Two Compared

One critical public-choice question is why the new regime for catching halibut counts as a success while the various initiatives for air pollution control count as failures on both the domestic and foreign scene. The source of this difference does not lie in any grand theory of deliberative democracy, but in a close public-choice analysis. In the halibut fishery, the proposed changes were first suggested by the fishermen themselves. They

were able to realize this solution because all interested parties had roughly parallel positions on an issue that aligned itself in a single dimension: They wanted to maximize a single good—the net gain over time from the catch of the fish. That simple problem cleared the way to an easy conceptual solution because the position of all fishermen rose or fell together. The strong knowledge base, the focused objective, and the common incentive structure worked together to yield a favorable outcome.

The situation with air pollution was far more complex. The overall goal of pollution control was still present, but the political dynamics were drastically different. On the domestic front, many of the initiatives came from the Environmental Protection Agency, ruled by its own imperative for bureaucratic expansion regardless of the consequences.⁵⁴ Moreover, the interests of private parties were in conflict with each other. A solution that helped ethanol producers would hurt gasoline refiners who have worked out uneasy accommodations with environmental groups—for some sense of the problem, it is only necessary to read the ExxonMobil advertisements that appear from time to time on the op-ed page of the *New York Times*. Any overall solution that minimizes the net anticipated social harm from pollution of all kinds would inevitably have profound distributional consequences. One group would win and a second would lose in a world in which no side payments were available to even out the burdens in question. Exactly the same problems plagued the effort to reach sensible accommodations on questions of global air pollution at Kyoto. Given the initial positions of the negotiating parties, political process gave birth to a legal monster, as political deliberation only made it clear to the various participants just how far apart they really were.

IV. THE DISCOUNTING PROBLEM

This discussion of common-pool problems shows how easy it is to move from small disputes between neighbors to large disputes that can envelop the globe. That same form of messianic environmentalism arises anew when considered over the long haul. This matter is quite inescapable, for implicit in environmental common-pool problems is the temporal dimension. Discharges do not cause harm only at the moment of their release; they may accumulate over time. Excessive capture of fish reduces the stock and makes sustainable yields impossible. Increases in atmospheric carbon dioxide have long-term implications for the temperature of the earth and the survival of human beings, and indeed for all living things, even

54. See William Niskanen, *Bureaucrats and Politicians*, 18 J.L. & ECON. 617, 618 (1975) (“My model of bureaucratic supply determines only the bureau’s preferred output based on an assumption that the bureau acts to maximize its budget.”).

though these could take generations to manifest themselves. To handle these issues, we must develop some way to link the present and future on both the benefit and cost side. The traditional method is the discount rate, which converts a dollar tomorrow into a dollar today, or the reverse. The steeper the discount rate, the greater the implicit preference for present costs and benefits. In dealing with most decisions, a real discount rate (one that ignores inflation) is normally around two percent per year.⁵⁵ But even that modest discount rate attaches only tiny weight to the welfare of the people alive in 100 years, virtually none of whom are alive today.

Farber offers us a thoughtful, if agonized, discussion over the choice of the proper discount rate, and even flirts with the absurd idea of using a zero discount rate to keep future generations, even a billion years from now, on the social radar screen as vividly as the present inhabitants of the earth.⁵⁶ This debate is overblown, for the choice of a social discount rate matters less than is commonly supposed. First, we must have a very inflated view of our own importance to think that any decision made today will have much impact on the welfare of individuals a thousand, or even a hundred, years from now. The present generation does not make all the relevant decisions while future generations remain locked in autopilot. Their leaders, their legislatures, and their environmental activists will happily overrule our decisions just as we have overruled the decisions, thoughtless or not, of prior generations. In the interim, the soot that we place in the atmosphere will slowly settle to the ground. After all, what are the effects of the pollution generated by the bombings and wreckage of World War II on the welfare of the present? The future counts less for us because it rightly counts more for unborn generations who have to be depended on to take the right steps once their time arises. And there is always a risk of taking costly steps today that could prove unnecessary in light of the technological improvements tomorrow.

But what about those decisions that lead to the immediate destruction of the Earth? Of course, we should fear such foolishness. But in such cases the discount rate matters not a whit because the present generation has sufficient incentive to preserve itself, at least if it can overcome its own humdrum collective-action problems. Unborn generations can thus happily free-ride off the present against those cataclysms. The only way to falsify this conclusion is to imagine situations in which the future is worse than it ought to be because we have mortgaged it to make the present better. But

55. See FARBER, *supra* note 4, at 142, 156 (citing Michael J. Moore & W. Kip Viscusi, *Discounting Environmental Health Risks: New Evidence and Policy Implications*, 18 J. ENVTL. ECON. & MGMT. S-51, S-59 to S-62 (1990)). For a critique of Moore and Viscusi, see Richard L. Revesz, *Environmental Regulation, Cost-Benefit Analysis, and the Discounting of Human Lives*, 99 COLUM. L. REV. 941, 974-81 (1999).

56. See FARBER, *supra* note 4, at 143.

that unlikely scenario presupposes that we can enjoy life today and postpone all adverse consequences with laser-like precision until the next generation. Farber is drawn to just this form of artificial reasoning when he contrasts two hypothetical projects for waste disposal.⁵⁷ The first waste dump produces no deaths in construction, but is certain to cause a billion deaths in the year 2500.⁵⁸ The second may cause one or two deaths today, but none in the future.⁵⁹ How do we choose? Answer: Not at all, because the choice is artificially contrived to speak only of false options. Should we really think that a project that holds a risk, or even certainty, of catastrophic failure in 500 years poses no short-term risk? Should we think that we have only two corner solutions when we might tweak questions of design, siting, and supervision in a thousand different ways? Should we further assume that the next generation will be unable to fix any such monstrous danger after it becomes apparent: Can anyone conceive of a technology (for which there are no substitutes) that could be fixed at the cost of one death today but one million tomorrow? Why assume that we can, or must, make only binary decisions between today's benefits and the next millennia's payback, with nothing in between? Any real choice set involves initial decisions that are constantly modified in the light of future circumstances, taking into account shifts in popular demand, changes in technology, and external shocks to the system from natural causes. Both costs and benefits occur in all relevant time periods for all relevant environmental choices. We have no monopoly on the future.

For this simple truism, we and our descendants should all pay homage to the free-riders of the future. The basic logic is the same whether we deal with pollution or with exhaustion of common-pool resources. Either way, the first desideratum is for decisions that make sense within short time periods. An easy rule of thumb in the fishery case is to make sure that the annual catch does not deplete the stock for the next year. If the commonplace principle of sustainable yields is consistently followed, the future, when left to its own devices, will neatly take care of itself, one year at a time. The short-term adjustments in allowable catch limits will yield long-term benefits, for it is difficult to imagine a pattern in which short-term austerity yields long-term destruction of natural resources. A similar solution applies to air pollution controls. If we can keep emissions levels, properly calculated, constant over time, then the long-term problem will take care of itself, one year at a time—which won't happen under the Kyoto plan given its political preferences for underdeveloped nations. Of course, any sensible solution requires the next generation to play its part. But no

57. *See id.* at 150-51.

58. *See id.* at 150.

59. *See id.*

matter what we do, our conceptual exercise is rendered moot if 100 years from now our great-grandchildren want the world to go up in flames.

Indeed, in a very real sense, the long-term position is rosier still. Thus far, the implicit assumption is that the level of output for any given measure of input is constant. But in general, we should join with Julian Simon and expect that improved technology will increase all relevant measures of output.⁶⁰ Aquaculture may reduce the need to raise fish in a common-pool environment. Simon won his famous bet with Paul Ehrlich because technology rendered mineral resources less valuable, as glass fiber had replaced copper fiber.⁶¹ The key to environmental success is keeping overall technology humming so that information travels on the Internet and not through the U.S. Postal Service, with its expenditures of paper, fuel, labor, and other raw materials so that ill-maintained government trucks can pollute the air. Indeed, if we get things right for those in the next generation, preserving the environment should be an easier task for them. The future comes in bite-size pieces. Simon correctly saw that human intelligence could reduce the demand for key natural resources far more rapidly than human growth would demand them. The key to environmental preservation does not lie chiefly in narrowly conceived policies of resource preservation that ignore all dynamic social forces. Environmental preservation cannot be achieved by a rule that refuses to discount environmental costs, but applies that discount figure to just about everything else: For in that case we should spend only on those projects that are labeled “environmental,” and create by indirection an environmental problem of far greater magnitude. Rather, the key to a successful policy lies in a willingness to abandon the view that the planet can survive only if population shrinks to a tiny fraction of the present level—our gift, as it were, to future generations. So on the state of the world in a billion years, it

60. See SIMON, *supra* note 2, at 31-32 (noting that academics are the most hidebound adherents to their own diminishing expertise). For some striking confirmation of the Simon thesis, see PACIFIC RESEARCH INST., 1999 INDEX OF LEADING ENVIRONMENTAL INDICATORS (Steven Hayward et al. eds., 1999), which noted (by way of example only) sharp declines in various environmental indicators. See *id.* at 19 (ambient carbon monoxide), 20 (ambient lead levels), 21 (blood levels of lead in children), 22 (ambient ozone). The key question is the extent to which these reductions should be attributed to improved technology, wise policy, or some combination of these. And the possibility that bad policies could *deter* welcome technical innovation should never be overlooked either.

61. The bet concerned the prices of a marketbasket of commodities in 1990: copper, lead, tungsten, etc. Simon allowed Ehrlich to pick the commodities in the basket, and then claimed that their price in real dollars would be lower in 1990 than they were in 1980. His view was that technological advances would negate potential scarcities. Ehrlich took the opposite position. Simon clearly won as commodity prices dropped across the board, and Ehrlich declined to renew the bet. Note that all relevant events took place within a decade. For an account of the bet, see John Tierney, *Betting the Planet*, N.Y. TIMES, Dec. 2, 1990, § 6 (Magazine), at 52. For commentary on this account, see PERCIVAL ET AL., *supra* note 47, at 1392, which notes that although Simon won the bet, Ehrlich remains “highly popular,” while Simon “has few followers.”

is best to relax: The sunspots will take care of that issue. After much self-inflicted doubt, Farber ends up in the right place and for the right reason. "Like runners in a relay race, we may do best when we concentrate on passing the baton to the next runner, leaving the rest of the race to the succeeding runners."⁶² He could have gotten there a lot faster by being less pragmatic and less ecumenical.

V. PROPERTY RIGHTS AND THE ENVIRONMENT

Thus far, I have examined environmental regulation in connection with common-pool resources. But I must make brief mention of the evident and persistent conflict between the environmentalist movement and the property-rights movement, with which I have long been identified. Farber pays little attention to this issue, one he regards as a second-order question, which, in some sense, it surely is since the compensation paid is a means to some social end rather than the end in itself. But is that compensation needed? At its most general level, the debate over compensation parallels the debate between reasonableness and strict-liability rules in nuisance cases. If either system is correctly applied, we get to the first-best outcome, as measured by the proper allocation of resources. Quite simply, the government decides which resources should be held in common and which should be privatized, and does so without fear or favor, acting on the strength of the best available information. Given a peerless, if presumed, record of behavior, the payment of compensation, *vel non*, is no longer needed to create the right set of incentives. The only questions that remain are distributional, based on some perceived sense of equity.

The real world, however, never gives us the luxury to consider distributional questions wholly apart from their allocative consequences. Bias is commonplace, given human self-interest. Information is a scarce commodity, costly to acquire and interpret. The decision as to whether to provide compensation thus generates powerful behavioral consequences for public and private actors alike. So the key question here is which rule (compensation or not) has institutional features that lead to desired social outcomes, defined at a minimum to cover the adoption of positive-sum social projects. If collective judgments could determine the most beneficial use of resources, the need for property rights would vanish.⁶³ Benevolent and knowledgeable political leaders would make all the correct allocation decisions. Even if these leaders provided no compensation to individuals, matters would even out in the long run as everyone shared in the fruits of

62. FARBER, *supra* note 4, at 160.

63. I develop this theme in Richard A. Epstein, *Property, Speech, and the Politics of Distrust*, 59 U. CHI. L. REV. 41 (1992).

their high-minded labors. But not all government officials are benevolent, and their knowledge may be imperfect even if their motives are exemplary. Private actors do better when they are subject to sensible economic incentives, and allowing government officials to take or to regulate at will gives these officials an open invitation to ignore the costs that their actions inflict on the private parties whose property, quite literally, lies in their path. A system that couples the government's power to regulate with responsibility for the property it takes is in general likely to do better. But it hardly follows that all forms of government regulation can be implemented only if compensation is paid.

The sensible position recognizes two degrees of regulatory freedom. First, the government can stop pollution and other nuisances without compensation when a diffuse group of private property owners finds it difficult to coordinate legal action for their own protection. That set of public remedies simply reinforces the strong set of common-law private rights on environmental issues. Any sensible definition of the police power seeks to tie it to the control of common-law nuisances. Next, for the destruction of common-pool resources, some limitations are justified for the reasons given in the discussion of the Canadian halibut fisheries: The restrictions work to the long-run advantage of the parties so regulated.⁶⁴ In some cases, this test might even justify the total prohibition on the killing of certain endangered species where the sustainable yield may be zero.

But what about habitat preservation—that is, situations in which restrictions on land use are imposed, without compensation, to protect the habitat of some plant or animal species?⁶⁵ On yet another controversial topic that Farber passes over, the common-law rules were clear: The habitat was part of the land. Its use, preservation, or destruction was determined solely by its owner. If the state wanted to preserve the habitat, it could either buy the land outright or purchase the appropriate easement. Where government officials chose not to intervene, private environmental groups could enter with their own offers to purchase the land or the habitat on it. To the extent that the benefits of species preservation redound to society generally, it offers the perfect case for having the public at large, not the individual landowner, bear the cost.⁶⁶ Here Farber should be faulted for not

64. See *supra* Section III.A.

65. For a recent decision upholding habitat regulations without compensation, see *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687 (1995), which I criticized in Richard A. Epstein, *Babbitt v. Sweet Home Chapters of Oregon: The Law and Economics of Habitat Preservation*, 5 SUP. CT. ECON. REV. 1, 48-57 (1997). For a somewhat less critical view of the Endangered Species Act, see Barton H. Thompson, Jr., *The Endangered Species Act: A Case Study in Takings & Incentives*, 49 STAN. L. REV. 305 (1997).

66. Cf. *Armstrong v. United States*, 364 U.S. 40, 49 (1960) ("The Fifth Amendment's guarantee that private property shall not be taken for a public use without just compensation was designed to bar Government from forcing some people alone to bear public burdens which, in all

taking into account *any* of the recent efforts of “free market environmentalists” to use a system of strong property rights to secure environmental protection.⁶⁷ To understand Farber’s outlook fully, we need his assessment of this key question.

VI. CONCLUSION

On balance, then, *Eco-Pragmatism* deserves a mixed review. On the positive side, the book does not fall prey to any of the excesses of environmental zealotry. Farber never takes liberties with the evidence and is careful to distance himself from extremists of all stripes. So far so good. But the negatives must be reckoned with as well. Throughout the length and breadth of legal theory, a battle is now being fought over the proper mode of analysis. Farber falls into a camp that prizes a kind of sober ecumenicalism that looks with suspicion on the capacity of legal theory and empirical research to make hard choices on the way to attack knotty substantive problems. Instead of examining a wide range of substantive environmental issues head-on, and recounting the experience in the field over the past generation, he spends too much time on one case, only to resort thereafter to a variety of avoidance doctrines, the only effect of which is to distance him from his own subject matter. Like a good republican, he gives great praise to political deliberation within a democratic structure. Yet in so doing, he often praises the process of deliberation from afar without engaging in the tough substantive analysis that makes deliberation worthwhile. Like a good public-choice scholar, he is aware of the potential pitfalls in the legislative process; however, he proposes no structural constraints on the process that respond to these public-choice concerns. Instead, at every critical juncture he is content to rely on grand global presumptions, chiefly about the importance of an environmental baseline, that are meant to incline thoughtful citizens in favor of a respectable level of regulation.

Unfortunately, his consistent appeal to responsible consensus leads him to ignore the need to deal with *any* of the major intellectual alternatives to his own position. He does not systematically assess, for example, the

fairness and justice, should be borne by the public as a whole.”). For my more detailed views on this case, see EPSTEIN, *supra* note 27, at 42-44.

67. Ignoring any one author is, of course, appropriate. But when all relevant authors are left out of the account, the systematic weakness becomes more apparent. Here is a brief sampling: TERRY L. ANDERSON & DONALD R. LEAL, *FREE MARKET ENVIRONMENTALISM* (1991); ELIZABETH BRUBAKER, *PROPERTY RIGHTS IN DEFENSE OF NATURE* (1995); MICHAEL S. GREVE, *THE DEMISE OF ENVIRONMENTALISM IN AMERICAN LAW* (1996); GARY D. LIBECAP, *CONTRACTING FOR PROPERTY RIGHTS* (1989); ELINOR OSTROM, *GOVERNING THE COMMONS* (1990); and BRUCE YANDLE, *COMMON SENSE AND COMMON LAW FOR THE ENVIRONMENT* (1997).

strengths and weaknesses of traditional property-rights regimes, nor the standard mechanisms that are designed to control overconsumption of common-pool assets. His great faith in political deliberation also leads him to overlook the critical question of the incentive structures that improve the level of legislative deliberation, such as holding legislatures accountable for their own conduct. Such structures would require legislatures to think seriously about which government initiatives require compensation and which are protected under the police power. I wish I could see him blast just one ostensibly environmental initiative as self-destructive, misguided, or simply inept. If he had, I would have read him more sympathetically, even if he had offered a stirring defense of a dozen others. But that close examination of particular programs is not part of his lofty purpose. By staying at so high a level of generality, *Eco-Pragmatism* will persuade only those who are predisposed to accept its conclusions in the first place. It will not advance the science of environmental protection, nor will it lead to the effective integration of environmental law into the larger system of legal relations.

