



Spring 2004

## Environmental Amenities, Private Property, and Public Policy

Steven J. Eagle

### Recommended Citation

Steven J. Eagle, *Environmental Amenities, Private Property, and Public Policy*, 44 Nat. Resources J. 425 (2004).

Available at: <https://digitalrepository.unm.edu/nrj/vol44/iss2/5>

This Article is brought to you for free and open access by the Law Journals at UNM Digital Repository. It has been accepted for inclusion in Natural Resources Journal by an authorized editor of UNM Digital Repository. For more information, please contact [amywinter@unm.edu](mailto:amywinter@unm.edu), [lsloane@salud.unm.edu](mailto:lsloane@salud.unm.edu), [sahrk@unm.edu](mailto:sahrk@unm.edu).

STEVEN J. EAGLE\*

# Environmental Amenities, Private Property, and Public Policy

## ABSTRACT

*Environmental amenities, like beautiful vistas and famous natural landmarks, are highly valued by many people, but it is difficult to determine what would constitute an optimal supply of them. Since enjoyment of an amenity by one person does not preclude enjoyment by many others, and it is impractical to limit such enjoyment to those who pay, individuals have an incentive to understate their demand for environmental amenities, thus leading to their underproduction. On the other hand, interest groups might spur government to overestimate the unarticulated demand. Furthermore, much demand is not policy relevant, since individuals with a moderate taste for particular amenities might be more than surfeited by the supply that others voluntarily provide. Building upon this framework, the author contends that commonly employed methodologies for ascertaining the value of amenities are seriously flawed, and that attempts to provide very high levels of amenities without commensurate public expenditures may damage private property rights.*

Mae West, who was an actress and not an economist, once observed, "too much of a good thing is wonderful."<sup>1</sup> Miss West also supplied considerable insight into how such a happy state of affairs might be obtained. When someone gasped "my goodness" upon seeing her diamonds, she responded, "Goodness had nothing to do with it."<sup>2</sup> Miss West was not bereft of an understanding of market principles or, for that matter, of the value of what one might call the amenities of life.

## I. POLICY-RELEVANT ENVIRONMENTAL AMENITIES IN A PARETIAN WORLD

Parties in consensual relationships do not purchase "too much" of any good, since the subjective value of the resources they thereby

---

\*. Professor of Law, George Mason University School of Law, Arlington, Virginia 22201 (seagle@gmu.edu).

1. JOSEPH WEINTRAUB, *THE WIT AND WISDOM OF MAE WEST* (1967), quoted in Edward A. Dauer, *Judicial Policing of Consumer Arbitration*, 1 PEPP. DISP. RESOL. L.J. 91, 91 (2000).

2. *NIGHT AFTER NIGHT* (Paramount Pictures 1932) (quoted in BARTLETT'S FAMILIAR QUOTATIONS 736 (Justin Kaplan ed., 17th ed. 2002)).

would exchange exceeds the value of the goods they would obtain. Possibly, Miss West meant that the quantity of diamonds that would satisfy others was insufficient for her. Perhaps her meaning was normative rather than positive. The taste for diamonds among others similarly situated should not easily be sated, either.<sup>3</sup> In either event, a new owner akin to Mae West would revel in a quantity of diamonds beyond the demands of those with more abstemious tastes or who possessed endowments of lesser exchange value.

On the other hand, those obtaining goods through agents may well acquire too much of a good thing. Agency costs include shirking, manifested through indifference to the real wants of their principals. Agents may further their own agendas, which include opportune yielding to the blandishments or threats of others. In any event, it is difficult and expensive for one to learn the preferences of another, which contributes to the fact that "it is generally impossible for the principal or the agent at zero cost to ensure that the agent will make optimal decisions from the principal's viewpoint."<sup>4</sup> The problem becomes more difficult when the principal cannot be relied upon to disclose to the agent the value that he or she places on the good.

A classic response to the suspicion of undisclosed value is to assume that the value is high and to obtain goods accordingly. Even though the result is likely to be iatrogenic, the agent is aggrandized by acting and is spurred to action by interested groups. Where the agent is a government agency, the results are no different. "[M]arket forces provide strong incentives for politicians to enact laws that serve private rather than public interests, and hence statutes are supplied by lawmakers to the political groups or coalitions that outbid competing groups."<sup>5</sup> It is the brave adviser, then, who would counsel the agent, "Don't just do something, stand there!"<sup>6</sup>

That brave adviser, with respect to government provision of environmental amenities, is Professor David Haddock. In his article "When are Environmental Amenities Policy-Relevant?,"<sup>7</sup> Haddock

---

3. Recall the popular song that sums up this attitude. Jule Styne & Leo Robin, *Diamonds Are a Girl's Best Friend*, in *GENTLEMEN PREFER BLONDES* (Original Broadway Cast 1949).

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

5. Jonathan R. Macey, *Promoting Public-Regarding Legislation Through Statutory Interpretation: An Interest Group Model*, 86 COLUM. L. REV. 223, 224 (1986).

6. *Thoughts on the Business of Life*, FORBES, Dec. 1, 1977, at 140 (attributing quotation to Dean Acheson).

7. David D. Haddock, *When Are Environmental Amenities Policy-Relevant?*, 44 NAT. RESOURCES J. 383 (2004).

demonstrates the strong possibility that amenities are not undersupplied in the absence of governmental intervention. Furthermore, even if there is an undersupply, Haddock maintains that government is ill equipped to deal with it. The best intervention might be no intervention.

The genesis of the environmental amenities problem lies in the distinctions among "private goods," "public goods," and "collective goods."<sup>8</sup> Since public goods are nonrivalrous, the aggregate demand for them is the sum of the demands of individuals. Environmental amenities in large part are collective goods, since it is impossible or impractical to exclude individuals from them.<sup>9</sup> Individuals have an incentive to feign indifference to collective goods from which they derive significant benefit, since they expect to externalize the costs of environmental amenities by free riding on the willingness of others to pay. However, since articulated willingness to pay is our most robust measurement of demand, the demand we perceive might be considerably less than the actual demand for collective goods. Furthermore, if no one expresses willingness to pay, the potential Kaldor-Hicks benefit to society from the amenities would be foregone.<sup>10</sup>

Haddock quotes Harold Demsetz's skepticism that individuals will step forward to provide collective goods<sup>11</sup> but regards this, correctly, in my view, as "overstat[ing] the problem."<sup>12</sup> Many individuals do volunteer to provide collective environmental amenities and their altruism, in this sense, means that "rational action need not be considered optimally efficient ex ante (as in economics), it need only be

---

8. Following Haddock, I will define a "private good" as a rivalrous good (*i.e.*, its consumption by one person would foreclose consumption by anyone else. A "public good" is one that is non-rivalrous in consumption (*e.g.*, a television program). A "collective good" is a public good from which the exclusion of individuals is impractical (*i.e.*, national defense). *See id.* at 400-01.

9. The mere existence of the environmental amenity gives utility to many people. *See infra* text accompanying notes 41-46.

10. Under the Kaldor-Hicks test, if those benefiting from a rule or action could, in theory, fully compensate the losers and still have a net gain, the rule or action is considered efficiency enhancing (a Kaldor-Hicks "improvement" even though the compensation payments are not made). *See* Nicholas Kaldor, *Welfare Propositions of Economics and Interpersonal Comparisons of Utility*, 49 *ECON. J.* 549 (1939); J.R. Hicks, *The Foundations of Welfare Economics*, 49 *ECON. J.* 696 (1939).

11. Haddock, *supra* note 7, at 404-05 (quoting Harold Demsetz, *The Private Production of Public Goods*, 13 *J.L. & ECON.* 293, 306 (1970) ("the private production of collective goods, for which the cost of excluding nonpurchasers is great, does not seem to be practical")).

12. *Id.*

considered effective."<sup>13</sup> The growth and success of private land stewardship and of environmental organizations illustrates the point.<sup>14</sup>

That said, there remains the strong perception of a large gap between the (largely unrevealed) demand for and supply of collective environmental amenities. The provision of such goods by government is said to ameliorate this problem, since the State alone has the ability to exact payment from those who enjoy the good but are unwilling to step forward. Thus, the production of environmental amenities will be optimized and funded. As Haddock notes, "It seems intuitive that chronic externalities beg for public policy initiatives."<sup>15</sup>

There are a few problems, however. One is the likelihood that government will get the solution to the problem wrong. Centralized planners are unable to discern and act in timely fashion upon local knowledge.<sup>16</sup> A planned economy deprives planners of the very information they need to plan properly—market prices that embody information about preferences, resources, and technology.<sup>17</sup> Also, through regulatory capture, public agencies established to regulate industries become subservient to them.<sup>18</sup>

An even more fundamental problem with centralized solutions is the likelihood that there is no underlying problem. Haddock builds upon James Buchanan and William Stubblebine's seminal article, *Externality*.<sup>19</sup> "The nearly lost point of *Externality* is that more often even

13. Trevor M. Knox, *The Volunteer's Folly and Socio-Economic Man: Some Thoughts on Altruism, Rationality, and Community*, 28 J. SOCIO-ECON. 475, 477 (1999).

14. See, e.g., A. Dan Tarlock, *Contested Landscapes and Local Voice*, 3 WASH. U. J.L. & POL'Y 513, 535 (2000) (discussing private land conservation trusts). As of 1999, The Nature Conservancy had a membership of slightly over one million. At the same time, the National Wildlife Fund had 835,000 members and the World Wildlife Fund 800,000 members. The next three largest groups, the Sierra Club, the National Parks Conservation Association, and the National Audubon Society, each had almost 400,000 members. David B. Ottaway & Joe Stephens, *Nonprofit Land Bank Amasses Billions: Charity Builds Assets on Corporate Partnerships*, WASH. POST, May 4, 2003, at A1. The Nature Conservancy, which has \$3 billion in assets, recently was the subject of extensive criticism for "its strategy of combining conservation and business, including its own pursuit of for-profit ventures, [which] has led to some costly misadventures and awkward positions." *Id.* at A25.

15. Haddock, *supra* note 7, at 387.

16. See Friedrich A. Hayek, *The Use of Knowledge in Society*, 35 AM. ECON. REV. 519, 524-25 (1945).

17. Ludwig von Mises, *Economic Calculation in the Socialist Commonwealth*, in COLLECTIVIST ECONOMIC PLANNING 87 (Friedrich A. Hayek ed., 1935).

18. See George J. Stigler, *The Theory of Economic Regulation*, 2 BELL J. ECON. & MGMT. SCI. 3, 3 (1971) ("[R]egulation is acquired by the industry and is designed and operated primarily for its benefit."); Michael E. Levine & Jennifer L. Forrence, *Regulatory Capture, Public Interest, and the Public Agenda: Toward a Synthesis*, 6 J.L. ECON. & ORG. 167, 169 (1990).

19. James M. Buchanan & William Craig Stubblebine, *Externality*, 29 ECONOMICA 371 (1962).

chronic externalities are irrelevant...Externalities, positive and negative, are everywhere, but usually economically meaningless."<sup>20</sup> Haddock illustrates the point through such accounts as Ted Turner's Flying D Ranch in southwestern Montana, which provides passers-by with spectacular views of indigenous animals and those brought by Turner to the site.<sup>21</sup> While motorists value the wealthy Turner's efforts, they would not pay for them to be further enhanced. Their enjoyment is a positive externality, but one not policy-relevant.

It is important to note that Buchanan and Stubblebine emphasize that potentially relevant externalities become actually relevant through consensual, and therefore Pareto superior, exchange.<sup>22</sup> In the case of provision of collective environmental amenities, however, free riding generally precludes the internalization of externalities, including some that might be policy relevant. Government efforts to force internalization of the costs of meeting the perceived latent demand for environmental amenities are rough-hewn affairs. Many not actually deriving enjoyment from the amenities would be taxed and regulated for the benefit of others. The hope, at least, is that the aggregate welfare of society would benefit, thus making government provision of environmental amenities that are Kaldor-Hicks, albeit not Pareto, superior.<sup>23</sup>

Haddock indicates the "plausible prospect of a Kaldor-Hicks improvement"<sup>24</sup> but adds that governmental suasion towards the provision of a set of amenities desired by, say, an articulate

---

An externality is defined as *potentially relevant* when the activity, to the extent that it is actually performed, generates any desire on the part of the externally benefited (damaged) party (A) to modify the behaviour of the party empowered to take action (B) through trade, persuasion, compromise, agreement, convention, collective action, etc. An externality which, to the extent that it is performed, exerts no such influence is defined as *irrelevant*....

*Id.* at 373-74.

20. Haddock, *supra* note 7, at 387.

21. *Id.* at 38-40.

22. Buchanan & Stubblebine, *supra* note 19, at 374 ("gains from trade' characterise the Pareto-relevant externality, trade that takes the form of some change in the activity of B as his part of the bargain"). Unlike Kaldor-Hicks superiority, where it suffices that gains from a rule or action exceed losses, Pareto superiority requires that losers actually are compensated, so that, while winners gain, none is worse off. See generally RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 10-16 (6th ed. 2003) (discussing generally Pareto and Kaldor-Hicks superiority).

23. Kaldor-Hicks analysis advances the interests of the wealthy, since the maximum that each individual would choose to pay for any option often is a function of wealth. A weighted version of the Kaldor-Hicks criterion could adjust for income or other factors. See Richard Craswell, *Incommensurability, Welfare Economics, and the Law*, 146 U. PA. L. REV. 1419, 1451-52 (1998).

24. Haddock, *supra* note 7, at 403.

environmental interest group, could lead to "a Kaldor-Hicks deterioration rather than an improvement—even in principle those who lose could not possibly be fully compensated from the beneficiaries' gains."<sup>25</sup>

The balance of this article considers two interrelated vulnerabilities of governmental provision of environmental amenities; the ease by which the value of collective environmental amenities might be inflated and the temptation of government to "pay" for an inflated level of amenities though the partial confiscation of an endowment, such as landowner property rights.

## II. THE VALUE OF ENVIRONMENTAL AMENITIES

Professor Haddock focuses upon a world containing two types of goods, "market goods," benefiting only their owners, and "environmental goods" (e.g., forests and meadows), which provide "substantial spillover amenities to other members of the community."<sup>26</sup> This Manichean division permits the construction of a basic model following the scientific method.<sup>27</sup> The scientific method is useful in demonstrating that amenities might not be policy-relevant. In the actual formulation of sound and coherent policy, however, accurate knowledge of individual and societal goals and endowments, coupled with the presence of well-defined property rights, is essential.

### A. Measuring Amenity Values

In consensual market transactions, there is no reason for government officials to appraise the relative value of the goods exchanged, since the consenting parties regard themselves as gaining from it.<sup>28</sup> Each party to the agreement prefers it to any alternatives and thereby has maximized value and minimized costs.<sup>29</sup> Where government contemplates filling an asserted need for collective goods, however, it must ascertain the aggregate demand for that good.

---

25. *Id.* at 41.

26. *Id.* at 1.

27. *Id.* at 1-2.

28. See James M. Buchanan, *Rights, Efficiency, and Exchange: The Irrelevance of Transaction Cost*, reprinted in *ECONOMICS: BETWEEN PREDICTIVE SCIENCE AND MORAL PHILOSOPHY* 161 (Robert D. Tollison & Victor J. Vanberg eds., 1987), quoted in Todd J. Zywicki, *A Unanimity-Reinforcing Model of Efficiency in the Common Law: An Institutional Comparison of Common Law and Legislative Solutions to Large-Number Externality Problems*, 46 *CASE W. RES. L. REV.* 961, 974 n.42 (1996).

29. See Zywicki, *supra* note 28, at 966 n.12.

The problem of ascertaining values in welfare economics is vexing. Law and economics scholars Louis Kaplow and Steven Shavell recently argued that legal rules should be based exclusively on considerations of well-being:

The notion of well-being used in welfare economics ...incorporates in a positive way everything that an individual might value—goods and services that the individual can consume, social and environmental amenities, personally held notions of fulfillment, sympathetic feelings for others, and so forth....The only limit on what is included in well-being is to be found in the minds of individuals themselves, not in the minds of analysts.<sup>30</sup>

Professor Richard Fallon has criticized Kaplow and Shavell for criticizing the lack of clarity in the work of other theorists but failing themselves to define anything more clearly than what they described as “the central importance of the concept of well-being to welfare economics.”<sup>31</sup> In fairness, however, it would be hard to expect a more objective reply. Since modern economists do not purport to measure a given individual’s overall utility function objectively and overwhelmingly reject interpersonal comparisons of utility or satisfaction, it would be difficult to envision how aggregate welfare functions could be generated for the society as a whole.<sup>32</sup>

Measuring values pertaining to the environment is particularly difficult. The primary dictionary meanings of “environment” refer to background events or to the “whole complex of...factors that act upon an organism or an ecological community, [or alternatively,] the aggregate of social and cultural conditions...that influence the life of an individual or community.”<sup>33</sup> Gestalt problems lie in every direction.<sup>34</sup>

Cost-benefit analysis has become a standard, and increasingly legislatively mandated, tool for discerning the efficacy of regulatory

---

30. LOUIS KAPLOW & STEVEN SHAVELL, *FAIRNESS VERSUS WELFARE* 18–19 (2002).

31. Richard H. Fallon, Jr., *Should We All Be Welfare Economists?*, 101 MICH. L. REV. 979, 987–88 n.39 (2003) (quoting KAPLOW & SHAVELL, *supra* note 30, at 16).

32. See Gary Lawson, *Efficiency and Individualism*, 42 DUKE L.J. 53, 53–57 (1992).

33. WEBSTER’S THIRD NEW INTERNATIONAL UNABRIDGED DICTIONARY 760 (1993).

34. Gestalt theory is the relationship of figure to ground, where figure is a form made perspicuous by its perceived difference from a ground, context, or structure that lies behind or beyond it. See T.R. Miles, *Gestalt Theory*, in 3 ENCYCLOPEDIA OF PHILOSOPHY 318–23 (Paul Edwards ed., 1967).



policy.<sup>35</sup> However, the concept is controversial, with some asserting that the methodology of cost-benefit analysis is flawed.<sup>36</sup> In particular, deep ecologists have rejected in toto the use of cost-benefit analysis with respect to the environment. They argue, for example, "that if access to nature is a right, then cost-benefit analysis breaks down. In other words, there is no amount of money which can compensate for irreversible and irreparable damage to nature."<sup>37</sup> Others assert that future generations have "inviolable rights" to environmental resources—rights we must value as much as our own. Thus, they attack the familiar practice of discounting the present value of future environmental amenities because they are deferred.<sup>38</sup>

Such assertions about environmental values and the value of the environment are expressed with considerable conviction. However, claims and demands based on the rights of nature and of future generations are not falsifiable, hence not scientific in nature.<sup>39</sup> They are political appeals that others should defer to the sensibilities of the claimants, dressed up in rights talk.<sup>40</sup>

Since many environmental amenities are not traded, there are no transaction prices to indicate their benefits. Passive uses of amenities do not generate output that might be measured. The contingent valuation method has been used by some researchers to survey how much a representative sample population values passive environmental uses.<sup>41</sup> These passive uses include "option value," which measures willingness to pay to reserve the right to use the resource in the future, and

---

35. See, e.g., Jason Scott Johnston, *A Game Theoretic Analysis of Alternative Institutions for Regulatory Cost-Benefit Analysis*, 150 U. PA. L. REV. 1343, 1344 (2002) (discussing growth of cost-benefit analysis).

36. See, e.g., Robert H. Frank, *Why Is Cost-Benefit Analysis So Controversial?*, 29 J. LEGAL STUD. 913, 929–30 (2000) (asserting bias in much cost-benefit analysis methodology).

37. Edwin R. McCullough, *Through the Eye of a Needle: The Earth's Hard Passage Back to Health*, 10 J. ENVTL. L. & LITIG. 389, 436–437 (1995) (citing ARNE NAESS, *ECOLOGY COMMUNITY AND LIFESTYLE* (1989)). Naess coined the term "deep ecology" in 1973. *Id.* at 415.

38. *Id.* at 437 n.180 (quoting Clive L. Splash, *Economics, Ethics, and Long-Term Environmental Damages*, 15 ENVTL. ETHICS 117, 127 (1993)).

39. See KARL R. POPPER, *CONJECTURES AND REFUTATIONS: THE GROWTH OF SCIENTIFIC KNOWLEDGE* 33–59 (3d ed. 1969).

40. See MARY ANN GLENDON, *RIGHTS TALK: THE IMPOVERISHMENT OF POLITICAL DISCOURSE* (1991) (asserting that the recent tendency to reframe requests for privileges as demands that "rights" be respected has hindered political dialogue).

41. See, e.g., Daniel S. Levy & David Friedman, *The Revenge of the Redwoods? Reconsidering Property Rights and the Economic Allocation of Natural Resources*, 61 U. CHI. L. REV. 493 (1994). See also John M. Heyde, *Is Contingent Valuation Worth the Trouble?*, 62 U. CHI. L. REV. 331 (1995) (presenting a thorough account of uses and limitations of this technique).

“existence value,” which measures satisfaction derived from the continued existence of the resource.<sup>42</sup>

When option and existence values are employed to calculate an imputed market-clearing price that includes non-market benefits, the results are startling. The imputed market benefits of public lands devoted to recreation and preservation far exceed the economic benefits of commodity extraction uses. Furthermore, the data suggest that the value of preservation, a non-use, overwhelms the economic benefits of recreation and commodity uses.<sup>43</sup>

Existence value has its ardent proponents.<sup>44</sup>

Other scholars, however, are quite skeptical of option and existence value analysis.<sup>45</sup> They question the reliability of specific techniques and, more fundamentally, they assert that “the main problem with contingent valuation of environmental goods is conceptual, not methodological.”<sup>46</sup>

Notable supporters of environmentalism have claimed that the environmental movement is successful because it is in accord with the moral imperatives of the times. According to Professor Richard Lazarus, “Professor Dan Farber was the first to suggest that modern environmental laws may have resulted from a ‘republican moment’ — an “outburst[] of democratic participation and ideological politics” — created by widespread and then-rising public demand for environmental

42. See Jan G. Laitos & Thomas A. Carr, *The Transformation on Public Lands*, 26 *ECOLOGY* L.Q. 140, 145 (1999).

43. *Id.* at 145–46.

44. See, e.g., Howard F. Chang, *An Economic Analysis of Trade Measures to Protect the Global Environment*, 83 *GEO. L.J.* 2131, 2170 (1995) (stating that a “[n]onuse value, no less than use value, is a genuine component of economic welfare, regardless of whether this nonuse value is shared by others, and even if others view these preferences as absurd. From this perspective, if ethical considerations make some preferences illegitimate, those who wish to exclude these preferences from a cost-benefit calculation must bear the burden of justifying this exclusion in terms of moral philosophy.”).

45. See generally *CONTINGENT VALUATION: A CRITICAL ASSESSMENT* (J.A. Hausman ed., 1993). See also Donald J. Boudreaux et al., *Talk is Cheap: The Existence Value Fallacy*, 29 *ENVTL. L.* 765, 780–83 (1999) (asserting that asking non-experts to price selected environmental amenities independently results in their being overvalued).

46. Matthew D. Adler & Eric A. Posner, *Implementing Cost-Benefit Analysis When Preferences Are Distorted*, 29 *J. LEG. STUD.* 1105, 1126 (2000) (asserting, inter alia, that respondents asked for existence values register zero or unrealistically high valuations, provide valuations that are invariant across vastly different amenities, are inconsistent or intransitive, and are sensitive to the order and wording of the questions).

protection."<sup>47</sup> Lazarus added that the significance of the "republican moment" was that without it "environmental protection laws would never exist because of their radically redistributive nature."<sup>48</sup> The fact that Earth Day might have been a transformative moment for many, of course, does not negate the old Washington story of the symbiotic relationship between established commercial interests seeking to burden their competitors and reformers who came to do good and stayed to do well.<sup>49</sup>

An additional consideration is framing theory, which relates the present discussion of valuation to the temptation to pay for environmental amenities by redefining property rights.<sup>50</sup> "Framing" is the establishment of a context in which valuation decisions are made. Individuals tend to perceive the value of resources to be higher when they regard them as being owned by themselves rather than by others.<sup>51</sup> Researchers have found that the value respondents placed on a given natural resource could vary by 300 to 2000 percent, and they attribute much of that variance to the fact that "if the public views itself as the owner of a natural resource, valuation estimates will be much higher than if the public believes that others own the natural resource."<sup>52</sup>

## B. Additional Problems in Measuring Environmental Values

Determining the value of environmental amenities raises problems in addition to those inherent in valuing collective goods, even those of a passive nature. Haddock defines "environmental goods" as

47. Richard J. Lazarus, *A Different Kind of "Republican Moment" in Environmental Law*, 87 MINN. L. REV. 999, 999 (2003) (quoting Daniel A. Farber, *Politics and Procedure in Environmental Law*, 8 J.L. ECON. & ORG. 59, 66 (1992) (quoting, in turn, James G. Pope, *Republican Moments: The Role of Direct Popular Power in the American Constitutional Order*, 139 U. PA. L. REV. 287, 292 (1990))).

48. *Id.* at 1000.

49. See, e.g., Todd J. Zywicki, *Environmental Externalities and Political Externalities: The Political Economy of Environmental Regulation and Reform*, 73 TUL. L. REV. 845 (1999) (asserting that command and control environmental regulation has cartel-like effects that benefit selected industries and organized environmental interests); Jonathan R. Macey, *Public Choice and the Law*, in 3 THE NEW PALGRAVE DICTIONARY OF ECONOMICS AND THE LAW 171, 173 (Peter Newman ed., 1998) (emphasizing special interest benefit of environmental regulation).

50. See *infra* Part III.

51. See Amos Tversky & Daniel Kahneman, *Rational Choice and the Framing of Decisions*, 59 J. BUS. S251, S257-62 (1986); Daniel Kahneman et al., *The Endowment Effect, Loss Aversion, and Status Quo Bias*, 5 J. ECON. PERSP. 193, 196-97 (1991). See also William A. Fischel, *The Offer/Ask Disparity and Just Compensation for Takings: A Constitutional Choice Perspective*, 15 INT'L REV. L. & ECON. 187 (1995).

52. Levy & Friedman, *supra* note 41, at 495.

resources that provide “substantial spillover amenities to other members of the community,”<sup>53</sup> implying that it is human demand that must be satisfied. Yet, from the term “environmental,” it is not self evident what organism or ecological or cultural community should be preferred. Some might term Haddock’s approach “shallow environmentalism” and “anthropocentric” because “it views humans as the source of all value and ascribes only use value to nature. Deep ecology recognizes the intrinsic values of all living beings and views humans as just one particular strand in the web of life.”<sup>54</sup>

For many committed environmentalists, it is difficult to take a piecemeal approach, focusing on one amenity or another, or even to speak of externalities, in a world where “nature knows best”<sup>55</sup> and “everything is connected to everything else.”<sup>56</sup> Furthermore, the “ethical concept of ‘deep ecology’ refers to the notion that nature and nonhuman forms of life hold intrinsic value irrespective of the utility or value humans place on them.”<sup>57</sup>

The United States has not adopted the straightforward approach of preserving environmental amenities only to the extent that they benefit people for aesthetic or other reasons, and employing efficient administrative means such as pollution taxes to do so.<sup>58</sup> Rather, “the tailor-made command approach remains the nation’s predominant means of addressing pollution.”<sup>59</sup> Statutes expressing environmental aspirations, such as the Endangered Species Act,<sup>60</sup> have been treated literally by the courts so as to impose mandates “to halt and reverse the trend toward species extinction, *whatever the cost.*”<sup>61</sup>

---

53. Haddock, *supra* note 7, at 384.

54. Fritjof Capra, *Ecologically Conscious Management*, 22 ENVTL. L. 529, 534 (1992).

55. This is Barry Commoner’s “Third Law of Ecology.” See BARRY COMMONER, *THE CLOSING CIRCLE* 41 (1971).

56. *Id.* at 33.

57. Robert W. Collin & Robin Morris Collin, *Sustainability and Environmental Justice: Is the Future Clean and Black?*, 31 ENVTL. L. REP. 10,968, 10,975 (2001) (citing ALDO LEOPOLD, *A SAND COUNTY ALMANAC* (1949)).

58. The classic exposition of this position is WILLIAM F. BAXTER, *PEOPLE OR PENGUINS: THE CASE FOR OPTIMAL POLLUTION* (1974).

59. Barton H. Thompson, Jr., *People or Prairie Chickens: The Uncertain Search for Optimal Biodiversity*, 51 STAN. L. REV. 1127, 1128 (1999).

60. See, e.g., David B. Spence, *The Shadow of the Rational Polluter: Rethinking the Role of Rational Actor Models in Environmental Law*, 89 CAL. L. REV. 917, 934 (2001) (noting the “aspirational nature of environmental law”).

61. *Tenn. Valley Auth. v. Hill*, 437 U.S. 153, 154 (1978) (emphasis added).

It may seem curious to some that the survival of a relatively small number of three-inch fish among all the countless millions of species extant would require the permanent halting of a virtually completed dam for which Congress has expended more than \$100 million. The paradox is not

A problem related to the valuation of environmental amenities is their asserted status as "merit goods." The term refers to goods that society deems so beneficial to consumers that its private provision is worthy of public subsidy. However, it encompasses the societal provision of goods for those who are unwilling, as well as unable, to pay for them.<sup>62</sup> Thus, accurate data indicating that the public's aggregate demand for a specified collective environmental amenity was not policy relevant might be rejected by those urging that government provide it nevertheless.<sup>63</sup> The melding of ascribed preferences with contingent valuation unveils the essential nature of the enterprise as being not one of positive inquiry, but rather as normative and intended to impress particular environmental policy preferences upon others. While preferences revealed through market transactions are not perfect proxies for value,<sup>64</sup> they are grounded in actual behavior and thus are limited in scope. For this reason, "[a]ttempts to bring a more social concept of value into economics...according to which cultural traditions or communities have value beyond what individuals place on them, have never caught on among economists."<sup>65</sup>

### III. PROVIDING ENVIRONMENTAL AMENITIES THROUGH REDEFINING PROPERTY RIGHTS

Assuming that government decides that it would be Kaldor-Hicks efficient to create new environmental amenities, privately owned

---

minimized by the fact that Congress continued to appropriate large sums of public money for the project, even after congressional Appropriations Committees were apprised of its apparent impact upon the survival of the snail darter. We conclude, however, that the explicit provisions of the Endangered Species Act require precisely that result.

*Id.* at 172-73.

62. See RICHARD A. MUSGRAVE, *THE THEORY OF PUBLIC FINANCE: A STUDY IN PUBLIC ECONOMY* 13-14 (1959) (asserting that "situations may arise, within the context of a democratic community, where an informed group is justified in imposing its decision upon others").

63. See, e.g., Martha B. Coven, *The Freedom to Spend: The Case for Cash-Based Public Assistance*, 86 MINN. L. REV. 847, 885 (2002) (asserting that "health care is a 'merit good,' which is 'something that in our ethical judgment everybody should have, whether or not they are willing or able to buy it'" (emphasis added) (quoting BARBARA R. BERGMANN, *SAVING OUR CHILDREN FROM POVERTY: WHAT THE UNITED STATES CAN LEARN FROM FRANCE* 131 (1996)).

64. A classic illustration is the expensive hormone obtained by the wealthy family for a slight enhancement of its child's athletic prowess, obtained over the lower bid of the poor family desiring the hormone to save its child's life.

65. Robert D. Cooter, *The Best Right Laws: Value Foundations of the Economic Analysis of Law*, 64 NOTRE DAME L. REV. 817, 825 (1989).

parcels of land or other land use rights would have to be obtained. State purchase is the most direct solution. It could be supplemented, as needed, by the exercise of eminent domain to avoid bilateral monopoly or strategic bargaining problems. These devices require payment from the public fisc, thus enhancing the accountability of government officials. However, public officials are not always eager to test their estimates of the value of amenities by demanding budget increases for their agencies or tax increases from the legislature or voters.<sup>66</sup> Indeed, circumvention of the requirement for purchase or condemnation at fair market value might be the sine qua non of obtaining amenities that are considered Kaldor-Hicks efficient in the first place. The efficacy of changes advocated to remove alleged externalities is thereby predicated upon the creation of a new externality.

### A. Common Law Property, the Right to Development, and Common Law Nuisance

Officials often prefer to obtain their objects through regulation. As Justice Scalia has noted, "The politically attractive feature of regulation is not that it permits wealth transfers to be achieved that could not be achieved otherwise; but rather that it permits them to be achieved 'off budget,' with relative invisibility and thus relative immunity from normal democratic processes."<sup>67</sup>

Therefore, it is not surprising that government would attempt to pay for environmental amenities not through taxation, but rather through the redefinition, and arguable confiscation, of private property rights. Since private ordering furthers individual liberty,<sup>68</sup> and private property is the best guarantee of its perpetuation,<sup>69</sup> the diminution of

---

66. See *Pennell v. City of San Jose*, 485 U.S. 1, 22 (1988) (Scalia, J., concurring in part, dissenting in part).

67. *Id.*

68. See Stephen M. Bainbridge, *Community and Statism: A Conservative Contractarian Critique of Progressive Corporate Law Scholarship*, 82 CORNELL L. REV. 856, 895 n.199 (1997) ("conservative contractarians...regard efficiency as a presumptively legitimate norm precisely because it best serves our preference for private ordering through contract").

69. See FREDRICH A. HAYEK, *THE ROAD TO SERFDOM* (1956).

[T]he system of private property is the most important guaranty of freedom, not only for those who own property, but scarcely less for those who do not. It is only because the control of the means of production is divided among many people acting independently that nobody has complete power over us, that we as individuals can decide what to do with ourselves.

*Id.* at 103-04.

property rights for the purpose of enhancing environmental amenities would create a negative externality of the first magnitude.<sup>70</sup>

Under common law, what now is termed "the environment" was the backdrop to private property. The creation of disturbances in the environment that would detract from owners' reasonable enjoyment of their property could be prosecuted under the rubric of private or public nuisance.<sup>71</sup> Since the 1960s, "the environment," as encapsulated in environmental law, is an aggregate of topics, such as clean air, clean water, and the protection of endangered species, in which statutory obligations have been created. Given the arbitrary quality of environmental statutes and the complexity of ensuing regulations, some scholars advocate that the common law nuisance approach is preferable.<sup>72</sup>

From colonial days on, the United States was settled by immigrants attracted by fee simple ownership of land that they could farm and develop.<sup>73</sup> "The normal bundle of property rights contains no priority for land in its natural condition; it regards use, including development, as one of the standard incidents of ownership."<sup>74</sup> To be sure, the use rights of individuals were qualified by their duty not to interfere with the reasonable use of neighboring lands, enforced by the law of nuisance. These principles were summed up a decade ago in *Lucas v. South Carolina Coastal Council*,<sup>75</sup> where Justice Scalia described that

[i]n the case of land,...the notion...that title is somehow held subject to the 'implied limitation' that the State may subsequently eliminate all economically valuable use is inconsistent with the historical compact recorded in the

---

70. See generally JAMES W. ELY, JR., *THE GUARDIAN OF EVERY OTHER RIGHT: A CONSTITUTIONAL HISTORY OF PROPERTY RIGHTS* (1992). See also Richard A. Epstein, *The "Necessary" History of Property and Liberty*, 6 *CHAP. L. REV.* 1 (2003); Steven J. Eagle, *The Development of Property Rights in America and the Property Rights Movement*, 1 *GEO. J.L. & PUB. POL'Y* 77 (2002).

71. Where the tortious act of one landowner precludes another from making reasonable use of his land, the victim may sue under private nuisance or may agree to tolerate the injury under contract. Where the disturbance caused by a nuisance tortfeasor is widespread, public nuisance permits the local prosecutor to bring suit to vindicate the rights of the affected owners, thus dealing with the collective action problem. See Karol Boudreaux & Bruce Yandle, *Public Bads and Public Nuisance: Common Law Remedies for Environmental Decline*, 14 *FORDHAM ENVTL. L.J.* 55, 59-65 (2002).

72. See, e.g., Roger E. Meiners & Bruce Yandle, *Clean Water Legislation: Reauthorize or Repeal?*, in *TAKING THE ENVIRONMENT SERIOUSLY* 73, 88 (Roger E. Meiners & Bruce Yandle eds., 1993).

73. See ELY, *supra* note 70, at 11.

74. RICHARD A. EPSTEIN, *TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN* 123 (1985).

75. 505 U.S. 1003 (1992).

Takings Clause that has become part of our constitutional culture.<sup>76</sup>

Such limitations “must inhere in the title itself, in the restrictions that background principles of the State’s law of property and nuisance already place upon land ownership.”<sup>77</sup>

The rise of the environmental movement has challenged development as a fundamental attribute of land ownership. Academic critics charged that the historic abundance of land in America has encouraged a “consumptive, aggrandizing culture.”<sup>78</sup> In 1972, the Wisconsin Supreme Court declared, in the well-known case of *Just v. Marinette County*,<sup>79</sup> that “[a]n owner of land has no absolute and unlimited right to change the essential natural character of his land so as use it [sic] for a purpose for which it was unsuited in its natural state and which injures the rights of others.”<sup>80</sup>

## B. Devices to Make Development a Collective Right

In an important sense, governmental regulation of private rights makes them collective rights. Beneficiaries of regulation rapidly assume proprietary attitudes,<sup>81</sup> and those benefiting from environmental regulations also want to institutionalize their gains by establishing a grounding for them in property law.<sup>82</sup> Since the common law assumed that private landowners possessed development rights short of nuisance, obtaining environmental amenities through other than consensual

76. *Id.* at 1028.

77. *Id.* at 1029.

78. Eric T. Freyfogle, *The Owning and Taking of Sensitive Lands*, 43 UCLA L. REV. 77, 96 (1995).

79. 201 N.W.2d 761 (Wis. 1972) (holding that a landfill could not be placed upon certain wetlands).

80. *Id.* at 768. *Just* was reiterated in *Zealy v. City of Waukesha*, 548 N.W.2d 528, 535 (Wis. 1996). The phrase “rights of others” refers here not to common law rights against nuisance, but to newly-minted rights to be bordered by land with an unchanged, if not well defined, “essential natural character.”

81. See, e.g., J. GREGORY SIDAK & DANIEL F. SPULBER, *Deregulatory Takings and the Regulatory Contract: The Competitive Transformation of Network Industries in the United States* (1997) (advocating compensation for utility companies’ “stranded costs” in newly deregulated markets); ROBERT H. NELSON, *Zoning and Property Rights: An Analysis of the American System of Land-Use Regulation* 22-51 (1977) (asserting that zoning is a de facto neighborhood collective private property right).

82. It is a tribute to the potency of the concept of property that those asserting new social entitlements may seek to institutionalize them by bestowing the status of property upon them. Various government welfare programs and occupational licenses have been the subject of such efforts, with varying degrees of success. The seminal work is Charles A. Reich, *The New Property*, 73 YALE L.J. 733 (1964).



transactions requires a redefinition of traditional property rights, or property-nuisance baselines.<sup>83</sup> Professor Daniel Farber advocated an "environmental baseline" against which public and private development activities could be measured. "To the extent feasible without incurring costs grossly disproportionate to any benefit, the government should eliminate significant environmental risks."<sup>84</sup> Farber's proffered baseline and qualification have been attacked as "wobbly" and insufficient to overcome the normal presumption for private ordering.<sup>85</sup>

Beginning with the idea that protection of the environment justifies regulating the use of private land short of finding a nuisance, it is only a short step to say that development is actually or potentially harmful<sup>86</sup> and that the rights to permissible development constitute a common pool. Our predominant metaphor for that pool is Garrett Hardin's evocative "Tragedy of the Commons."<sup>87</sup> The "tragedy," in this often-cited view, is that each person has a huge incentive to overexploit a common resource, since many others surely will do likewise and are unlikely to be dissuaded by isolated examples of self-restraint. As Haddock and Lynne Kiesling recently noted, the correct metaphor is "The Tragedy of Open Access,"<sup>88</sup> since commons are not unowned, but are rather the collective property of defined groups.<sup>89</sup> The distinction is important because, contrary to the "tragedy" metaphor, ownership in

83. Robert Ellickson has argued that the "normal behavior" within a community ought to define the landowners' baseline of entitlement to use rights against the state. See, e.g., Robert C. Ellickson, *Suburban Growth Controls: An Economic and Legal Analysis*, 86 YALE L.J. 385, 419-21 (1977).

84. DANIEL A. FARBER, *ECO-FRAGMATISM: MAKING SENSIBLE ENVIRONMENTAL DECISIONS IN AN UNCERTAIN WORLD* 131 (1999).

85. Richard A. Epstein, *Too Pragmatic by Half*, 109 YALE L.J. 1639, 1641-42 (2000).

86. See *infra* notes 104-108 and accompanying text (discussing the "precautionary principle").

87. Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968).

88. David D. Haddock & Lynne Kiesling, *The Black Death and Property Rights*, 31 J. LEGAL STUD. 545, 557 (2002). Haddock and Kiesling's extensive treatment of the commons is based on Louis DeAlessi's model of a continuum bounded by open access and private property separated by a continuous varied set of rights among owners. Louis DeAlessi, *Gains from Private Property: The Empirical Evidence*, in PROPERTY RIGHTS: COOPERATION, CONFLICT, AND LAW 90 (Terry L. Anderson & Fred S. McChesney eds., 2003). See also Henry E. Smith, *Semicommon Property Rights and Scattering in the Open Fields*, 29 J. LEGAL STUD. 131 (2000) (describing complex pattern of private and common land uses in medieval fields).

89. The resources may be open access to group members but are private property to outsiders. Shi-Ling Hsu, *A Two-Dimensional Framework for Analyzing Property Rights Regimes*, 36 U.C. DAVIS L. REV. 813, 817 n.12 (2003) (noting the earlier formulation: "commons on the inside, property on the outside," by Carol M. Rose, *The Several Futures of Property: Of Cyberspace and Folk Tales, Emission Trades and Ecosystems*, 83 MINN. L. REV. 129, 155 (1998)).

common "can yield sustainable exploitation of the resource in a way that is impossible in open access."<sup>90</sup>

Under the common pool approach, a logical way to apportion the limited amount of permitted development might be unitization, which some states impose on ownership of lands above fugitive oil and gas.<sup>91</sup> Under such an arrangement, the landowners in the relevant ecoshed (*i.e.*, unit) would share the value of permissible development through being accorded transferable development rights (TDRs) that a developer would have to purchase in specified quantities. However, that device is employed rarely.<sup>92</sup> Instead, localities typically establish various use zones and grant development permits through the use generally unconstrained and ad hoc methods.<sup>93</sup> Occasionally, development is metered through intricate schemes whereby builders acquire points toward an eventual permit.<sup>94</sup> As Dean James Huffman has noted,

The bias against property rights and markets remains strong among most environmental organizations, nowhere more than in the context of concerns about ecosystems and biodiversity. Threats to ecosystems and biodiversity are viewed as classic common pool resource problems, which will only be solved through command and control regulation or central planning.<sup>95</sup>

Under the "public trust" theory, which dates to the Romans, the sea and its shores, running water, and the air were deemed the common property of mankind. Navigable waters were legally available for public use in fishing and commerce.<sup>96</sup> The English common law perpetuated those principles, with the gloss that these rights were owned by the

---

90. *Id.* at 817 n.11 (citing ELINOR OSTROM, *GOVERNING THE COMMONS: THE EVOLUTION OF INSTITUTIONS FOR COLLECTIVE ACTION* (1990)). See also Michael Taylor, *The Economics and Politics of Property Rights and Common Pool Resources*, 32 NAT. RESOURCES J. 633 (1992).

91. See generally Gary D. Libecap & James L. Smith, *The Economic Evolution of Petroleum Property Rights in the United States*, 31 J. LEGAL STUD. 589 (2002).

92. For an exception, see *Barancik v. County of Marin*, 872 F.2d 834 (9th Cir. 1989). In other so-called TDR schemes, government confiscates development rights through the use of overly-stringent zoning. The rights are then repackaged and transferred to others.

93. See, e.g., Robert F. Drinan, S.J., *Essay: Reflections on the Demise of the Religious Freedom Restoration Act*, 86 GEO. L.J. 101, 102 (1997) (observing that "the decisionmakers in zoning cases have broad discretion; sometimes it almost appears that their discretion is standardless").

94. The seminal case is *Golden v. Planning Board of Town of Ramapo*, 285 N.E.2d 291 (N.Y. 1972).

95. James L. Huffman, *Marketing Biodiversity*, 38 IDAHO L. REV. 421, 421 (2002).

96. See Jan S. Stevens, *The Public Trust: A Sovereign's Ancient Prerogative Becomes the Peoples' Environmental Right*, 14 U.C. DAVIS L. REV. 195, 196-97 (1980).

sovereign in trust for the public.<sup>97</sup> The Supreme Court of the United States affirmed those principles over a century ago.<sup>98</sup>

During the past 30 years, however,

many state courts have expanded the geographical reach and substantive scope of the public trust doctrine. In particular, a spate of recent decisions have extended it to cover resources beyond navigable waterways, while also finding that the trust protects public uses in such resources other than the traditional triad of commerce, navigation, and fishing.<sup>99</sup>

The extent that the public trust doctrine can trump takings considerations remains very controversial.<sup>100</sup> Nevertheless, the substantive content of the doctrine comports with the environmentalist agenda, and its notion of perpetuity<sup>101</sup> resonates with the environmentalist argument that cost-benefit analysis in the provision of environmental amenities must be constrained because it is unethical to discount the needs of future generations.<sup>102</sup>

Another factor auguring toward collectivization of development rights is the "precautionary principle."<sup>103</sup> The 1992 Rio Declaration on Environment and Development declared, "Where there are threats of serious or irreversible damage, lack of full scientific certainty shall not be used as a reason for postponing cost-effective measures to prevent environmental degradation."<sup>104</sup> As described by Professor Cass Sunstein, "In its strongest and most distinctive forms, the principle imposes a

97. See Charles F. Wilkinson, *The Public Trust Doctrine in Public Land Law*, 14 U.C. DAVIS L. REV. 269 (1980).

98. Ill. Cent. R. Co. v. State of Illinois, 146 U.S. 387, 452 (1892).

99. David L. Callies & J. David Breemer, *Selected Legal and Policy Trends in Takings Law: Background Principles, Custom and Public Trust "Exceptions" and the (Mis) Use of Investment-Backed Expectations*, 36 VAL. U. L. REV. 339, 357 (2002).

100. See James Huffman, *Avoiding the Takings Clause Through the Myth of Public Rights: The Public Trust and Reserved Rights Doctrines at Work*, 3 J. LAND USE & ENVTL. L. 171 (1987).

101. Ill. Cent. R. Co., 146 U.S. at 453 (asserting that the trust "can never be lost, except as to such parcels as are used in promoting the interests of the public therein").

102. See JOHN O'NEILL, *ECOLOGY, POLICY AND POLITICS: HUMAN WELL-BEING AND THE NATURAL WORLD* 60 (1993).

103. See David Freestone & Ellen Hey, *Origins and Development of the Precautionary Principle*, in *THE PRECAUTIONARY PRINCIPLE AND INTERNATIONAL LAW: THE CHALLENGE OF IMPLEMENTATION* 3 (Int'l Envtl. Law & Policy Series No. 31, David Freestone & Ellen Hey eds., 1996) (discussing the origins and evolution of the precautionary principle).

104. *Rio Declaration on Environment and Development*, U.N. Conference on Env't and Dev., Annex I, princ. 15, U.N. Doc. A/Conf.151/5/Rev.1 (1992), available at <http://www.unep.org/Documents/Default.asp?DocumentID=78&ArticleID=1163> (last visited Apr. 8, 2004).

burden of proof on those who create potential risks, and it requires regulation of activities even if it cannot be shown that those activities are likely to produce significant harms."<sup>105</sup> Sunstein finds the strong form of the precautionary principle to be "literally paralyzing—prohibiting inaction, stringent regulation, and everything in between."<sup>106</sup> As he notes, the principle, although not the term, is seeping into domestic American legislation.<sup>107</sup> The precautionary principle has been defended by others as a useful guide to action that compensates for psychological misperceptions of risk.<sup>108</sup>

Yet another purported justification for the cutting back of private development rights without compensation is that much of the value enjoyed by landowners was supplied by government construction of infrastructure and provision of many other direct and indirect benefits that were capitalized in the value of land. Withdrawals of these benefits are not unconstitutional takings, but rather the retraction of earlier government "givings."<sup>109</sup> "Givings recapture" has been advocated as a method of funding the provision of environmental amenities.<sup>110</sup> In fact, "givings" represent either (1) expenditures of public funds for private purposes, as such contrary to due process of law, or (2) expenditures furthering public health, safety, or welfare, albeit with incidental private benefits.

The trend toward the collectivization of development in the name of enhancement of environmental amenities is accelerating under the banner of "smart growth," a set of general policies designed to reduce "sprawl" (*i.e.*, low density development) and to encourage urban infill and mass transportation.<sup>111</sup> "Smart growth" would move the United States toward the European system, where owners typically must

---

105. Cass R. Sunstein, *Beyond the Precautionary Principle*, 151 U. PA. L. REV. 1003, 1003 (2003).

106. *Id.*

107. *Id.* at 1005 (citing the Clean Air Act § 109, 42 U.S.C. § 7409(b)(1) (2000) (requiring an "adequate margin of safety...to protect the public health") and quoting, *inter alia*, *Lead Indus. Ass'n v. EPA*, 647 F.2d 1130, 1155 (D.C. Cir. 1980) (stating that "Congress directed the Administrator to err on the side of caution").

108. David A. Dana, *A Behavioral Economic Defense of the Precautionary Principle*, 97 NW. U. L. REV. 1315, 1316-17 (2003).

109. See Abraham Bell & Gideon Parchomovsky, *Givings*, 111 YALE L.J. 547 (2001).

110. See Daniel D. Barnhizer, *Givings Recapture: Funding Public Acquisition of Private Property Interests on the Coasts*, 27 HARV. ENVTL. L. REV. 295 (2003).

111. See, e.g., Edward J. Sullivan & Carrie Richter, *Out of the Chaos: Towards a National System of Land-Use Procedures*, 34 URB. LAW. 449, 472-83 (2002). See also the American Planning Association's massive GROWING SMART LEGISLATIVE GUIDEBOOK: MODEL STATUTES FOR PLANNING AND THE MANAGEMENT OF CHANGE (2002), available at <http://www.planning.org/guidebook/Guidebook.htm> (last visited Apr. 8, 2004).

obtain government permission to put land to new uses.<sup>112</sup> While “smart growth” is advocated by professional planners, environmentalists, and many public officials, it has proven very divisive.<sup>113</sup>

The increasing demand for public provision of environmental amenities, and the redefinition of property that would be entailed, makes the determination of whether the demand is policy-relevant more important and difficult than ever.

---

112. See, e.g., JESSE DUKEMINIER & JAMES E. KRIER, *PROPERTY* 1091-92, 1092 n.47 (4th ed. 1998) (noting that the English Town and Country Planning Act of 1947 paid landowners because the Act took away “their right to develop the land [in toto],” but that “[p]ayments from the fund were not called ‘compensation,’ but rather ‘ex gratia payments,’ because the [English government]...would not admit that...any compensation at all was payable”).

113. See, e.g., Timothy J. Dowling, *Reflections on Urban Sprawl, Smart Growth, and the Fifth Amendment*, 148 U. PA. L. REV. 873 (2000) (supporting smart growth); Bernard H. Siegan, *Smart Growth and Other Infirmities of Land Use Controls*, 38 SAN DIEGO L. REV. 693 (2001) (opposing smart growth).