NATURAL PRESERVATION AND THE RACE TO DEVELOP

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INTRODUCTION

The last twenty years have witnessed an explosion in natural preservation regulation—regulation aimed at preserving the ecological and aesthetic values of land in its natural or undeveloped state. There is every reason to think that the scope of such regulation will continue to grow.

Although efforts to enact natural preservation regulation have been successful, they have not been entirely uncontroversial. One of the greatest sources of controversy has been whether owners of undeveloped land should be compensated when the government limits or eliminates their developmental prerogatives in the interest of promoting natural preservation. The “battle lines” on the question of compensation for regulatory losses are clearly drawn. By and large, those ideologically and/or financially interested in promoting economic development over preservation—property owners, the business community, and intellectual critics of the modern regulatory state—have favored a generous compensation requirement.¹ Those interested in promoting preservation over economic development—environmentalists and sympathetic government officials and academics—have been hostile to any compensation requirement.²

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¹ See, e.g., Brief Amicus Curiae for the Long Beach Island Oceanfront Homeowners Association and the Coastal Advocate, Inc. at 4, *Lucas v. South Carolina Coastal Council*, 112 S. Ct. 2886 (1992) (No. 91-453) (urging the Supreme Court to hold that “even if the public interest is served, [developmental] restrictions . . . clearly amount to deprivation of private property. If the public interest is to be served, it should not be subsidized by particular property owners.”); Brief Amicus Curiae of the Northern Virginia Chapter of the National Association of Industrial and Office Parks, and the Northern Virginia Building Industry Association, Inc., in Support of Petitioner at 14, *Lucas* (No. 91-453) (urging the Supreme Court to hold that modern developmental restrictions motivated by “environmental and other preservationist concerns” constitute takings for which just compensation must be paid).

² See, e.g., Brief Amici Curiae of Sierra Club, the Humane Society of the United States, and the American Institute of Biological Sciences in Support of Respondent at 19, *Lucas* (No. 91-453) (urging the Supreme Court to reject takings claims

This Article critically examines the assumption underlying the affiliation of pro-preservation groups with the strict anti-compensation position: that the absence of a compensation requirement best promotes efforts at preservation. The Article questions the conventional wisdom that "[t]he more often the government must pay for exercising control over private property, the less control there will be."³

The focus of my argument is what I call "the race to develop." The absence of a compensation requirement encourages property owners to accelerate development in order to avoid regulatory losses from future preservation regulation. By reducing or eliminating this race to develop, a compensation requirement actually may facilitate preservation efforts. Monetary payments would remove landowners' incentives to rush to develop and would thus help ensure that when a societal consensus in support of preservation of a natural resource has been reached, the resource is still in existence.

In focusing on the marketplace incentives created by a regime of uncompensated natural preservation regulation, this Article takes a different approach from that adopted by most other academic commentary on the issue of compensation for regulatory losses. The great bulk of the academic commentary either ignores or thinly addresses the marketplace incentives created by uncompensated regulation.⁴ Almost all of the academic commentary, moreover,

whenever the government exercises its police power in a manner that passes muster under the extremely deferential "rational basis" standard of review); Brief for American Planning Association and Tahoe Regional Planning Agency as Amici Curiae in Support of Respondent at 7-8, *Lucas* (No. 91-453) (urging the Supreme Court to accept the proposition that until a building permit for a project has been issued, a land owner has no protected property interest in the development of vacant or bare land); Brief for Amici Curiae 1000 Friends of Oregon, Oregon Chapter of American Planning Association, American Planning Association, and National Trust for Historic Preservation in Support of Respondent at 15, *Dolan v. City of Tigard*, 114 S. Ct. 2309 (1994) (No. 93-518) (urging the Supreme Court to demonstrate "deferential respect" toward legislative decisions to enact regulation without paying compensation).

³ *Florida Rock Indus. v. United States*, 18 F.3d 1560, 1575 (Fed. Cir. 1994) (Nies, C.J., dissenting).

⁴ The extensive literature on the Takings Clause falls roughly into three categories: (1) descriptive analyses that purport to find a unifying theme in the case law, see generally Andrea L. Peterson, *The Takings Clause: In Search of Underlying Principles, Part I—A Critique of Current Takings Clause Doctrine*, 77 CAL. L. REV. 1301 (1989); (2) normative arguments in support of a particular interpretation of the Takings Clause, see generally RICHARD A. EPSTEIN, *TAKINGS: PRIVATE PROPERTY AND THE POWER OF EMINENT DOMAIN* 331 (1985); Joseph L. Sax, *Takings and the Police Power*, 74 YALE L.J. 36 (1964) [hereinafter Sax, *Takings and the Police Power*]; Joseph L. Sax, *Takings*,

treats "regulation" as a unified or singular subject of study. The incentives in particular regulatory regimes and the resulting social costs warrant far more attention.⁵

The academic commentary regarding compensation has focused on the Fifth Amendment Takings Clause and, in particular, the doctrinal interpretations of that clause set forth by the United States Supreme Court. Part I of this Article demonstrates that existing Takings Clause doctrine fails to pose helpful questions. Compensation for regulatory losses must be justified, if at all, on grounds other than those squarely addressed in the case law.

Private Property and Public Rights, 81 YALE L.J. 149, 151 (1971) [hereinafter Sax, *Takings, Private Property*]; and (3) commentary that explores the contradictions and tensions in our conceptions of property rather than proposing any singular descriptive or normative "solution" to the takings puzzle, see, e.g., Gary Minda, *The Dilemmas of Property and Sovereignty in the Postmodern Era: The Regulatory Takings Problem*, 62 U. COLO. L. REV. 599, 601 (1991); Jeremy Paul, *The Hidden Structure of Takings Law*, 64 S. CAL. L. REV. 1393, 1399 (1991).

⁵ Commentators have analyzed the effects of racing behavior in other contexts. In an excellent article examining the race to establish property rights over previously unclaimed land that is engendered by a first possession legal regime, David Haddock suggests that the costs of such a race explain the historical use of "[a]lternatives superior to first possession," such as the practice whereby "the sovereign claimed title prior to settlement, then sold or bartered the land to settlers or intermediaries." David D. Haddock, *First Possession Versus Optimal Timing: Limiting the Dissipation of Economic Value*, 64 WASH. U. L.Q. 775, 791 (1986). Terry Anderson and Peter Hill have similarly commented:

[E]conomic analysis suggests that rents were dissipated through resource expenditures under squatting and homesteading and therefore questions whether disposal of the public domain unambiguously increased national output. Efforts to give away the public domain created a commons into which squatters and homesteaders rushed to compete for the rents. In the process, pioneers paid for the land in terms of foregone wealth, privations, and hardships, demonstrating that "there ain't no such thing as free land."

Terry L. Anderson & Peter J. Hill, *The Race for Property Rights*, 33 J. L. & ECON. 177, 195 (1990) (footnote omitted).

In the patent context, commentators have argued that races to secure patents result in duplicative research. See, e.g., Yoram Barzel, *Optimal Timing of Innovations*, 50 REV. ECON. & STAT. 348, 348 (1968) (noting that "it has not been recognized that competition between potential innovators to obtain priority rights (and profits) from innovations can result in premature applications of discoveries"); Partha Dasgupta & Joseph Stiglitz, *Uncertainty, Industrial Structure, and the Speed of R&D*, 11 BELL J. ECON. 1, 3 (1980) (arguing that "there is some presumption of excessive duplication of R&D activity in a market economy in the sense that while each firm undertakes less than the socially optimal level of R&D activity, market equilibrium sustains an unwarranted number of firms so that industry-wide R&D expenditure is excessive"); Dale T. Mortensen, *Property Rights and Efficiency in Mating, Racing and Related Games*, 72 AM. ECON. REV. 968, 968 (1982) (arguing that competition does not necessarily increase efficiency).

Part II examines the social costs engendered by a regime of uncompensated natural preservation regulation. After exploring and rejecting the argument that a constitutional compensation requirement is justified by flaws in the political process that produce natural preservation regulation, the analysis turns to the race to develop. The race to develop robs society of the time needed to reach fully informed and fully considered decisions about the comparative social value of ecological preservation and development.

Part III explores possible responses to the socially costly race to develop. Specifically, Part III evaluates the comparative merits of four responses—a legislative program of *ex post* payments for regulatory losses, a judicially enforced constitutional guarantee of *ex post* payments, a legislative program of *ex ante* payments to the owners of as-yet undeveloped and unregulated land, and development taxes. Each of these responses holds some promise, although each also presents substantial difficulties. This Article does not argue that any one of these responses is “best” under all circumstances. Rather, the Article sets forth a framework for the commencement of a debate about the race to develop and the means available to eliminate it.

I. NATURAL PRESERVATION AND TAKINGS JURISPRUDENCE

A. *Three Basic Concepts*

The Fifth and, by incorporation, Fourteenth Amendments prohibit the taking of private property for public use without the payment of just compensation.⁶ State constitutions contain identical or similar prohibitions.⁷

The courts have found the application of the Takings Clause to physical seizures or occupations of private property relatively unproblematic: where the government permanently seizes or physically occupies property, it generally must pay.⁸ Application of

⁶ The Takings Clause provides: “[N]or shall private property be taken for public use, without just compensation.” U.S. CONST. amend. V. This provision was held applicable to the states through the Due Process Clause of the Fourteenth Amendment in *Chicago, Burlington & Quincy R.R. v. Chicago*, 166 U.S. 226, 238-39 (1897).

⁷ See LAURENCE H. TRIBE, *AMERICAN CONSTITUTIONAL LAW* § 9-2, at 588 n.2 (2d ed. 1988) (providing a list of the states with such constitutional provisions).

⁸ See *Lucas v. South Carolina Coastal Council*, 112 S. Ct. 2886, 2893 (1992) (“In

the Takings Clause to regulatory restrictions on the use of property, however, has proved extremely difficult for the American judiciary.⁹

The doctrinal "test" for what constitutes a taking builds on three concepts: public harm, reasonable expectations, and diminution in market value. These concepts form the framework in which the courts have addressed the constitutional status of uncompensated natural preservation regulation.¹⁰

general (at least with regard to permanent invasions), no matter how minute the intrusion, and no matter how weighty the public purpose behind it, we have required compensation."); *Loretto v. Teleprompter Manhattan CATV Corp.*, 458 U.S. 419, 427-38 (1982) (discussing and rejecting criticism of the rule requiring compensation for physical takings). For academic analyses and criticism of the sharp doctrinal distinction between physical and regulatory takings, see John J. Costonis, *Presumptive and Per Se Takings: A Decisional Model for the Taking Issue*, 58 N.Y.U. L. REV. 465, 501-23 (1983) (criticizing the Supreme Court's failure to adequately explain its special treatment of physical occupations given its "candid[] acknowledge[ment] that other impositions may impose far graver economic harm than do permanent physical occupations"); Sax, *Takings, Private Property*, *supra* note 4, at 162 (arguing that physical invasions, such as an "influx of . . . smoke," should not trigger a compensation requirement where "competing uses in question (e.g., residential as against industrial) put inconsistent demands on the other, and both are a priori equal in status").

⁹ Regulatory takings doctrine has been the subject of sharp criticism by legal commentators and, in pained moments of candor, handwringing by judges themselves. Justice Stevens, for example, has criticized takings doctrine as "open-ended and standardless." *First English Evangelical Lutheran Church v. County of Los Angeles*, 482 U.S. 304, 340 n.17 (1987) (Stevens, J., dissenting); see also Peterson, *supra* note 4, at 1304 ("[I]t is difficult to imagine a body of case law in greater doctrinal and conceptual disarray.").

One possible source of guidance for the courts—original historical understandings—has played a minimal role in contemporary judicial analysis of regulatory takings challenges. The drafters of the federal and state constitutions were concerned with physical appropriations of property by the government. Moreover, even with respect to physical seizures, the original conception of the reach of the just compensation clauses was quite narrow. See William M. Treanor, Note, *The Origins and Original Significance of the Just Compensation Clause of the Fifth Amendment*, 94 YALE L.J. 694, 711 (1985) ("Madison seems to have taken a rather limited view of what legal rights [the Just Compensation Clause] created: He intended the clause to apply only to direct, physical taking of property by the federal government.").

¹⁰ For a critical discussion of judicial reliance on the concepts of harm and economic loss, see Jed Rubenfeld, *Usings*, 102 YALE L.J. 1077, 1085-100, 1106-11 (1993) (criticizing the Supreme Court's reliance both on a "relatively black-or-white economic viability test" as "operat[ing] without much regard for economic niceties" and on the harm element because it "would render the compensation clause a nullity"). For a critical discussion of judicial reliance on the concept of reasonable expectations, see Richard A. Epstein, *Lucas v. South Carolina Coastal Council: A Tangled Web of Expectations*, 45 STAN. L. REV. 1369, 1371, 1392 (1993) (arguing that the Supreme Court relies on a reasonable expectations concept that "is drained of all its explanatory power" because the Justices want to avoid the "more complicated inquiry" of what set of entitlements "maximize the welfare of the citizen[ry]").

The essence of the public harm concept is that when the use of property would cause harm to the public, the government may restrict that use without payment. No one has a right, it is said, to use property in a way that injures others. By contrast, when the public seeks to secure a benefit by restricting the use of property, compensation must be paid.¹¹

The public harm concept does capture some widely shared intuitions. No one seriously maintains that the government must compensate the owners of nuclear power plants when it enacts regulation designed to prevent accidental releases from those plants. Outside of a relatively narrow set of cases, however, there is likely to be a lack of consensus as to whether a restricted activity would be "harmful" to the public. The judicial opinions offer no guidance as to how to distinguish between public harm and public benefit in such cases. Conclusory assertions, presumably reflecting the courts' normative assessments of the activity at issue and its likely societal effects, are all that are offered.¹²

The other two concepts that form the core of modern regulatory takings analysis—the reasonable expectations of the property holder and the regulatory diminution in value of the relevant property interest—sound somewhat less vague than the public harm concept. In fact, they are equally ill-defined.

The Supreme Court has held that, in determining whether a newly enacted regulation has effected a taking requiring the payment of just compensation, courts should consider whether, at

¹¹ See, e.g., *Goldblatt v. Town of Hempstead*, 369 U.S. 590 (1962) (rejecting a challenge to a law requiring the closure of a quarry in a residential area); *Miller v. Schoene*, 276 U.S. 272 (1928) (rejecting a challenge to an order requiring the destruction of cedar trees infected with a disease that might have spread to nearby apple orchards); *Hadacheck v. Sebastian*, 239 U.S. 394 (1915) (rejecting a challenge to a law requiring a brick mill in a residential area to terminate operation); *Mugler v. Kansas*, 123 U.S. 623 (1887) (rejecting challenge to a law requiring the closure of breweries).

¹² For discussions of the indeterminacy of the harm/benefit distinction, see Donald W. Large, *The Supreme Court and the Takings Clause: The Search for a Better Rule*, 18 ENVTL. L. 3, 15, 29-34 (1987) (dismissing the harm/benefit concept as "slippery" and "not . . . very useful"); Paul, *supra* note 4, at 1438-65 (arguing that courts can scrutinize regulations effectively in terms of the harm/benefit distinction only if "the governmental aim [is] measured against a reference point that is not provided by the regulators themselves"); Rubinfeld, *supra* note 10, at 1097-100 ("Taken seriously, then, the harm principle would render the Compensation Clause a nullity. Every state action that passes the legitimate-state-interest test aims at preventing anticipated harms, and hence no constitutional state action could ever effect a 'taking.'").

the time of purchase of a property, the purchaser reasonably expected that the property would not be subjected to new uncompensated regulation.¹³ The presence of such a reasonable expectation strongly weighs in favor of a judicial finding of a regulatory taking.

Unfortunately, the courts provide very little explanation for their holdings as to when it is and is not reasonable for a property owner to expect that she will be subject to uncompensated regulation in the future. As Jeremy Paul notes, the real question raised by "reasonable expectations analysis" is whether "a claimant has a strong normative case to support the expectation."¹⁴ The Supreme Court has failed altogether to make the normative arguments necessary to explain, for example, its recent holdings that citizens have absolutely no reasonable expectation of constancy in pension regulations, whereas they have, at least in some circumstances, a reasonable expectation of constancy in building regulations.¹⁵

The third concept, diminution in value, concerns the difference in market value of a property interest before the enactment of a regulation and its market value afterward.¹⁶ The Supreme Court has differentiated sharply between cases in which there is a partial diminution in value and those in which there is a complete diminution in value. In partial diminution cases, the extent of diminution is merely one of a number of factors to be considered in determining whether a regulatory taking has occurred. By contrast, where there has been a total diminution in value, a court is much more likely to find a taking and order the payment of just compensation.¹⁷

¹³ See *Kaiser Aetna v. United States*, 444 U.S. 164, 179 (1979) (noting that if "expectancies . . . [are] sufficiently important, the Government must condemn and pay for [them] before it takes over the management of the landowner's property"); *Penn Cent. Transp. Co. v. New York City*, 438 U.S. 104, 124 (1978) (noting that the "economic impact of the regulation on the claimant and, particularly, the extent to which the regulation has interfered with distinct investment-backed expectations are, of course, relevant considerations").

¹⁴ Paul, *supra* note 4, at 1504 n.284.

¹⁵ Compare *Connolly v. Pension Benefit Guar. Corp.*, 475 U.S. 211, 226-27 (1986) (holding that the pervasive nature of pension regulation undermines any claim of a reasonable expectation of constancy in pension regulation) with *Nollan v. California Coastal Comm'n*, 483 U.S. 825, 833-34 n.2 (1987) (concluding that despite the fact that claimants purchased property with the knowledge that they would need to secure a permit from state regulators before building, they had a reasonable expectation of constancy in the requirements for building).

¹⁶ See *Penn Cent.*, 438 U.S. at 136 (noting the relevance of "the severity of the impact of the law on [the landowner's] parcel").

¹⁷ See *Lucas v. South Carolina Coastal Council*, 112 S. Ct. 2886, 2893-95 (1992).

Whatever its conceptual weaknesses, this special treatment of total diminutions at least has the virtue of appearing "rule-like." In practice, however, the total diminution "rule" accommodates substantial judicial discretion.¹⁸ First, the total diminution test, taken literally, would be meaningless. Even an absolute quarantine of a land parcel whereby everyone, including the owner, is barred entry does not permanently destroy all market value because there is always the prospect that the regulation will be lifted. Because "total diminution" cannot really mean what it says, it necessarily means "far too much diminution." The judge's assessment of what is "far too much" invariably brings into issue her assessment of the conduct being restricted and the social need animating the restriction.

Second, the very idea of diminution of value requires a preregulation delineation of the property interest that is reduced in value by the regulation. An expansive definition of the relevant preregulation property interest enables a court to find that significant market value remains after the enactment of the regulation; a narrow definition of the relevant preregulation property interest, by contrast, enables a court to find that all or almost all value has been destroyed.¹⁹

The Court stated:

We think, in short, that there are good reasons for our frequently expressed belief that when the owner of real property has been called upon to sacrifice all economically beneficial uses in the name of the common good, that is, to leave his property economically idle, he has suffered a taking.

Id. at 2895; see also *Agins v. City of Tiburon*, 447 U.S. 255, 260 (1980) ("The application of a general zoning law to particular property effects a taking if the ordinance . . . denies an owner economically viable use of his land." (citations omitted)).

¹⁸ For scholarly criticisms of the doctrinal distinction between partial and total takings from very different perspectives, see Richard A. Epstein, *Takings: Descent and Resurrection*, 1987 SUP. CT. REV. 1, 16-17 (criticizing the distinction as conceptually unsound and arguing that compensation generally should be required for both partial and total diminutions in value); Margaret J. Radin, *The Liberal Conception of Property: Cross Currents in the Jurisprudence of Takings*, 88 COLUM. L. REV. 1667, 1674-78, 1684 (1988) (criticizing the distinction as conceptually unsound and arguing that compensation even for total diminutions often is unwarranted).

¹⁹ For example, a court predisposed to find a taking plausibly could define the relevant property interest as the land area subject to the regulation at issue. Thus, in a case involving a municipal prohibition on the development of a 10-acre section of a 40-acre farm, a court plausibly could find that there had been a total diminution in value of the 10 acres. See, e.g., *Loveladies Harbor, Inc. v. United States*, 21 Cl. Ct. 153, 154, 160 n.9 (1990) (identifying the relevant property interest for takings purposes to be the 12.5-acre portion of a larger land holding for which a dredge and fill permit had been sought and denied). Conversely, a court predisposed not to find a taking plausibly could define the relevant property interest as the 40-acre farm and,

B. *The Basic Concepts Applied to Natural Preservation*

Applying these basic concepts, the courts have set forth two distinct conceptions of natural preservation and the Takings Clause. The first conception supports the constitutionality of virtually any uncompensated natural preservation regulation on the ground that the destruction of nature is a public harm. The second conception supports a requirement of compensation for that subset of natural preservation regulation that results in a total diminution in market value. Neither conception is appealing. The conceptions turn on unanswered and very likely unanswerable questions: (1) when is an activity harmful rather than beneficial? and (2) when has there been a total rather than a partial diminution in value?

The leading case articulating the first conception is *Just v. Marinette County*.²⁰ *Just* involved a challenge to a county ordinance restricting the filling of wetlands located within one thousand feet of a lake. In rejecting the claim that the filling prohibition effected a taking, the Wisconsin Supreme Court relied upon the public's unusually strong and historic interest in navigable lakes and streams and the importance of bordering wetlands for preventing the pollution of such waters.²¹ The opinion, however, suggests a broader principle—that the despoliation of nature harms society and is hence subject to uncompensated regulatory control:

Is the ownership of a parcel of land so absolute that man can change its nature to suit any of his purposes? . . . An owner of land has no absolute and unlimited right to change the essential natural character of his land so as to use it for a purpose for which

even more expansively, all holdings of the claimant in the municipality. See, e.g., *Penn Cent. Transp. Co. v. New York City*, 366 N.E.2d 1271, 1277 (N.Y. 1977) (identifying the relevant property interest to be all parcels held by Penn Central in the general vicinity of the Penn Central train terminal), *aff'd*, 438 U.S. 104 (1978).

There is arguably a definitional problem that is even more fundamental than the problem of choosing the market valuation that will serve as the baseline for judging the extent of regulatory diminution in value. In assessing the preregulation value of a property in a takings case, a fundamental question should be whether the market value reflected an unreasonable expectation on the part of the market that the state would not redefine property rights without compensation. If the market indulges such an unreasonable expectation, the preregulation market value logically should not serve as the baseline, but rather should be reduced by the increment attributable to that unreasonable marketplace expectation. Hence, the reasonable expectations and diminution in value inquiries merge, and, as we have seen, the courts have failed to provide guidance as to when it is reasonable or unreasonable to expect protection against future uncompensated regulation.

²⁰ 201 N.W.2d 761 (Wis. 1972).

²¹ See *id.* at 768-69.

it was unsuited in its natural state [W]e think it is not an unreasonable exercise of [the police] power to prevent harm to public rights by limiting the use of private property to its natural uses.²²

The Supreme Court's opinion in *Keystone Bituminous Coal Ass'n v. DeBenedictis*²³ expresses a similar attitude toward uncompensated environmental regulation. In *Keystone*, Justice Stevens contended that where a regulation is designed to combat "a significant threat to the common welfare," such as the degradation of surface waters, the regulation falls within the public harm exception to the Takings Clause.²⁴ However, Justice Stevens—like the Wisconsin Supreme Court in *Just*—failed to explain why the preservation of resources such as wetlands and surface waters could not as easily be conceptualized as a public benefit.

Implicitly rejecting *Just* and *Keystone*, Justice Scalia's plurality opinion in *Lucas v. South Carolina Coastal Council*²⁵ sets forth a very different conception of preservation regulation—a conception in which natural preservation regulation secures a benefit for the public for which the public generally should be required to pay, at least where there has been a total diminution in market value.²⁶ *Lucas* concerned the South Carolina Beachfront Management Act, which prohibited new construction on certain areas of the South Carolina coastline.²⁷ The stated purpose of the legislation was to

²² *Id.* at 768.

²³ 480 U.S. 470 (1987).

²⁴ *Id.* at 485.

²⁵ 112 S. Ct. 2886 (1992).

²⁶ See *id.* at 2894-95. Prior to *Lucas*, the Supreme Court opinion that most clearly articulated this view was Justice Brennan's dissent in *San Diego Gas & Elec. Co. v. City of San Diego*, 450 U.S. 621 (1981). In *San Diego Gas & Elec.*, Justice Brennan argued that an "open space" zoning designation enacted by the City of San Diego effected a taking for which just compensation must be paid. See *San Diego Gas & Elec.*, 450 U.S. at 652-53 (Brennan, J., dissenting). Three Justices concurred in the dissent and Justice Rehnquist, although concurring with the majority on procedural grounds, expressed his substantive agreement with Brennan's analysis. See *id.* at 633-34.

Several decisions by lower federal courts and state courts have adopted essentially the same stance as the *Lucas* plurality toward uncompensated natural preservation regulation. The most well-known of these cases involve the same natural resource that was at issue in *Just*—wetlands. See, e.g., *Florida Rock Indus. v. United States*, 791 F.2d 893, 904 (Fed. Cir. 1986), *cert. denied*, 479 U.S. 1053 (1987) (asserting without explanation that, whereas much environmental regulation frustrates property owners in "doing harm," restrictions on the filling of wetlands require the property owner "to maintain at its own expense a facility, the wetlands, which by presently received wisdom operates for the public good, and benefits a large population who make no contribution to the expense of maintaining such facility").

²⁷ See 1988 S.C. Acts 634 (codified at S.C. CODE ANN. § 48-39-250 (Law. Co-Op.

protect the beach/dune system along the coast of South Carolina, which the legislature described as "critically eroding."²⁸ That system, the legislature found on the basis of an expert commission's report, has "extremely important" functions, including protection of life and property from storm damage and gradual erosion and the provision of "habitat for numerous species of plants and animals, several of which are threatened or endangered."²⁹

David Lucas purchased two beachfront lots for \$975,000 in 1986.³⁰ After passage of the South Carolina Beachfront Management Act in 1988, he sued the State, claiming that the Act's building prohibition had deprived him of all economically viable use of his land and that he was entitled to \$1.2 million in just compensation.³¹ Relying on the U.S. Supreme Court's expansive interpretation of public harm in *Keystone*, the South Carolina Supreme Court held there had been no taking.³² The United States Supreme Court reversed and remanded the case.

Scalia's analysis in the *Lucas* plurality opinion seems to depend on the view that natural preservation regulation represents an effort to secure a public benefit, rather than a response to a public harm.³³ His treatment of the harm/benefit distinction, like that of other Justices in other takings decisions, is wholly unenlightening.

At one point in the opinion, Scalia explicitly rejected the harm/benefit distinction altogether, arguing that there is no meaningful way to distinguish between a public harm and a public benefit. According to Scalia, because a harm-preventing "justification can be formulated in practically every case," a public harm exception to the Takings Clause eliminates the requirement of just compensation except where "the legislature has a stupid staff."³⁴

Although Scalia rejected the harm/benefit distinction as completely malleable and hence useless, he proceeded to base his opinion on that distinction. According to Scalia:

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²⁸ *Id.*

²⁹ *Id.*; see also *Lucas*, 112 S. Ct. at 2905-06 (Blackmun, J., dissenting) (discussing the Blue Ribbon Committee on Beachfront Management appointed by the South Carolina Coastal Council "to investigate beach erosion and propose possible solutions").

³⁰ See *Lucas*, 112 S. Ct. at 2889.

³¹ See *Lucas v. South Carolina Coastal Council*, 404 S.E.2d 895, 896 (S.C. 1991).

³² See *id.* at 901.

³³ See *Lucas*, 112 S.Ct. at 2894-95.

³⁴ *Id.* at 2898 n.12.

[A]ffirmatively supporting a compensation requirement, is the fact that regulations that leave the owner of land without economically beneficial or productive options for its use—typically, as here, by requiring land to be left substantially in its natural state—carry with them a heightened risk that private property is being pressed into some form of public service under the guise of mitigating serious public harm.³⁵

The parentheticals following this explanation suggest that Scalia equated ecologically-oriented natural preservation with “public service” or public benefit, and more traditional human health and safety concerns with genuine public harm.³⁶ In addition to failing to point to any evidence that developmental restrictions are generally enacted by means of subterfuge regarding the legislators’ true purposes, Scalia failed to explain why natural preservation should be treated as a benefit rather than a harm.³⁷

³⁵ *Id.* at 2894-95; *see also id.* at 2901 (noting that the judicial review of a takings claim should “ordinarily entail . . . analysis of . . . the degree of harm to public lands and resources, or adjacent private property, posed by the claimant’s proposed activities” (citing RESTATEMENT (SECOND) OF TORTS §§ 826-827, 827(e), 827 cmt. g, 830-31 (1978))).

Like Justice Brennan in *San Diego Gas & Elec.*, Justice Scalia also emphasized that natural preservation sometimes has been achieved by means of formal condemnation. *See Lucas*, 112 S. Ct. at 2895. That fact, however, does not justify the holding in *Lucas*. Many regulatory ends could be achieved by the government through formal condemnation and acquisition; the existence of that possibility is not normally regarded as the basis for finding a regulatory taking. Moreover, the fact that preservation once was achieved through compensated condemnation and is now more frequently achieved through uncompensated regulation does not establish that the latter approach is unconstitutional. It merely establishes that we are in a period of change.

³⁶ *Id.*

³⁷ In *Nollan v. California Coastal Comm’n*, 483 U.S. 825 (1987), Justice Scalia suggested a basis for his rejection of the view that developmental restrictions should be exempt from the just compensation requirement. The California Coastal Commission had granted a beachfront construction permit to the Nollans on the condition that they grant the public access across their land. *See id.* at 828. In his dissent, Justice Brennan argued that the lateral access condition did not constitute a taking because, before the Nollans purchased the property, California had expressly made the right to build on the beach subject to the Coastal Commission’s discretionary permitting authority, and the Commission had announced that they would require lateral access as a condition for all permits. *See id.* at 857-60. Justice Scalia rejected Justice Brennan’s argument on the ground that “the right to build on one’s own property . . . cannot remotely be described as a ‘governmental benefit.’” *Id.* at 834 n.2. In doing so, Scalia seemed to recognize a natural or prepolitical right to build that takes precedence over the positive law of the state. If the right to build is a “natural right,” then it would seem to follow that the state may not deprive a citizen of that right, even if building in some sense “harms” the general public.

Scalia also provided little guidance regarding the identification of "total" diminutions in value. He candidly admitted the fuzziness of the concept of total diminution: "Regrettably, the rhetorical force of our 'deprivation of all economically feasible use' rule is greater than its precision, since the rule does not make clear the 'property interest' against which the loss is to be measured."³⁸

Scalia maintained that this lack of precision was not an issue in *Lucas* because "the South Carolina Court of Common Pleas found that the Beachfront Management Act left each of Lucas's beachfront lots without economic value."³⁹ Scalia did not provide any substantive defense of that finding, a finding several of the Justices questioned. As Justice Blackmun noted, the building prohibition did not prevent Lucas from using the lots for swimming and camping or from selling the lots to neighbors as a buffer.⁴⁰

Although the legal analysis in the *Lucas* plurality opinion amounts to little more than undefended conclusions, the facts of the case do provide a good starting point for reflecting upon the desirability or undesirability of a regime of uncompensated preservation regulation. South Carolina adopted its first beachfront erosion regulations in 1977.⁴¹ Between 1977 and 1985, David Lucas was actively involved in development of the South Carolina shore as a realtor, contractor, and partner in a 1500-acre coastal resort known as Wild Dunes.⁴² When he purchased two beachfront lots in 1986, there was widespread sentiment that state erosion and

³⁸ *Lucas*, 112 S. Ct. at 2894 n.7.

³⁹ *Id.*

⁴⁰ *See id.* at 2908 (Blackmun, J., dissenting). Similarly, in his dissent in *San Diego*, Justice Brennan failed to support his conclusion that the open space designation had effected a total diminution in value. Brennan treated the relevant property interest as the 214 acres that San Diego included within its open space plan. *See San Diego Gas & Elec. Co. v. City of San Diego*, 450 U.S. 621, 637 (1981). Those acres, however, were part of a larger 412-acre site that the power company had purchased in 1966. *See id.*

A final source of confusion in Justice Scalia's opinion is his contention that, if development of a parcel of land would have qualified as a state common law nuisance at the time title was acquired, then the state may later enact regulations barring development without paying compensation. *See Lucas*, 112 S. Ct. at 2900. As Justice Blackmun noted, Justice Scalia, in effect, invites speculation as to how state courts might have decided hypothetical public nuisance cases at different points in history. *See id.* at 2912-13 (Blackmun, J., dissenting).

⁴¹ *See Lucas*, 112 S. Ct. at 2905 (Blackmun, J., dissenting) (discussing the South Carolina Coastal Zone Management Act of 1977).

⁴² *See* Brief for Respondent South Carolina Coastal Commission, *Lucas* (No. 91-453); *Wild Dunes Condominium Project Announced*, UPI, Apr. 10, 1984, available in LEXIS, News Library, UPI File.

preservation regulation had proved inadequate and required substantial expansion and strengthening. Indeed, three months prior to Lucas's purchase of the lots, the governor of South Carolina had appointed a Blue Ribbon Commission on Beachfront Management and charged it with formulating recommendations for the best means of preventing continued coastal erosion and preserving the important environmental and economic values of South Carolina's coastline.⁴³ Given Lucas's understanding of worsening physical conditions on the South Carolina coast and of the political situation, it seems certain that, when he acquired the two lots in 1986, he understood that there was a sizeable risk that building on them might be prohibited in the very near future. That he nonetheless left the lots empty for the following two years may well be attributable to his belief that, in the event a building prohibition was enacted, he had a good chance of winning compensation. Had Lucas perceived himself as operating in a regime in which the unavailability of compensation for losses resulting from natural preservation was a certainty, he presumably would have built summer houses on the lots before the Beachfront Management Act went into effect. Thus, the facts of the *Lucas* case suggest that the absence of any compensation for regulatory losses actually may encourage accelerated development and thereby impede preservation efforts. Part II of this Article analyzes accelerated development at length.

II. THE SOCIAL COSTS OF UNCOMPENSATED NATURAL PRESERVATION REGULATION

As the preceding discussion demonstrates, the courts have not provided an adequate account of when compensation should or should not be paid for losses resulting from natural preservation regulation. The questions posed by the *Keystone* and *Lucas* courts—whether natural preservation regulation is a public benefit or a response to a public harm and whether a total or partial diminution in value has occurred—seem to lead nowhere. Meaningful discussion of the problem of uncompensated natural preservation apparently must proceed outside the confines of judicial discourse.

This Part moves from the positive task of describing judicial treatment of natural preservation regulation to the normative task

⁴³ See SOUTH CAROLINA BLUE RIBBON COMM., REPORT OF SOUTH CAROLINA BLUE RIBBON COMMITTEE ON BEACHFRONT MANAGEMENT 1-2 (1987).

of asking whether such compensation should be required and, if so, how much. The focus is the comparative social costs of denying or providing compensation for losses resulting from natural preservation regulation.⁴⁴

At first blush, it may seem odd to think that the social costs under a compensation regime could be any different than those under a no-compensation regime. Under either regime, the basic tradeoff is between the ecological values secured by preservation and the economic values secured by development. The net cost or benefit of a preservation decision, one might think, would be identical whether the cost of preservation is borne wholly by particular private property owners or wholly by the public. Compensation rules, in this view, are irrelevant to questions of social benefit maximization or social cost minimization, although they may have a great deal of relevance to considerations of distributive justice.

This Part explores two analyses that suggest that the social costs of uncompensated natural preservation regulation may be greater than those of compensated regulation. The first analysis focuses upon the "demoralization" property owners experience when denied compensation. Concerns about demoralization do not justify compensation for losses resulting from natural preservation regulation.

The second analysis focuses upon investors' reactions to the risk of future uncompensated regulation. The most troubling aspect of a regime of uncompensated natural preservation regulation may be that it encourages investors to accelerate development. The problem of accelerated development may justify the adoption of a system of *ex post* or *ex ante* monetary payments to landowners or development taxes.

A. *Property Owner Demoralization and Natural Preservation*

As Frank Michelman explained in a seminal article on takings, a fundamental question posed by the takings problem is why we should treat risk from regulatory loss differently from other risks where there is clearly no right to compensation.⁴⁵ The world is,

⁴⁴ The term social cost is used loosely to encompass all forms of social welfare or utility. Although this approach is utilitarian, it is not meant to dismiss considerations of distributive justice. An analysis of competing conceptions of distributive justice and their application to preservation regulation is beyond the scope of this Article.

⁴⁵ See Frank I. Michelman, *Property, Utility, and Fairness: Comments on the Ethical*

after all, fraught with risk. When I establish a business, I face a significant risk of failure from, among other things, market downturns and unreliable suppliers. If my business fails because of a market downturn, I do not have any claim against the government for compensation. Why should I have any claim, then, if the business fails as a result of new government regulation that sensibly meets a perceived social need?

Michelman argues that citizens are particularly demoralized by losses that result from government regulation and that such demoralization imposes its own cost on society. This cost distinguishes the risk of uncompensated regulation from other risks. According to Michelman, demoralization results from the perception on the part of the property owner that she is being mistreated by the majority:

If I am able to mobilize my productive faculties under the general conditions of uncertainty which prevail in the universe, why should I be paralyzed by a realization that I am at the mercy of majorities?

There seems to be only one possible way to defend this behavioral supposition. The defense must begin with an imputation to human actors of a perception that the force of a majority is self-determining and purposive, as compared with other loss-producing forces which seem to be randomly generated. The argument must then proceed to the effect that even though people can adjust satisfactorily to random uncertainty . . . they will remain on edge when contemplating the possibility of strategically determined losses. For when the bearing of strategy is evident, one faces the risk of being *systematically* imposed upon, which seems a risk of a very different order from the risk of occasional, accidental injury.⁴⁶

Demoralization, then, arises from the fear that one might be the subject of systematic persecution by a majority. In invoking

Foundations of "Just Compensation" Law, 80 HARV. L. REV. 1165, 1216-17 (1967) (examining utilitarian justifications for compensation).

⁴⁶ *Id.* at 1217. Michelman also argues that demoralization occurs when the government upsets citizens' crystallized expectations that the government would not re-define their property rights. *See id.* at 1239-45. As Richard Epstein has argued, however, such an expectational approach to the takings problem is inherently circular. *See Epstein, supra* note 10, at 1370-72. If the courts announced today that from now on all property rights are subject to redefinition by the government for any cause and without compensation, no one henceforth could acquire property with the expectation of constitutional protection against uncompensated regulation. *See id.* at 1371-72. Reducing the takings clause to a question of actual notice trivializes it out of existence. *See id.*

concerns about systematic mistreatment, Michelman seems to suggest that takings jurisprudence should be collapsed into post-*Lochner* equal protection jurisprudence.⁴⁷ In the post-*Lochner* era, equal protection analysis has been concerned principally with the risk that certain groups are subject to systematic mistreatment by the government. Groups such as African-Americans and women are presumed to be at greater risk of systematic mistreatment because of historical prejudice and other identifiable sources of disadvantage. Citizens who do not fall into suspect categories are presumed to receive fair treatment by the legislature, at least on balance.⁴⁸

If the essence of demoralization costs is the fear of systematic expropriation, then the concept has quite limited application. Most of the individuals and business entities seeking Takings Clause compensation are not particularly likely to be subject to systematic burdening by the majority. To have much meaning, the demoralization cost concept must refer to a psychological reaction that may occur even when the imposition of uncompensated losses is a one-time event and not part of a larger pattern.

Of course, one might argue that the majority, acting through the legislature, demoralizes a property owner whenever it reduces the value of her property without paying compensation. According to this argument, it is per se demoralizing for a political minority of property owners to lose out to a political majority of taxpayers who do not wish to pay compensation. This argument, however, proves too much. In the post-*Lochner* era, we proceed on the general premise that majoritarian redefinitions and adjustments of econom-

⁴⁷ The so-called *Lochner* era of Supreme Court jurisprudence was characterized by judicial unwillingness to defer to legislative determinations. In the case for which this era is named—*Lochner v. New York*, 198 U.S. 45 (1905)—the Supreme Court invalidated a statute prohibiting employers from requiring bakers to work more than 60 hours per week. See *id.* at 64. In the 1930s, the Supreme Court adopted a much more deferential posture in reviewing economic regulation. See, e.g., *West Coast Hotel Co. v. Parrish*, 300 U.S. 379 (1937) (upholding minimum wage law).

⁴⁸ In *United States v. Carolene Prods. Co.*, 304 U.S. 144 (1938), the Supreme Court suggested that “political processes” can be relied upon to protect the interests of minorities except in cases involving minorities that are “discrete and insular” and that suffer from “prejudice.” *Id.*, 304 U.S. at 152-53 n.4. For a critique of the *Carolene Products* doctrine, see Bruce A. Ackerman, *Beyond Carolene Products*, 98 HARV. L. REV. 713 (1985) (suggesting that diffuse large groups, rather than discrete and insular minorities, are most in need of special protection in the political process). For a thoughtful defense, see Daniel A. Farber & Philip P. Frickey, *Is Carolene Products Dead? Reflections on Affirmative Action and the Dynamics of Civil Rights Legislation*, 79 CAL. L. REV. 685 (1991) (arguing that the protection of racial “out-groups” should remain a serious judicial concern).

ic rights and privileges are presumptively constitutional within quite broad limits. Rejection of this premise would freeze and ultimately atrophy the modern regulatory state, a prospect that only a distinct minority of commentators or citizens would truly welcome.⁴⁹ It would seem, therefore, that property owners' subjectively experienced frustration over uncompensated regulation (whatever its magnitude) should be weighed in a utilitarian calculus only if the uncompensated regulation results from legislative decision-making that offends post-*Lochner* principles of majoritarian legitimacy.

The question then becomes, what decision-making processes offend those principles of majoritarian legitimacy? One approach to this question is to distinguish between ostensibly majoritarian politics in which minority interests are taken seriously and those in which the majority reflexively and unthinkingly burdens the minor-

⁴⁹ See Cass R. Sunstein, *Lochner's Legacy*, 87 COLUM. L. REV. 873, 873-74 (1987). Sunstein noted:

In the different answers to the question, what was wrong with the decision in *Lochner*?, can be found the various positions on most of the major constitutional issues of the modern era. The received wisdom is that *Lochner* was wrong because it involved 'judicial activism': an illegitimate intrusion by the courts into a realm properly reserved to the political branches of government.

Id. A notable dissenter from this view is Richard Epstein. See EPSTEIN, *supra* note 4, at 5 (advocating a strict prohibition against majoritarian redistribution of wealth).

Justice Stevens suggested that Justice Rehnquist's majority opinion in *Dolan v. City of Tigard*, 114 S. Ct. 2309 (1994), represented a rejection of the post-*Lochner* tradition of judicial deference to the legislature. See *Dolan*, 114 S. Ct. at 2328-30 (Stevens, J., dissenting). The City of Tigard conditioned its grant of a building permit to Florence Dolan on her dedication of a portion of her property for use as "greenway" space and as a bicycle and pedestrian path. See *id.* at 2314. In his majority opinion, Justice Rehnquist explained that the city had to demonstrate a "rough proportionality" between the effects of the proposed new land use and the conditions in the building permit. *Id.* at 2319-20. In his dissent, Justice Stevens condemned the rough proportionality requirement as a vehicle for courts to act as superlegislatures. See *id.* at 2329. The significance of *Dolan*, however, remains to be seen. The majority opinion seems to limit its rough proportionality requirement to government land use requirements that are specific to a particular parcel of land and that involve the actual transfer of title to the public. See *id.* at 2316-17. The majority opinion, moreover, fails to explain the basis for a rough proportionality requirement. The majority opinion's pithy but uninformative "analysis" is that "the Takings Clause of the Fifth Amendment" is "as much a part of the Bill of Rights as the First Amendment or Fourth Amendment." *Id.* at 2320. At a minimum, *Dolan* has energized those members of Congress who favor the enactment of "takings" legislation requiring the payment of compensation to landowners for losses resulting from government regulation. See 140 CONG. REC. S12,218-19 (daily ed. Aug. 19, 1994) (statement of Sen. Gramm) (invoking *Dolan* in support of the Senate's passage of The Private Property Rights Restoration Act).

ity simply because it has the power to do so. Where minority interests are not taken seriously and a decision not to compensate is reached, any resulting demoralization should be a subject of serious concern.⁵⁰

In practice, what does taking minority interests seriously mean? At a minimum, legislators making the decision to regulate without compensation should recognize and reflect upon the fact that uncompensated regulation does impose costs on particular citizens and hence on the society as a whole. Uncompensated regulation is not costless. Taking minority interests seriously also necessitates legislative deliberation as to whether any reason exists beyond political power to assign the costs of regulation to the regulated entities rather than to the taxpaying public as a whole. It requires, to use Cass Sunstein's terminology, that decision-making be based on something more than mere "naked preferences."⁵¹

The actual thought processes of legislators, of course, are never fully known. Therefore, there is a case to be made for proceeding on the basis of the identification of general scenarios in which reflexive exercises of majority power are particularly likely to occur. In such cases, minority property owners may reasonably presume that a denial of compensation resulted from a failure on the part of legislators to take their interests seriously.

It seems plausible—if somewhat tautological—to say that a minority interest is likely to be taken seriously by legislators when the minority is sufficiently strong to garner the attention of legislators; the strength of the minority's voice, in other words, is critical.⁵² Although the strength or weakness of that voice will

⁵⁰ For example, a legislative decision not to compensate a group of farmers for losses resulting from wetlands regulation could reflect nothing more than the fact that the taxpaying majority (or the interest group that would lose funding redirected toward compensation) was politically more powerful than the farmers. Alternatively, the decision may reflect a recognition that farmers have received and continue to receive a multitude of offsetting special benefits from the government without charge and that for a number of years the government has been urging farmers to voluntarily make the transition out of wetland farming.

⁵¹ See Cass R. Sunstein, *Naked Preferences and the Constitution*, 84 COLUM. L. REV. 1689, 1689 (1984) (arguing that the most important clauses of the Constitution, including the Takings Clause, "are united by a common theme and focused on a single underlying evil: the distribution of resources or opportunities to one group rather than another solely on the ground that those favored have exercised the raw political power to obtain what they want").

⁵² To the extent that we posit that the taxpaying majority reflexively opposes compensation, the strength of the majority voice also is a relevant factor. The stronger that voice, the greater is the risk it will drown out the minority's voice,

depend on many factors in each case, two factors are likely to be especially important. First, the wealthier the minority, the likelier it can and will bear the costs of lobbying the legislature.⁵³ Second, the size of the group is important. All other things being equal, an individual or very small group is less likely to capture the attention of legislators than a moderately-sized group. Legislators are more likely to dismiss out of hand one or two letters than fifty or one hundred letters. A protest march by one individual is less likely to generate news coverage and legislative inquiry than a march by two thousand individuals.⁵⁴

To the extent that one does accept this analysis, one is unlikely to be troubled by the absence of compensation for losses resulting from natural preservation regulation. Those most often subjected to uncompensated natural preservation regulation—groups of wealthy individuals and businesses—are likely to be taken very seriously by legislators.⁵⁵

leading legislators to fail to take the minority interest seriously.

At the federal level, taxpayers are a very large group, each of whom has a rather small financial interest in the decision of Congress to provide or deny compensation to any particular property owner. Public choice theory suggests that large groups with diffuse interests in an outcome rarely will be able to organize effectively. In smaller jurisdictions with smaller taxpayer populations, a legislative decision to compensate or not to compensate will have a more substantial impact on individual taxpayers and, according to public choice theory, taxpayers will be more likely to organize to oppose compensation. See Daniel A. Farber, *Economic Analysis and Just Compensation*, 12 INT'L REV. L. & ECON. 125, 130-32 (1992) (distinguishing between federal and local government action on this basis).

In reality, however, legislators at the local, state, and federal level are very sensitive to popular opposition to deficit spending (where it is an option at all) and tax increases. President Clinton's difficulties in securing passage of tax proposals attest to the perceived strength of taxpayer sentiment. See Edwin Chen & Karen Tumulty, *Foley Sees Little Support for National Sales Tax*, L.A. TIMES, Apr. 21, 1993, at A20 (discussing the Clinton administration's sensitivity to Republican success in public opinion polls concerning economic policy); Ann Devroy & Eric Pianin, *White House Goes on Offensive: Clinton, Aides Defend Mix of Taxes and Cuts in Budget*, WASH. POST, June 22, 1993, at A1 (same). At least at present, it seems difficult to say that the voice of taxpayers is substantially softer at the federal level than at the local level.

⁵³ Even extremely small groups are likely to be taken seriously if they possess sufficient resources. For example, an uncompensated regulation that would negatively affect Bill Gates, the multibillionaire founder of Microsoft, almost certainly would not be enacted without serious consideration of the loss to Gates and the fairness and prudence of inflicting it upon him.

⁵⁴ For analyses of the disadvantages of small groups and individuals in the legislative political process, see Farber, *supra* note 52, at 132-36; William A. Fischel, *Exploring the Kozinski Paradox: Why Is More Efficient Regulation a Taking of Property?*, 67 CHI.-KENT L. REV. 865, 887-94 (1991); Saul Levmore, *Takings, Torts, and Special Interests*, 77 VA. L. REV. 1333, 1355-60 (1991).

⁵⁵ See generally Betsy Carpenter, *This Land Is My Land: Environmentalism Is*

Consider, for example, the federal wetlands program that was at issue in *Florida Rock Industries v. United States*.⁵⁶ The federal wetlands program potentially affects an enormously large number of landowners; by one estimate, more than three million acres of land in the State of Louisiana qualify as wetlands under federal guidelines.⁵⁷ The federal program's broad sweep encompasses interest groups that have substantial resources and political power, including agriculture and the real estate and building industries. These groups have mounted a fierce and well-organized campaign to limit wetland regulation or, in the alternative, require compensation for regulatory losses.⁵⁸

There is no question that Congress has listened to, if not accepted, the voice of those interests that are potentially affected by wetlands regulation. Bills requiring compensation for wetlands regulation have been introduced in Congress, and hearings on these bills have been held at which proponents of compensation have testified.⁵⁹ The opponents of compensation in Congress have been

Colliding with the Rights of Property Owners, U.S. NEWS & WORLD REP., Mar. 14, 1994, at 65, 68-69 (reporting that landowners affected by environmental regulation "often portray themselves as average 'moms and pops,'" but "a look at who owns land in America reveals that by and large the property rights movement represents the wealthier and more powerful segments of American society . . . [and that] most of the privately owned land in America is concentrated in the hands of relatively wealthy individuals and corporations"). Of course, some of those adversely affected by preservation regulation have quite limited means. See, e.g., Robert McClure, *Private Land as Public Policy: Supporters Say Time to Compensate Owners Hurt by Environmental Laws*, ORLANDO SENTINEL, Apr. 3, 1994, at B1 (describing the plight of an elderly woman who spent her life savings on a 10-acre plot and then learned that wetlands regulations prohibited her from building a retirement home there).

⁵⁶ 18 F.3d 1560 (Fed. Cir. 1994). *Florida Rock* involved a challenge to the Army Corps of Engineers' denial of a permit to mine limestone that lay beneath a tract of wetlands. The extraction of the limestone would have destroyed the surface wetlands. See *id.* at 1575.

⁵⁷ See John McQuaid, *Owner's Rights Sacred, Bill Says*, TIMES-PICAYUNE (New Orleans), Apr. 3, 1994, at B1, B2 (noting that the three million acres of wetlands in Louisiana constitute 70% of the total wetlands in the continental United States).

⁵⁸ For accounts of this campaign, see, for example, *Backers of Major House Property Rights Bill to Push for Floor Vote*, INSIDE EPA, Mar. 18, 1994, at 7 ("The debate over how to address landowner complaints [about] federal Clean Water Act wetland rules . . . is among the most contentious and emotional issue facing Congress."); Ellen Gamberman, *Wetlands Compensation Sparks House Panel Debate*, State News Service, May 21, 1992, available in LEXIS, News Library, Arcnws File (discussing ongoing attempts to enact wetlands compensation legislation); William G. Laffer, *The Private Property Rights Act: Forcing Federal Regulators to Obey the Bill of Rights*, HERITAGE FOUND. REP., Apr. 3, 1992 (same).

⁵⁹ See, e.g., *Reauthorization of the Clean Water Act: Hearings Before the Subcomm. on Clean Water, Fisheries, and Wildlife to Consider S.1114, the Water Pollution Prevention and*

called upon to and have offered carefully reasoned explanations for their opposition.⁶⁰ Legislators are also likely to take seriously the interests of property owners affected by beachfront management programs of the sort at issue in *Lucas*. As Marc Poirier has pointed out, the owners of beachfront property tend to be very wealthy and politically sophisticated. Poirier convincingly argues that the political influence of beachfront property owners is demonstrated by their repeated success in securing generous state assistance in times of natural disaster despite the fact that they built or purchased property with specific knowledge of the high risk of such disaster.⁶¹ Of course, the number of property owners affected by the prospective ban on building in *Lucas* was relatively small. But in a state the size of South Carolina, a small group of wealthy property owners can make their voices heard, and there is every indication that they did so.⁶²

I do not mean to claim too much for this line of argument. It

Control Act of 1993, to Amend the Federal Water Pollution Control Act, and Three Other Acts to Extend and Strengthen EPA Water Pollution Abatement and Control Programs, 103d Cong., 1st Sess. 556-91 (1993) (testimony of Commissioner of the New York State Department of Agriculture and Markets Richard T. McGuire); *Tauzin Seeks Support from Heritage Foundation*, 24 Env't Rep. (BNA) No. 48, at 2040 (Apr. 1, 1994) (discussing takings bill introduced in Congress).

⁶⁰ See *Representatives Urged to Oppose Measures That Would Require Compensation for Takings*, 24 Env't Rep. (BNA) No. 48, at 2039-40 (Apr. 1, 1994) (describing Rep. Norman Mineta's "Dear Colleague" letter on this subject); *Studds Advises Against Inclusion of Takings Provision in Water Act Rewrite*, Nat'l Env't Daily (BNA) at A55 (Mar. 23, 1994).

⁶¹ See Marc R. Poirier, *Takings and Natural Hazards Policy: Public Choice on the Beach Front*, 46 RUTGERS L. REV. 243, 260-71 (1993) (discussing factors that enable beachfront property owners to obtain subsidies from legislatures).

⁶² One development suggesting the political power of beachfront landowners in South Carolina is the "startling about face" of a leading democratic legislator on the issue of beachfront management. *Waddell Beats Hasty Retreat on Beach Bill*, STATE, Feb. 23, 1989, at 14A; see also Lisa A. St. Amand, *Sea Level Rise and Coastal Wetlands: Opportunities for a Peaceful Migration*, 19 B.C. ENVTL. AFF. L. REV. 1, 13 (1991) (describing clash in South Carolina between environmental lobbyists, representatives of coastal property owners, and lending institutions and noting that "banks were particularly adamant" in opposing building restrictions); *Folly Beach Residents Say Beachfront Management Law Dooms Town*, STATE, Mar. 15, 1989, at 3E (reporting on lobbying by beachfront communities to obtain exemptions from building restrictions); *New Bill Would Allow Unrestricted Development*, STATE, Feb. 17, 1989, at 1A (reporting that Waddell, a Beaufort Democrat, introduced a bill that would reverse many of the measures of the Beachfront Management Act after coming "under intense heat" from property owners); *Waddell's Proposal Costly, Inefficient*, STATE, Mar. 19, 1989, at 2B (suggesting that Waddell's proposal was explained by the fact that "his campaign committee consisted of well-heeled landowners, large beachfront developers, [and] real estate companies and brokers").

relies on highly contestable normative and empirical propositions and, to the extent the empirical propositions are true, they are true only as generalizations. Sometimes political decisions affecting a large and well-organized minority will have the smell of raw exercises of political power; sometimes the plight of a single person will invoke thoughtful legislative deliberation. At a minimum, however, it does seem clear that there is no general or overarching reason to suspect that property owner interests are taken less seriously in the context of natural preservation regulation than in other contexts.⁶³

B. *Investor Incentives and Natural Preservation Regulation*

Demoralization costs are borne by society when property owners respond to the refusal of government to pay them compensation for regulatory losses. A very different type of social cost results from investors' responses to the risk of future uncompensated regulation. In the natural preservation context, this response is likely to take the form of an effort to "beat the regulatory clock" by means of accelerated development. This section first reviews the current academic literature regarding investors' responses to the risk of future uncompensated regulation. The section then presents a model of accelerated development and explores the nature of the social costs that result from such development.

1. Underinvestment and Overinvestment as a Response to Regulatory Risk

The academic literature regarding investors' responses to the risk of future uncompensated regulation counterposes the prospect of underinvestment in productive activity against the prospect of overinvestment in activity that might be socially undesirable. As I explore below, the debate about underinvestment and overinvestment is not particularly helpful in understanding the regime of

⁶³ By contrast, we may want to worry very much about the demoralization that results from regulatory changes in welfare programs. The populations adversely affected by such changes, although sizable, may well lack the resources necessary to ensure their voices are heard. See *Dandridge v. Williams*, 397 U.S. 471, 520 (1970) (Marshall, J., dissenting) (arguing that post-*Lochner* deference to the legislature is appropriate in cases involving "interests that have more than enough power to protect themselves in the legislative halls," but not in cases involving "a powerless minority—poor families without breadwinners").

uncompensated natural preservation regulation because it fails to capture a central dynamic in that regime—the race to develop.

Lawrence Blume and Daniel Rubinfeld have provided the most nuanced argument that compensation may be necessary to prevent underinvestment in socially productive activity.⁶⁴ Their argument, in essence, relies on three propositions.

First, they posit that some participants in the market for land are risk-averse.⁶⁵ Risk-averse investors value risky investments at a lower value than risk-free investments that have the same expected value.⁶⁶ Consider, for example, two otherwise identical properties, the first of which is guaranteed to produce \$1,000,000 income per year, the second of which has a .7 probability of producing \$2,000,000 income per year and a .3 probability of producing no income. A risk-neutral investor would prefer the second property over the first since it has a higher expected value ($(\$2,000,000)(.7) = \$1,400,000$). Risk-averse investors, however, might prefer the first property. In an economy dominated by risk-averse investors, and in the absence of insurance, one would observe substantial inefficiencies as a result of underinvestment in risky enterprises.

Second, Blume and Rubinfeld posit that risk aversion normally generates a demand for risk spreading through insurance and that, but for failures in the insurance market, we would observe commercially available insurance against regulatory diminutions in property value. Such insurance does not exist, they believe, because of two imperfections in the insurance market: “moral hazard,” which occurs when the party to be insured can affect the probability of the magnitude of the event that triggers payment, and “adverse selection,” which arises because insurers are not always as accurate as policyholders in assessing the probabilities of the events they are insuring.⁶⁷

⁶⁴ See generally Lawrence Blume & Daniel L. Rubinfeld, *Compensation for Takings: An Economic Analysis*, 72 CAL. L. REV. 569 (1984) (providing economic analysis of compensation as a form of insurance and evaluating efficiency arguments both for and against compensation); Lawrence Blume et al., *The Taking of Land: When Should Compensation Be Paid?*, 99 Q. J. ECON. 71 (1984) (examining whether compensation for land taken by eminent domain is efficient).

⁶⁵ See Blume & Rubinfeld, *supra* note 64, at 582-92 (presenting several examples illustrating the relevance of risk-averse behavior to the takings question).

⁶⁶ See *id.* at 592-97.

⁶⁷ See *id.* The principal “moral hazard” problem Blume and Rubinfeld envision is that insured property owners would fail to lobby against new regulation and, if they believe insurance proceeds will overcompensate them, might even bribe public officials to ensure its passage. See *id.* at 594. Their adverse selection point is that

Third, Blume and Rubinfeld propose that *ex post* compensation for regulatory losses can serve as a substitute for insurance and thereby eliminate the underinvestment that otherwise would result from risk-averse investors' awareness of the existence of the risk of uncompensated regulatory losses.⁶⁸ In Blume and Rubinfeld's view, *ex post* compensation solves the moral hazard problem that would beset any scheme for *ex ante* insurance:

If compensation were paid to landowners after the fact, the problems of direct insurance would be largely eliminated. First, properties would not be classified as "insured" or "uninsured," removing the possibility that project plans would be altered to take only uninsured properties. Nor would any bribes be exchanged for the information that certain landowners are likely to be harmed by government action, since no insurance would be sold. Finally, the cost of determining the appropriate tax rate to fund the compensation scheme would be substantially less than the cost of determining the appropriate direct insurance premium, especially given the likely alleviation of the moral hazards involved in direct government insurance.⁶⁹

Whereas Blume and Rubinfeld focus on the social cost of *underinvestment* in response to uninsured regulatory risk, Louis Kaplow focuses on the social cost of *overinvestment* in response to a guarantee of *ex post* compensation.⁷⁰ Kaplow's argument also relies on three propositions.

insurers would be unable to assess the risk of future regulation as well as landowners and hence would be unable to set premiums at levels that would ensure a profitable return. See *id.* at 596; see also William A. Fischel & Perry Shapiro, *Takings, Insurance, and Michelman: Comments on Economic Interpretations of "Just Compensation" Law*, 17 J. LEGAL STUD. 269, 286 (1988). Fischel and Shapiro noted:

An explanation for lack of private taking insurance . . . is adverse selection. A public planner might tip off landowners of an impending taking and encourage them to apply for insurance in order to reduce political opposition to his project. Insurance losses would mount as a result, and private insurers would withdraw.

Id. at 286. It is unclear whether, in fact, moral hazard or adverse selection accounts for the absence of insurance against regulatory losses. What is clear is that such insurance has not been and is not currently available, and there are no signs that it will become available in the future. See Louis Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509, 539 n.84 (1986) (noting that "takings insurance. . . is not currently offered").

⁶⁸ See Blume & Rubinfeld, *supra* note 64, at 597-99.

⁶⁹ *Id.* at 599.

⁷⁰ See Louis Kaplow, *An Economic Analysis of Legal Transitions*, 99 HARV. L. REV. 509 (1986) (analyzing policy implications of similarities between economic uncertainty created by changes in government policy and other types of uncertainty).

First, Kaplow posits that the "efficient level of investment is that induced when investors bear all real costs and benefits of their decisions."⁷¹ He believes, therefore, that "the encouragement resulting from the assurance that compensation or other protection will be provided in the event of change results in overinvestment."⁷²

Second, Kaplow argues that, as a general matter, the government does not intervene to mitigate risks that investors face.⁷³ Rather, the government, and more generally society, normally proceeds on the assumption that investors in private markets will contend with risks confronting them in a socially beneficial way. This is true even with respect to some risks—like the risk of market downturns—that are not commercially insurable.⁷⁴

Third, Kaplow rejects the notion that there is anything distinctive about government risk that justifies departure from this general practice.⁷⁵ Rather, he contends that government intervention to protect investors against government risk will result in inefficiency in the form of overinvestment in activities subject to regulatory risk.⁷⁶

A simple example will help clarify the debate about underinvestment and overinvestment. Consider the case of a plot of land on which a chemical company is planning to build a plant for the production of Compound X. Compound X is not currently regulated but some scientists and consumer advocates believe it is dangerous and should be banned. The data regarding its dangerousness is disputed and incomplete.

If the company accurately assessed the risk of a ban on Compound X and if it were risk-neutral, it would invest \$1,000,000 in the construction of the plant. If the company were risk-averse, it might choose to build a smaller plant and invest only \$500,000. By contrast, if the company were assured of full compensation for regulatory losses, it would invest \$1,500,000. The debate between Blume and Rubinfeld and Kaplow, in essence, boils down to two questions. Which is worse: a \$500,000 underinvestment in the plant or a \$500,000 overinvestment? Which is worse: lost productive activity due to risk aversion or the removal of any incentive to

⁷¹ *Id.* at 529.

⁷² *Id.*

⁷³ *See id.* at 533.

⁷⁴ *See id.* at 533-36.

⁷⁵ *See id.* at 536.

⁷⁶ *See id.* at 551-52.

take account of the risk that future regulation may alter the range of permissible activities and hence render (in our example) the chemical plant totally useless?

In theory, of course, we could imagine a compensation scheme that is just generous enough to remove the effects of risk aversion but not so generous as to result in overinvestment. Kaplow has little faith in our ability in practice to identify that "right" amount of compensation; Blume and Rubinfeld seem more optimistic and are sufficiently troubled by the prospect of underinvestment that they believe a compensation solution is worth pursuing.

2. Accelerated Development as a Response to Regulatory Risk

The starting point for Blume and Rubinfeld and Kaplow is the recognition that uninsured risk imposes certain costs because risk-averse investors underinvest. Blume and Rubinfeld believe compensation may be an appropriate response to this phenomenon; Kaplow believes that the cure—compensation—may impose greater social costs than it removes.

The starting point for any analysis of the regime of natural preservation regulation must be different. The reason is that investors have available to them an alternative to reducing their level of investment in response to the risk of future natural preservation regulation: they can accelerate their investment and, in essence, beat the regulatory clock. Thus, the question in the natural preservation context is whether the social costs of accelerated development outweigh the costs of a compensation regime.

The regime of natural preservation regulation has certain well-defined characteristics that invite accelerated development on the part of both risk-neutral and risk-averse investors in response to the risk of future uncompensated regulation.⁷⁷ First, the potential scope of preservation regulation is now so broad that the owners of virtually any undeveloped land in the United States know or should know that they are subject to some risk of future developmental controls. As ecological awareness has grown, so too has political support for preservation of undeveloped land.⁷⁸ Ecosystems that

⁷⁷ Unlike Blume and Rubinfeld's underinvestment phenomenon, the accelerated development phenomenon does not depend on the prevalence of risk aversion in the land market. Accelerated development would occur even in an economy populated solely by risk-neutral investors. The aggregate amount of accelerated development, however, would be greater in a risk-averse land market than in a risk-neutral market.

⁷⁸ Of course, the growth in ecological consciousness and regulation is not

previously were regarded as having minimal social utility, such as wetlands, are now substantially protected from development.⁷⁹

The fierce resistance to the Clinton Administration's proposal for a National Biological Survey reflected a widespread recognition of a substantial risk of expansive future federal regulation of undeveloped land. Business and property groups strenuously opposed the accumulation of more information about the ecological value of undeveloped land because they believed that such information would encourage the powerful trend toward natural preservation regulation. The survey, they feared, would foster an endless

continuous at all levels of government. At the federal level, for example, there was arguably a decrease in federal environmental concern during the Reagan Administration. This temporary decrease in environmental concern, however, was not mirrored at the state and local level. Widespread criticism of the Reagan Administration's environmental policies, moreover, led George Bush to style himself the "Environmental President." See William Schneider, *Everybody's an Environmentalist Now*, 22 NAT'L J., 1062, 1062 (1990) ("Republicans are following the lead of President Bush. They are proclaiming the environmental cause as their own. . . . Bush now calls himself 'the Environmental President' . . ."). Moreover, even if land investors perceive environmental regulation as waxing and waning over time, they must worry that their developmental rights will be restricted during a waxing period.

⁷⁹ See ROBERT V. PERCIVAL ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY 951-59, 965-84, 1084-123 (1992) (describing wetlands, endangered species, and other ecological protection programs); Lynda L. Butler, *Private Land Use, Changing Public Values, and Notions of Relativity*, 1992 B.Y.U. L. REV. 629, 629 ("Government regulation of land use is becoming increasingly more extensive and demanding. Growing scientific evidence of the link between environmental quality and land use and greater appreciation of the ecological value of natural resources have provided much of the impetus for government's intensified regulatory efforts.").

There are numerous proposals for the dramatic expansion of current natural preservation efforts. Most notably, Secretary of the Interior Bruce Babbitt has proposed that federal law evolve toward the protection of large-scale ecosystems. See *Babbitt Calls for Ecosystem Management*, Cal. Env't Daily (BNA) at 1 (Feb. 18, 1993) (reporting interior secretary's plan to adopt an ecosystem-based approach to species conservation); *White House to Coordinate Ecosystem Protection, Browner Says*, Nat'l Env't Daily (BNA) at 5 (Mar. 26, 1993) (describing Environmental Protection Agency efforts to coordinate ecosystem programs with other federal agencies); see also Bruce Babbitt, *The Future Environmental Agenda for the United States*, 64 U. COLO. L. REV. 513 (1993) (outlining a broad vision of environmental protection); Christopher A. Cole, Note, *Species Conservation in the United States: The Ultimate Failure of the Endangered Species Act and Other Land Use Laws*, 72 B.U. L. REV. 343 (1992) (discussing proposals for broader protection of habitats and ecosystems than is currently achieved under the Endangered Species Act); Elizabeth Pennisi, *No Man's Land*, GARBAGE, Spring 1994, at 32, 34 ("Ecologists are realizing that effective conservation entails saving not one but many species, and doing so in their natural environments. Conservationists should be taking a broader view that encompasses large-scale preservation of habitats and ecosystems . . ."); William H. Schlesinger, *Keep the Mojave Landscape Intact*, L.A. TIMES, Sept. 24, 1993, at B7 (urging protection of the Southern California desert and other ecosystems).

stream of federal regulation of private land use.⁸⁰ At the state and local level, a wide range of ecosystems and more generally "open space" already have been subjected to special regulatory protections.⁸¹

Second, although the potential scope of ecological preservation is now vast, its actual progress has been gradual. With respect to any particular ecological resource, the lag time between the date of the first serious proposal for preservation regulation and the actual implementation of such regulation is often many years. At the legislative level, resource protection bills rarely pass the first several times they are considered;⁸² determinations by regulators—such as the decision whether to list a species as endangered under the Endangered Species Act—also can take years.⁸³ As a result, land-

⁸⁰ See *Wetlands: White House vs. "Wise Use" in Clean Water Debate?*, GREENWIRE, Jan. 27, 1994, available in LEXIS, News Library, Grnwre File (describing the "furor" of property rights supporters against the proposal for a National Biological Survey).

⁸¹ John M. De Grove, *Growth Management and Governance*, in UNDERSTANDING GROWTH MANAGEMENT: CRITICAL ISSUES AND A RESEARCH AGENDA (David J. Brower et al. eds., 1989) 22, 22-43 [hereinafter UNDERSTANDING GROWTH MANAGEMENT] (examining state growth management initiatives in Vermont, Florida, California, Oregon, Colorado, North Carolina, Hawaii, New Jersey, Rhode Island, Georgia, Maine, Massachusetts, and South Carolina); Elizabeth Deakin, *Growth Controls and Growth Management: A Summary of Empirical Research*, in UNDERSTANDING GROWTH MANAGEMENT, *supra*, at 3, 3-4 (reviewing and critiquing analyses of growth management).

⁸² See, e.g., Lynda L. Butler, *State Environmental Programs: A Study in Political Influence and Regulatory Failure*, 31 WM. & MARY L. REV. 823, 824-25 (1990) (discussing slow progress of resource protection in Virginia); Bill Dawson, *The Ailing Wetlands: Government's Plan of Action Remains Unclear*, HOUSTON CHRON., Oct. 10, 1993, at A1 (discussing the fact that "[t]wice Texas governors have killed plans for a state Coastal Zone Management Plan" and that former Governor Richards was considering, but had not yet approved, such a plan); *New Jersey: Coastal Development Bill Passes Assembly*, GREENWIRE, June 22, 1993, available in LEXIS, News Library, Grnwre File (describing the "years of gridlock" that preceded passage of coastal zone legislation); Howard Schneider, *Schaefer Acts Cautiously on Growth: Governor Sets Aside Panel's Most Controversial Proposals*, WASH. POST, Jan. 27, 1991, at B1 (discussing slow progress of Maryland growth control legislation and regulation).

⁸³ See Oliver A. Houck, *The Endangered Species Act and Its Implementation by the U.S. Departments of Interior and Commerce*, 64 U. COLO. L. REV. 277, 292 n.103 (1993) (discussing estimate that it will take the federal government until 2006 "to address the roughly 600 candidate species [currently under review], even if no additional species are determined to be in need of protection or added to the candidate list"); *Efforts to Save Endangered Species Hurt by Mismanagement*, ST. PAUL PIONEER PRESS DISPATCH, Oct. 19, 1990, at 13A (noting that, in addition to a "backlog of about 600 species that probably deserve immediate protection, but have yet to be officially listed as endangered," there are "[a]nother 3,000 plants and animals . . . suspected of being endangered, but [which] 'are receiving little or no protection while they await the federal review'").

owners typically have substantial notice of particular legislative or regulatory proposals that would affect their ability to develop and exploit their land.

Third, the losses imposed by uncompensated natural preservation regulation sometimes are very large in absolute terms and in terms of the overall value of the affected investment. Not surprisingly, the magnitude of the losses incurred by landowners is a principal focus of those judicial decisions holding that a natural preservation regulation has effected a taking.⁸⁴

Fourth, and perhaps most important, the strong norm of non-retroactivity in the regime of natural preservation regulation means there is a relatively easy means of protecting oneself against the risk of a future uncompensated regulation restricting development—develop immediately and thoroughly. At all levels of government, natural preservation regulation has been prospective or forward looking. Newly enacted wetlands regulations, for example, do not require people who have previously developed wetlands to restore the land to its natural state; rather, such laws prevent future filling of wetlands.⁸⁵ Similarly, new endangered species regulations do not require landowners to restore habitats that already have been destroyed. Local growth controls do not require existing buildings to be torn down.⁸⁶

As a theoretical matter, one could imagine a regulatory regime in which current and previous landowners are required to take measures to undo ecological damage that once was lawful. As a practical matter, such regulation has not been and is not likely to become part of accepted political debate.

There are several good reasons why this is so. First, the

⁸⁴ See Rubinfeld, *supra* note 10, at 1157 n.306 (noting the prominence of the "economic viability test" in takings cases involving ecological preservation).

⁸⁵ These laws, however, sometimes require efforts at the restoration of habitats that were destroyed after the laws went into effect. See, e.g., 33 C.F.R. § 326.3(d) (1994) (authorizing the Army Corps of Engineers to require persons who have unlawfully filled wetlands to take "corrective measures").

⁸⁶ As Justice Levin of the Michigan Supreme Court has noted, the forced destruction of existing buildings is generally regarded as outside the purview of the police power. See *Adams Outdoor Advertising v. East Lansing*, 483 N.W.2d 38, 51 (1992) (Levin, J., concurring) ("No reasonable person would seriously suggest that the owner of the Empire State Building could be required, in the exercise of the police power, to remove the building from the land"); see also John J. Delaney & William Kominers, *He Who Rests Less, Vests Best: Acquisition of Vested Rights in Land Development*, 11 LAND USE & ENV'T L. REV. 533 (1980) (analyzing the rights secured at various stages of a building project).

prospectivity of natural preservation regulation reflects the commonsense notion of legislators and regulators that, all things being equal, the benefit of preventing the future destruction of a natural resource is likely greater than the benefit of trying to restore the resource. It is often difficult to recreate nature; wetlands and other habitats sometimes have been successfully restored, but such restoration efforts cost much and sometimes fail.⁸⁷ Some natural phenomena—old growth forests, for example—are virtually impossible to recreate. Ecological benefits are much more certain where the state intervenes before development.

The costs of undoing an existing development, moreover, are typically much greater than the costs of preventing development. Development almost necessarily adds value to the land: labor, materials, and technology all are invested in building, for example, a shopping mall on wetlands. There is less waste when the developmental restriction is applied before the mall project has commenced.⁸⁸

More fundamentally, the strong norm of nonretroactivity in natural preservation regulation may reflect legislators' and regulators' understandable desire to avoid the difficult task of determining when human development of a particular resource or area became excessive. In some sense, all hazardous waste or malaria is

⁸⁷ See Mark C. Rouvalis, *Restoration of Wetlands Under Section 404 of the Clean Water Act: An Analytic Synthesis of Statutory and Case Law Principles*, 15 B.C. ENVTL. AFF. L. REV. 295, 319 (1988) ("The restoration process may take twenty to thirty years before the damaged wetland will closely approximate its formerly undisturbed state. Even such a lengthy period does not ensure that the wetlands' former plant and animal life will recover fully" (footnote omitted)); *Past Time to Curtail the Loss of Wetlands: Mitigation Projects Are No Substitute for the Real Thing*, L.A. TIMES, Aug. 9, 1992, at B10 ("[O]nly a handful of the dozens of mitigation projects done so far in Orange County could be called even promising."); William K. Stevens, *Restoring Lost Wetland: It's Possible but Not Easy*, N.Y. TIMES, Oct. 29, 1991, at C1 ("[A]ccording to proliferating studies . . . [restoration] efforts are ending in failure."); *Wetlands: Restoration Difficult, Maine Officials Find*, GREENWIRE, Nov. 30, 1993, available in LEXIS, News Library, Grnwre File (discussing "how hard it can be to replace natural wetlands that are sacrificed to development").

⁸⁸ The prevention of economic waste often has been cited as a rationale for the pre-existing use doctrine in zoning; that doctrine limits government's ability to terminate land uses that were lawful when established but which do not conform to subsequent zoning ordinances. See Note, *Nonconforming Uses: A Rationale and an Approach*, 102 U. PA. L. REV. 91 (1953); see also *PA Northwestern Distrib., Inc. v. Zoning Hearing Bd.*, 584 A.2d 1372, 1376 (Pa. 1991) ("[One of the] policy considerations [supporting the determination that] amortization and discontinuance of a lawful pre-existing nonconforming use is per se confiscatory and violative of the Pennsylvania Constitution [is that] forced destruction will often result in economic waste.").

bad: we would prefer to be without it altogether.⁸⁹ The same is not true, in fact, of human destruction of nature; that destruction is an essential part of Western living, and most of us accept its necessity to some extent. Natural preservation regulation is essentially a societal recognition that the extent of that destruction has simply gone too far. Ascertaining precisely when development crosses the "too far" line is extremely difficult. Was it two years ago or twenty or one hundred years ago that society crossed the line into having too little ecosystem diversity, too few wetlands, or too little open space? All in all, it is easier to leave the past alone and structure preservation regulation in solely prospective terms.

An example will illustrate how these factors combine to encourage a socially costly race to develop. Consider the hypothetical case of Land Development Corporation (Land Development). Land Development owns two hundred acres of forested land near an urban center in a heavily populated state. The forested area provides critical habitat to a range of flora and fauna whose numbers have been decreasing as a result of rapid urbanization. There is some sentiment among environmentalists and some community members to preserve forested areas, but so far no one has taken or specifically proposed political action. Current environmental and land use regulations do not restrict development. Land Development bought the property for \$1,000,000 with the intention of building residential townhome communities on it. Land Development ideally would like to put off building for four or five years. In the meantime, income from light forestry on the site will cover the costs of holding the land in its undeveloped state.⁹⁰

Developers and others, of course, often hold land in an undeveloped state for substantial periods of time.⁹¹ In Land

⁸⁹ For this reason perhaps, a norm of extreme or radical retroactivity prevails in our regime of hazardous waste regulation. Under the Comprehensive Environmental Response, Compensation, and Liability Act, 42 U.S.C. §§ 9601-75 (1988 & Supp. V 1993), entities may be held liable even to the point of bankruptcy for waste disposal activities that occurred decades before the statute was enacted. *See, e.g.,* Cadillac Fairview/Cal., Inc. v. Dow Chem. Co., 14 Env'tl. L. Rep. (Env'tl. L. Inst.) 20,376 (C.D. Cal. Mar. 5, 1984) (involving allocation of liability for hazardous waste generated at an industrial facility that commenced operation during World War II).

⁹⁰ The existence of a risk of uncompensated preservation regulation would have precisely the same effects if we assume that the land is held by a nondeveloper (for example, a timber company) and that developers will purchase land in the area only for immediate construction. Under those assumptions, the risk of uncompensated regulation will lead the timber company to accelerate the date on which it sells the land to the developer.

⁹¹ For descriptions of this practice, see MAURY SELDIN & RICHARD H. SWESNIK,

Development's case, the current market for the sale of townhomes in urban outskirts is weak; consequently, Land Development does not believe it could sell townhomes at present for a substantial profit. The market may well improve in four or five years. Land Development could build now and hold the townhomes until the market strengthens. But the building will be financed by debt and Land Development sensibly wants to minimize the length of the period in which it must service construction debt. Given the magnitude of the anticipated debt service, Land Development has decided it cannot build now and hold the townhomes for later sale. It must choose between building and selling now (in Year One) or building and selling in four years (in Year Four).⁹²

Suppose that Land Development perceives a risk of future uncompensated regulation prohibiting construction on the forested area. Let us also suppose for now that Land Development believes it can ascertain with a fairly high degree of certainty the magnitude of that risk and that Land Development is a risk-neutral investor.

Under these assumptions, a number of variables would affect Land Development's decision whether to build now and avoid future regulation or wait to build. These variables are:

- * The value of the townhomes in Year One ($V1$)
- * The present value of the townhomes in Year Four in the event the market for housing strengthens ($PV4$)
- * The present value of the townhomes in Year Four in the event the market for housing remains flat ($PV4'$)
- * The perceived probability that the housing market will improve (P)
- * The perceived risk that a regulatory prohibition will be enacted between Year One and Year Four (R)
- * The present value in Year Four of the land after a prohibition on construction has been enacted ($PV4''$)

As a formal matter, Land Development will build now if $V1 > (1 - R)[(P)(PV4) + (1 - P)(PV4')] + (R)(PV4'')$. Otherwise, Land

REAL ESTATE INVESTMENT STRATEGY 165-88 (1987); Gurney Breckenfeld, *Higher Taxes That Promote Development*, FORTUNE, Aug. 8, 1983, at 68; Tom Buerkle, *Playing the Securities Niche*, INSTITUTIONAL INVESTOR, Aug. 1989, at 115; Seth Lubove, *The Ultimate Inflation Hedge*, FORBES, June 21, 1993, at 178; William Meyers, *The Great Land Rush*, INSTITUTIONAL INVESTOR, Apr. 1988, at 141; Paul Robbins, *White River Battles the Three Rs*, VT. BUS. MAG., Oct. 1987, at 18.

⁹² For the purpose of simplicity, I am assuming that Land Development's choice is restricted to acting now or waiting four years; intermediate options are not under consideration.

Development will delay construction for four years.

Thus, for example, Land Development will respond to regulatory risk by building immediately if $V1$ is \$2,000,000, $PV4$ is \$3,000,000, $PV4'$ is \$2,000,000, $PV4''$ is zero, the probability of an improved housing market is .5, and the risk that a regulatory prohibition will be enacted is .7.⁹³ In the absence of regulatory risk, the value of the build-in-Year-One option would be \$2,000,000 and the present value of the build-in-Year-Four option would be \$2,500,000. When the .7 risk of uncompensated regulation is taken into account, the value of the build-in-Year-One option is \$2,000,000 and the present value of the build-in-Year-Four option is \$750,000.⁹⁴ If the risk of regulation were .2, both the build-in-Year-One and the build-in-Year-Four options would have the value of \$2,000,000 in current dollars.⁹⁵ Hence, Land Development will build now, in Year One, as long as the probability of regulation is .2 or greater.⁹⁶

⁹³ Land Development may be unable to settle upon a precise risk of regulation. Instead, Land Development may estimate a range or spectrum of possible risks (e.g., $.7 < R < .3$). This is most likely to be the case where Land Development's assessment of the risk of future uncompensated regulation must be made under conditions of substantial uncertainty. There are several possible causes of uncertainty: Land Development may lack effective access to legislators; legislators may be unwilling to provide an assessment of the probability of uncompensated regulation; and, most importantly, the legislators may be unable to do so. Many difficult-to-predict factors affect the legislative and regulatory process, including elections, the personal life development of politicians, public moods, scientific discoveries, and press coverage.

One source of Land Development's uncertainty about the risk of regulation may be the developmental decisions of other entities that hold undeveloped land near Land Development's parcel. Land Development may believe that the political pressure for regulation will increase as the total acreage of remaining undeveloped land decreases. Land Development may conclude, therefore, that the longer it postpones development, the more likely it is that other entities in the area will develop their land and subject Land Development to a heightened risk of uncompensated developmental controls. In other words, Land Development may perceive the race to develop as entailing a race *among* developers.

⁹⁴ When R is .7, the present value of the build-in-Year-Four option is $(1 - .7)[(.5)(\$2,000,000) + (1 - .5)(\$3,000,000)] + (.7)(0)$, which equals \$750,000.

⁹⁵ When R is .2, the present value of the build-in-Year-Four option is $(1 - .2)[(.5)(\$2,000,000) + (1 - .5)(\$3,000,000)] + (.2)(0)$, which equals \$2,000,000.

⁹⁶ One possible objection to this analysis is that, instead of accelerating development, Land Development may decide to reduce the risk of regulation through investments in the political process. By investments in the political process, I mean expenditures of money made with the specific purpose of influencing the behavior of elected and/or unelected government officials. Such expenditures might include, for example, financial contributions to the campaigns of legislative candidates and the retention of professional political lobbyists. It is a truism that expenditures of this sort sometimes influence political outcomes. See, e.g., Blair Kamin, *Pro-Growth Forces*

Raise the Stakes for Politicians in Suburban Elections, CHI. TRIB., Feb. 17, 1991, at 1 (describing developers' large contributions to successful campaigns of pro-growth candidates for county boards in the suburbs surrounding Chicago).

Figure 1 illustrates the inverse relationship between Land Development's investment in the political process (I) and the risk of future uncompensated regulation (R). $R^{I=0}$ is the risk of regulation that Land Development must bear when it makes no investment in the political process.

FIGURE 1

Whether Land Development invests anything in political efforts and, if so, how much it invests depends on the position and shape of the curve generated by the intersection of the I and R variables. If there is no point on the curve depicted in Figure 1 for which it is true that the present value of the build-in-Year-Four option *minus* Land Development's investment in the political process *exceeds* the value of the build-in-Year-One option, then Land Development will invest nothing in the political process and instead accelerate development. If there is more than one point on the curve at which this condition is satisfied, Land Development will select the investment level at which the present value of the build-in-Year-Four option *minus* Land Development's investment in the political process is maximized. Stated more formally, Land Development will select the level of investment, I , at which $(1 - R)[(P)(PV4) + (1 - P)(PV4')] + (R)(PV4'') - I$ is maximized.

For example, suppose that Land Development perceives a .3 risk of uncompensated regulation and that, therefore, the value of the build-in-Year-One option (\$2,000,000) exceeds the present value of the build-in-Year-Four option (\$1,750,000) by \$250,000. Now suppose that Land Development estimates that a \$200,000 contribution to legislators' campaign funds will reduce the risk of uncompensated regulation to .05 and a \$450,000 contribution will reduce the risk to .01. If the risk of regulation were .05, the present value of the build-in-Year-Four option (\$2,375,000) would exceed the present value of the build-in-Year-One option (\$2,000,000) by \$375,000. If the risk of regulation were .01, the present value of the build-in-Year-Four option (\$2,475,000) would exceed the value of the build-in-Year-One option (\$2,000,000) by \$475,000. Thus when $I = \$200,000$, Land Development realizes a net gain of \$175,000 (\$375,000 - \$200,000), and when $I = \$450,000$, Land

Now let us assume that Land Development is risk-averse. As a general matter, risk aversion tends to vary inversely with the investor's wealth and, holding wealth constant, it varies with the magnitude of the possible losses.⁹⁷ Some land developers have relatively limited assets and hence limited capacity to self-insure through portfolio diversification; as discussed above, insurance against risks of regulatory loss is not commercially available.⁹⁸ The magnitude of potential losses in this example and many actual cases, moreover, is large. Hence, Land Development may choose the build-now option even if its best guess as to the probability of regulation is lower than .2.⁹⁹

Development realizes a net gain of \$25,000 (\$475,000 - \$450,000). Accordingly, Land Development will contribute \$200,000 to campaigns, accept the .05 risk of future uncompensated regulation, and wait until Year Four to commence building.

This analysis, of course, does not suggest that accelerated development is an illusory problem. Rather, it suggests that the extent of accelerated development will be greatest in political jurisdictions where the "cost" of reductions in regulatory risk is very high or where such reductions simply cannot be purchased. Conversely, relatively little accelerated development will occur in jurisdictions in which modest monetary investments can prevent the enactment of uncompensated preservation regulation.

The progress of environmental regulation at all levels of government indicates that, in fact, it is often very expensive or impossible to block new regulation through monetary investments in the political process. Although the opponents of environmental regulation have consistently invested far greater sums in the political process than those public interest and citizen groups that support increased regulation, the scope of regulation has continued to increase.

⁹⁷ See Blume & Rubinfeld, *supra* note 54, at 601-02; see also Herbert Hovenkamp, *Legal Policy and the Endowment Effect*, 20 J. LEG. STUD. 225, 238-39 (1991) (discussing some of the implications of the proposition that, for most individuals, wealth has a declining marginal utility).

⁹⁸ See Kaplow, *supra* note 67, at 539 n.84; see also Lettice Stuart, *Housing the Elderly: "Assisted Living" Builders Regroup for the 90's*, N.Y. TIMES, Jan. 3, 1993, § 10, at 3 (discussing "undercapitalization" of many developers in the 1980s).

⁹⁹ In addition to its attitude toward risk, Land Development's beliefs about patterns in public attitudes may affect its decision whether to build now or in four years. Land Development may believe that public support for environmental protection waxes during periods of economic prosperity and wanes during periods of economic stagnation and recession, when "bread and butter" issues such as jobs command greater attention. See, e.g., Robert Reinhold, *Hard Times Dilute Enthusiasm For Clean-Air Laws*, N.Y. TIMES, Nov. 26, 1993, at A1 ("The worst economic slump since the Depression has created an audience for the argument that pollution restrictions are luxuries that Southern California cannot afford The economy is changing priorities."). Accordingly, Land Development may perceive two distinct risks of future regulation—a higher risk in the event the economy improves and a lower risk in the event the economy fails to improve. If that is the case, Land Development may accelerate development even if it perceives an *average* risk of regulation that is less than .2.

To illustrate this point, consider two scenarios. In scenarios one and two, Land Development perceives a .5 probability that the economy will improve and a .5

Some developers, of course, will be predisposed to act in a risk-neutral manner with respect to the risk of uncompensated regulation. Even such developers, however, might be compelled to act in a risk-averse manner in order to satisfy the demands of lending institutions that are financing their projects. Although lending institutions engaged in aggressive lending during the real estate boom of the 1980s, they traditionally have been regarded as fairly cautious or risk-averse business enterprises; an extensive body of state and federal bank underwriting regulation is intended to insure that such institutions place their solvency above profit considerations.¹⁰⁰ Lending institutions are demonstrably aware of and concerned about the prospect of losses from uncompensated preservation regulation. As Bill Fruit, chairman of the American Bankers Association's Real Estate Executive Committee, explains, banks "can foreclose and bankrupt developers" whose projects are blocked by new regulations, but then they "end up with property nothing can be done with."¹⁰¹ According to Fruit, the absence of compensation "for not being able to develop land is probably the biggest issue lenders and developers are faced with."¹⁰²

In response to the skittishness of risk-averse lenders regarding uncompensated regulatory losses, developers may well rush to secure financing for development projects as soon as possible. For example, Land Development could perceive the risk of regulatory loss as .1, but be aware that it will be difficult to convince its fretful bank that the land is not about to be barred from development.

probability that the economy will remain flat; the value of the development in Year One is \$2,000,000; its present value in an unimproved economy in Year Four is \$2,000,000; and its present value in an improved economy in Year Four is \$3,000,000. In scenario one, Land Development perceives a .18 risk of uncompensated regulation in both an improved and unimproved economy. In scenario two, Land Development perceives a .35 risk in an improved economy, a .01 risk in an unimproved economy, and, accordingly, an *average* risk of regulation of .18.

Under these assumptions, Land Development will accelerate development only in scenario two. In scenario one, the present value of the build-in-Year-Four option is $(.5)(.82)(\$2,000,000) + (.5)(.82)(\$3,000,000)$, or \$2,050,000. In scenario two, the present value of the build-in-Year-Four option is $(.5)(.99)(\$2,000,000) + (.5)(.65)(\$3,000,000)$, or \$1,965,000. The Year One option is more attractive than the Year Four option in scenario two, but not in scenario one.

¹⁰⁰ See generally 1 ALFRED M. POLLARD ET AL., *BANKING LAW IN THE UNITED STATES* § 11.1 (2d ed. 1993) ("[M]aintaining bank safety and soundness [is] the pervasive theme of the banking law of the United States [and is] pursued . . . through many devices.").

¹⁰¹ *The Regulatory Compliance Watch*, AM. BANKER-BOND BUYER, Mar. 9, 1992, at 2.

¹⁰² *Id.*

Rather than take the chance that future political events or media coverage will make the bank completely unwilling to lend or willing to lend only at an exorbitant interest rate, Land Development may act quickly to borrow and build in Year One even if, were it fully self-financing, it would wait until Year Four.

The acceleration of Land Development's building plans imposes two distinct costs on society. The first is a cost in allocative efficiency. In our example, the allocatively efficient use of the land from Year One to Year Four is its use as light forestry operation; during that period, the capital needed for building would be better spent elsewhere. The existence of a risk of uncompensated regulation does not cause a commensurate reduction in investment, but rather a presumptively inefficient channelling of resources into projects before the time at which they are wealth-maximizing.¹⁰³

¹⁰³ Figure 2 illustrates the allocative efficiency cost associated with the race to develop.

FIGURE 2

T_1 is the time at which the developer will commence building when operating in an environment characterized by a risk of uncompensated regulation; T_2 represents the time at which the developer will commence building in the absence of such risk. R_1 represents the return on an alternative investment to the building project—let us say, for example, the alternative investment is the renovation of an urban apartment house. In the absence of the risk of uncompensated regulation, the developer would prefer the apartment renovation project to the building project between time T_1 and time T_2 and would have the capital available to invest in that project during the T_1 - T_2 interim period. R_2 represents the return on the building project.

The shaded area represents the allocative efficiency cost that results from the developer's acceleration of the building project and consequent inability to invest in

The second cost is simply the loss of the societal option to decide whether to preserve the land in its natural state. As long as a strong norm of nonretroactivity obtains in the regime of natural preservation regulation, the subjects of such regulation will be limited to undeveloped land. The acceleration of development in response to the risk of uncompensated natural preservation regulation reduces the potential subjects of natural preservation regulation and thereby frustrates any long-term effort to establish a sustainable balance between human development and natural preservation.

This characterization of the reduction of potential regulatory subjects as a social cost is susceptible to a rather obvious charge of normativity or nonneutrality—a charge I readily admit. The loss of choice of potential regulatory subjects is only troubling to the extent that one believes that natural preservation is an important societal goal, that the societal and hence political appreciation of that goal is increasing, and that, therefore, the social and political calculus about the relative importance of the preservation and economic exploitation of a given site or resource might well shift with the passage of time.¹⁰⁴

and reap returns from the apartment renovation project during the *T1-T2* interim period.

¹⁰⁴ This analysis does not account for the possibility that the developer and the legislature may engage in a dynamic “racing game” wherein the developer’s race to develop engenders a race to regulate on the part of the legislature. Reconceptualizing the relationship between developer and legislator as a game, however, does not alter the conclusion of the analysis. As long as one assumes that the developer generally will win the racing game—and there are good reasons to think it will—the bottom line remains the same: the risk of uncompensated regulation imposes a social cost by eliminating potential subjects of preservation regulation.

To illustrate how a racing game might operate, assume that Land Development perceives the risk of uncompensated regulation to be .1 and is risk neutral. Under those assumptions, Land Development will prefer the build-in-Year-Four option over the build-in-Year-One option since the present value of the Year Four option exceeds that of the Year One option. Now let us relax the assumption that Land Development’s choice is solely between Year One and Year Four. In response to the perceived .1 risk of regulation, Land Development might accelerate its plans somewhat, choosing to build in Year Three instead of Year Four. If legislators detect this change in the plans of Land Development, they might focus more attention on the problem of dwindling forest land. The increased legislative attention may cause Land Development to perceive a greater risk of regulation and, as a result, to further accelerate its building plans so that—let us say—building will now be scheduled to commence in Year Two. If the legislators detect this acceleration, they could begin the process of drafting developmental controls and, in response, Land Development could further expedite its building plans. In the end, the game would be won by the party that made the last move, and there is no way to be sure whether that would be

Assuming one accepts the proposition that the race to develop is an undesirable phenomenon, the next question one might ask is whether the social costs at issue are large enough to warrant serious concern. Unfortunately, it is impossible to provide a definitive answer to that question. Developers do not systematically analyze and announce their motivations for the timing of their decisions. We simply do not know how much accelerated development has occurred and may be occurring as a result of the risk of uncompensated regulation.

We do know that observers of and participants in the development process believe that development is accelerated in response to regulatory risk. Developers, when asked, confirm that they weigh the risk of future developmental controls in planning the timing of projects. As one lawyer for developers has observed, there exists "a high-stakes contest between 'growth' and 'no growth' forces, where the developer seeks to win vested rights to a specific development plan before the municipality changes the land use rules."¹⁰⁵ Land use lawyers, developers, and interested government officials seem to agree that uncertainty about future growth controls leads developers to "engage in speculative land purchases and development."¹⁰⁶ Anecdotal accounts suggest that the magnitude of

Land Development or the legislature.

It seems likely, however, that developers such as Land Development generally will win the game. First, effective participation in the game requires an ability to detect the moves of the other player. Because the legislative decision-making process is much more open than the decision-making process of private developers, developers have a substantial advantage over legislators. Second, whereas developers are free to change their strategy whenever it is profit-maximizing for them to do so, legislators operate under political constraints. Societal and hence political support in favor of preservation has increased only gradually over time and, as a result, legislators may be unable or unwilling to accelerate the regulatory process in response to an obvious acceleration in development. It takes a great deal of time for environmentally-concerned citizens and their legislative allies to raise public consciousness and awareness and forge a political consensus in favor of a preservation program. Developers, by contrast, can act quickly to advance their interests while at the same time exercising their political clout in favor of delay in the legislative process.

Moreover, even if the legislature "wins" the game by preventing development, society may lose. Rushed to regulate before they can gather adequate scientific data and understanding, environmentally-oriented legislators may find that they have expended their energy and influence protecting minimally important natural resources to the detriment of their ability to address other more weighty problems. Premature decisions to regulate, just like premature decisions to develop, are socially suboptimal.

¹⁰⁵ Robert B. Koegel, *Vesting Property Rights Under SEQRA*, N.Y. L.J., June 24, 1991, at 18.

¹⁰⁶ *The Bluegrass Revisited: Regional Strategic Planning for a Vision of the Future*

accelerated development may be very substantial.¹⁰⁷

Landlines, LINCOLN INST. OF LAND POL'Y, July 1993, at 3. This statement is supported by 21 telephone interviews, including interviews with representatives of the National Homebuilders Association, private developers and real estate attorneys, the directors of two public entities responsible for growth management (the Chesapeake Critical Areas Commission and the New Jersey Pinelands Commission), and local and state officials in different regions of the United States. Notes of these interviews are available from the author.

¹⁰⁷ For example, accelerated development reportedly occurred along the South Carolina Coast in anticipation of the building prohibitions at issue in *Lucas*. According to David Lucas, developers "rushed" and "arbitrarily" assembled building plans and building permit applications in the hope of beating the regulatory clock. Telephone Interview with David Lucas (Mar. 21, 1994) (notes on file with the author).

Another example of a rush to develop is the New Jersey Pinelands. The New Jersey Pinelands is an area of approximately one million acres in southern New Jersey. In 1979, the State Legislature established a commission with the mandate to implement strict growth controls in the Pinelands. Shortly before developmental restrictions were implemented, there was reportedly a "purposeful" and "extensive" attempt by developers to expedite projects. Telephone Interview with Terrence Moore, Chairman, Pinelands Commission (Mar. 22, 1994) (notes on file with the author); see also W. Patrick Beaton, *The Impact of Regional Land-Use Controls on Property Values: The Case of the New Jersey Pinelands*, 67 LAND ECON. 172 (May 1991) (examining the effects on land values in the Pinelands of "the anticipation of the new growth controls").

There is also substantial evidence of races to destroy natural habitats in anticipation of the adoption of habitat preservation restrictions. One of the best-known cases of such behavior involved Ross Perot. As the *New Republic* reported:

Perot's land in the Hill Country of west Austin sits at the edge of one of the nation's most ecologically sensitive areas, the Balcones Canyonlands, home to . . . the golden-cheeked warbler, a migratory songbird that spends most of the spring in South America but comes north each year to breed in the juniper trees of Travis County. . . .

. . . Perot's company, worried that the golden-cheeked warbler could soon be subject to federal protection as an endangered species . . . sent in the bulldozers.

The idea was to clear most of the juniper trees from Perot's land before the warblers returned—like razing Capistrano, so that the swallows would have to swarm somewhere else.

David Wright, *Death to Tweety*, NEW REPUBLIC, July 6, 1992, at 9-10; see also Jon H. Goldstein & H. Theodore Heintz, Jr., *Incentives for Private Conservation of Species and Habitat: An Economic Perspective*, in A SPECIAL REPORT FROM DEFENDERS OF WILDLIFE: BUILDING ECONOMIC INCENTIVES INTO THE ENDANGERED SPECIES ACT 51, 53 (1993) ("The restrictions on private land use that result from [the Endangered Species Act] often reduce the income a landowner can earn from putting his land to other uses. This creates anti-conservation incentives, with landowners frequently striving to avert the discovery of a species or its habitat . . ."); Ike C. Sugg, *Caught in the Act: Evaluating the Endangered Species Act, Its Effects on Man and Prospects for Reform*, 24 CUMB. L. REV. 1, 45 (1993) (discussing reports of loggers' acceleration of harvesting in anticipation of preservation restrictions); Wallace Kaufman, *The Cost of Saving: You Take It, You Pay for It*, 99 AM. FORESTS 17 (1993) (discussing landowner's plan to cut longleaf pines before they become old enough to provide habitat for an endangered

III. RESPONSES TO THE RACE TO DEVELOP

If one accepts that the race to develop is undesirable and that its magnitude is substantial enough to warrant concern, the next logical question becomes, what can be done to prevent it? This Part explores four possible responses to the race to develop: a legislative scheme of *ex post* compensation, a judicially-enforced constitutional scheme of *ex post* compensation, a legislative scheme of *ex ante* payments, and a legislative scheme of development taxes.

A. Ex Post Compensation

In theory, a guarantee of *ex post* compensation could eliminate the race to develop. If Land Development knew that it would be compensated for any regulatory losses that might result from regulations enacted between Year One and Year Four, Land Development would delay building.

The guarantee of compensation, however, is not costless. For one thing, that guarantee would result in administrative costs. Some societal resources would have to be devoted to processing and evaluating claims for regulatory loss. Administrative costs, in the aggregate, might be quite large.¹⁰⁸

Most environmentalists, however, do not criticize *ex post* compensation requirements on the basis of administrative costs. Instead, environmentalists express the concern that compensation requirements will discourage the enactment of socially beneficial regulation. In this view, legislative reaction to budgetary expenditures is such that, when confronted with a choice between securing important but unquantifiable environmental benefits and making a substantial budgetary outlay, legislators too often will forego environmental protection.¹⁰⁹ One traditional "conservative"

species of woodpecker).

A close analogue to the race to develop is the race to demolish: developers often demolish buildings before the buildings are designated as historic landmarks. See, e.g., Thomas Fisher et al., *What Price Success—The Role of the Federal Government in Preservation*, 66 PROGRESSIVE ARCHITECTURE 107, 108-09 (1985) (discussing developers' circumvention of historic landmark classifications); Eric Nagourney, *A Way of Keeping the Past Alive: Historical Groups Push for Tougher Preservation Law*, NEWSDAY (N.Y.), May 10, 1989, at 34 (describing developers' practice of razing structures prior to grant of landmark status); Linda Wheeler, *4 Businesses Caught in Development Fight*, WASH. POST, Oct. 3, 1991, at A18 (providing account of building razed while historical significance was being debated).

¹⁰⁸ For a discussion of administrative costs, see Blume & Rubinfeld, *supra* note 64, at 600-01; Michelman, *supra* note 45, at 1214-18.

¹⁰⁹ See, e.g., Marianne Lavelle, *The "Property Rights" Revolt*, NAT'L L.J., May 10,

response is that forcing costs on-budget does not engender under-regulation, but rather discourages over-regulation. In this view, permitting a legislature to regulate without compensation is like permitting a department store shopper to "buy" goods for free: just as we would expect the department store shopper to grab goods she only minimally desires, we would expect the legislature to pass numerous regulations that generate minimal social benefit. In this view, shoppers and governments alike should be required to pay for what they want.¹¹⁰

This response, however, implicitly accepts the view that compensation requirements result in less regulation, and that view is not necessarily correct. For one thing, a guarantee of compensations has effects in the political marketplace that facilitate regulatory enactments. The promise of compensation eliminates or at least reduces the pressure against new regulation that otherwise would be brought to bear by the potential subjects of regulation.¹¹¹ Land Development, for example, will not oppose preservation of its forested land if it is fully compensated against regulatory losses. The proregulatory effect of removing political opposition must be balanced against the antiregulatory effect of requiring compensation.

Moreover, elimination of the race to develop also has a proregulatory effect that must be balanced against any antiregulatory effect that is introduced by a compensation requirement. In this regard, consider once again the parcel owned by Land Development. The issue is not whether the legislature would be more likely to take action to preserve the parcel from development in Year Four if no compensation were required at that time than if compensation

1993, at 1 (discussing the possible antiregulatory effect of state laws requiring the payment of compensation); Florence Williams, *The Compensation Game*, WILDERNESS, Fall 1993, at 29 (same).

¹¹⁰ For a characteristic statement of this view in the popular press, see Michael M. Berger, *Environmental Protection? It Depends on Who Is Paying*, L.A. DAILY J., Aug. 11, 1993, at 7. For more scholarly statements of this view, see generally RICHARD A. POSNER, *ECONOMIC ANALYSIS OF LAW* 56-61 (4th ed. 1992); William A. Fischel, *The Economics of Land Use Exactions: A Property Rights Analysis*, 50 LAW & CONTEMP. PROBS. 101 (1987); William A. Fischel & Perry Shapiro, *A Constitutional Choice Model of Compensation for Takings*, 9 INT'L REV. L. & ECON. 115 (1989); Thomas J. Miceli & Kathleen Segerson, *Regulatory Takings: When Should Compensation Be Paid?*, 23 J. LEG. STUD. 749 (1994).

¹¹¹ See Goldstein & Heintz, *supra* note 107, at 52-53 (arguing that compensation might quell political opposition to habitat conservation measures); Glynn S. Lunney, Jr., *A Critical Reexamination of the Takings Jurisprudence*, 90 MICH. L. REV. 1892, 1958-59 (1992) (arguing that compensation may reduce opposition to regulation).

were required at that time. Because a guarantee of compensation is necessary to prevent the development of the parcel in Year One, the relevant question is: Which is more likely—that the legislature will enact uncompensated regulation in Year One or that it will enact compensated regulation in Year Four? If ecological appreciation is increasing over time, the latter scenario may be more likely. And if that is true, a compensation requirement is preferable in terms of the goal of maximizing preservation.

In balancing the antiregulatory effect of a compensation requirement against the proregulatory effect of eliminating the race to develop, moreover, it is important to recall that full compensation for regulatory losses generally would not be necessary to eliminate the race to develop. For example, assuming that Land Development perceives a .2 probability of regulation and is risk neutral, Land Development presumably would choose the build-in-Year-Four option so long as it were assured compensation for *any* portion of its regulatory losses in the event a building prohibition is enacted.¹¹² Under those assumptions, the present value of the build-in-Year-Four option would exceed the value of the build-in-Year-One option.

There are two possible legal mechanisms by which *ex post* compensation for a regulatory loss could be paid. Such compensation could be paid by the legislature pursuant to a previous legislative promise to compensate future regulatory losses ("the legislative approach"). Alternatively, the legislature's obligation to pay could be based on the Constitution and hence subject to judicial enforcement ("the judicial/constitutional approach"). Because both approaches present special difficulties, it is not obvious which is preferable.

The principal obstacle to the legislative approach is the absence of trust between developers and legislatures. Because of that

¹¹² This example assumes that the regulation would render the property valueless. As a formal matter, where the perceived probability that compensation for regulatory losses will be paid is C , the value of the townhomes in Year One is $V1$, the present value of the townhomes in Year Four in the event the market for housing strengthens is $PV4$, the present value of the townhomes in Year Four in the event the market for housing remains flat is $PV4'$, the perceived probability that the housing market will improve is P , the perceived risk that a regulatory prohibition will be enacted between Year One and Year Four is R , and the present value in Year Four of the land after a prohibition on construction has been enacted is $PV4''$, Land Development will defer building if $V1 < (1 - R)[(P)(PV4) + (1 - P)(PV4')] + (R)[(1 - C)(PV4'') + (C)[(P)(PV4) + (1 - P)(PV4') - (PV4'')]]$.

mistrust, a legislative program of *ex post* compensation might fail to reduce accelerated development.

Under conditions of complete trust, both developers and legislators would benefit from an *ex post* compensation program. Legislators, representing the general societal or public interest, would assure less accelerated development and thereby avoid the social costs that result from it. For their part, developers would receive a better return on their money if they did not feel compelled to skew the timing of their investments to avoid regulatory risk.

Game theory, however, suggests that developers and legislators will be unable to achieve the level of cooperation necessary to secure the mutual benefits of an *ex post* compensation program.¹¹³ A principal insight of game theory is that cooperation is much harder to achieve in the context of one-time transactions than in the context of repeat transactions. In the one-time context, parties have no historical records upon which to ground their faith in mutual representations and no way of punishing each other for false representations once the transaction has been completed. By contrast, in ongoing relationships, the parties have historical track records and a much greater capacity to play "tit-for-tat"—to respond to truthfulness or untruthfulness with like behavior.¹¹⁴ Developers and legislatures often operate in the context of one-time transactions. A single developer may have projects in many jurisdictions, so that it interacts with many different legislative or regulatory bodies over time. Moreover, the composition of legislative and regulatory bodies—as well as the participants in the land development market—may change quite quickly. A developer who comes to an understanding with a group of legislators has no way of knowing whether those same legislators will be in office after the next election.

To illustrate how mistrust might undermine a legislative program of *ex post* compensation, consider the example of a state legislature that has promised a group of owners of undeveloped beachfront property in a remote area that they would be compensat-

¹¹³ For a good overview of the modeling of patterns of cooperation and noncooperation as games, see JOHN EATWELL ET AL., *THE NEW PALGRAVE: GAME THEORY* 1-54, 103-08, 178-85, 199-205 (1992).

¹¹⁴ In repeat interaction settings, "it pays not to breach, because the other party will retaliate; that is, breach back." Robert L. Birmingham, *The Duty to Disclose and the Prisoner's Dilemma: Laidlaw v. Organ*, 29 WM. & MARY L. REV. 249, 278 n.87 (1988) (footnotes omitted).

ed for losses resulting from any preservation regulation that might be enacted within the next ten years. The property owners may fear that the legislature, having prevented accelerated development by promising compensation, would refuse to pay when it decides to enact preservation regulation in Year Ten.¹¹⁵ The legislature, they may suspect, will be tempted to have the best of both worlds—the absence of accelerated development and the absence of compensation. Anticipating that the legislature will break its promises, the property owners may accelerate development despite the promise of *ex post* compensation.

Frustrated by this response and understandably unwilling to fund the administration of an ineffectual compensation program,¹¹⁶ the legislature may abandon its compensation guarantee. The abandonment of the guarantee, in turn, may serve to solidify developers' doubts about the credibility of legislative promises. The legislature and developers, in other words, may find themselves caught in a noncooperative game, the outcome of which is that the race to develop continues.

Unlike the legislative approach to *ex post* compensation, the judicial/constitutional approach probably would not be beset by problems of "trust." Judicial doctrine is generally not regarded to be as changeable as legislative sentiment and policy, and, more fundamentally, judges are unlikely to be perceived as being subject to the same temptation to retreat from guarantees of compensation.

The judicial approach to *ex post* compensation, however, also poses difficulties. First, as discussed above, takings jurisprudence traditionally has focused upon such questions as whether it is fair to require a citizen to pay for a public benefit and what constitutes a

¹¹⁵ There is an ample empirical basis for predicting that developers will doubt government promises. See, e.g., *Administration's New Assurance Policy Tells Landowners: "No Surprises" in Endangered Species Planning*, U.S. Newswire, Aug. 11, 1994, available in LEXIS, News Library, Tusnwr file ("A major impediment to property owner participation in a Habitat Conservation Plan is the fear that, after the costs and resource restrictions of the plan are accepted, the rules will change and the entire matter will be reopened."); Jeff Kurowski, *Company Expansion Plans Hinge on County Tax Breaks*, S. BEND TRIB., July 4, 1993, at B1 (discussing businessman's doubts that government officials will honor the promises of tax breaks); Tom Morris, *Pine Barrens Owners Feel "Caught in Bind,"* NEWSDAY (N.Y.), July 29, 1994, at A21 (noting that "[s]kepticism abounds" concerning a government program that purports to compensate landowners for regulatory losses by allocating them transferable development rights).

¹¹⁶ Even a minimally active compensation program will entail some fixed administration costs.

benefit rather than a harm. Given this jurisprudential context, it is very hard to imagine a court explicitly holding that compensation must be paid under the Fifth Amendment because the absence of compensation would encourage the socially-costly race to develop.

Second, courts traditionally have taken an all-or-nothing approach to just compensation. Claimants either are entitled to no compensation or—if a taking occurred—to full compensation for their regulatory losses.¹¹⁷ As discussed above, however, partial compensation often may be sufficient to eliminate the race to develop. Payments in excess of the amounts necessary to eliminate the race to develop may discourage the enactment of regulation and, even if they have no direct negative effects on legislative or regulatory behavior, may limit the government's ability to fund other programs or projects that address important social needs.

These difficulties do not mean that a constitutional compensation requirement cannot function as an effective response to the race to develop. Even if courts continue to discuss takings cases explicitly in terms of public harm and benefit and partial and total diminution, they may be influenced by litigants' arguments about accelerated development. Awareness of the problem of accelerated development, at the very least, may influence scholarly and popular assessments of takings decisions, and over the long term, courts may respond to those assessments.¹¹⁸

Further, a constitutionally based all-or-nothing compensation regime can function just like a legislatively-based partial compensation regime in terms of both investor incentives and the aggregate amount of compensation that must be paid. From the perspective of a risk-neutral investor, a legislative guarantee of compensation for one-third of regulatory losses is the equivalent of a one-in-three

¹¹⁷ See *United States v. 564.54 Acres of Land*, 441 U.S. 506, 511 (1979) ("The Court . . . has employed the concept of fair market value to determine [just compensation] The owner is entitled to receive 'what a willing buyer would pay in cash to a willing seller' at the time of the taking." (quoting *United States v. Miller*, 317 U.S. 369, 374 (1943))). For criticisms of the all-or-nothing approach, see John J. Costonis, "Fair" Compensation and the Accommodation Power: Antidotes for the Taking Impasse in Land Use Controversies, 75 COLUM. L. REV. 1021, 1021-23 (1975) (arguing that the all-or-nothing approach fails to accommodate "the legitimate interests of government and of private landowners"); Paul, *supra* note 4, at 1491 (describing the advantages of "a more flexible view of the appropriate compensation" in takings cases).

¹¹⁸ See William W. Fisher, III, *The Significance of Public Perceptions of the Takings Doctrine*, 88 COLUM. L. REV. 1774, 1775-76 (1988) (arguing that courts should consider popular attitudes in deciding takings cases).

chance of obtaining full compensation in a constitutionally based court challenge. If, for example, a legislative guarantee to pay one-third of regulatory losses is sufficient to convince the investor not to accelerate development, then the one-third chance of obtaining a judicial award of full compensation also should be sufficient.¹¹⁹ Moreover, assuming that judicial willingness to find a taking does not correlate directly or inversely with the absolute magnitude of the regulatory losses claimed in each case, the aggregate amount of compensation paid under the judicial/constitutional approach should be the same as it is under the legislative approach.

It is possible that our current takings jurisprudence operates in just this fashion. The *Lucas* plurality opinion did not explicitly overrule *Keystone* and other cases suggesting that losses resulting from preservation regulation are always noncompensable. Although the opinion states that total diminutions of value generally will trigger a requirement of full compensation, it leaves substantial uncertainty as to both the meaning of total diminution in value and the latitude of state courts to characterize their common law of property as categorizing the destruction of nature as a public nuisance. Operating in the highly uncertain world of post-*Lucas* takings jurisprudence, a property owner like Land Development might rightly guess that there is only a one-in-three chance it would receive a court award of compensation in the event of a stringent developmental ban. That estimate, however, might well prevent it from accelerating development.

¹¹⁹ For example, in the Land Development example, *see supra* notes 90-104 and accompanying text, assume that the current value of development of Land Development's parcel is \$1,500,000 and its present value in Year Four, absent regulation, is \$3,000,000. Assume also that regulation in Year Four would render the parcel valueless, and Land Development perceives a .7 risk of regulation. The present value of the build-in-Year-Four option, factoring in the risk of uncompensated regulation, is $(.3)(\$3,000,000)$, or \$900,000. In the absence of any prospect of compensation, therefore, Land Development will build in Year One.

Now assume that the legislature makes a credible promise that it will compensate Land Development for up to one-third of its regulatory losses in Year Four. The present value of the build-in-Year-Four option then would be \$900,000 plus $(.7)(.33)(\$3,000,000)$, or \$1,600,000. If there is no legislative promise of compensation, but Land Development perceives a .33 chance of obtaining a judicial award of full compensation for any regulatory losses incurred in Year Four, the present value of the build-in-Year-Four option also would be \$900,000 plus $(.7)(.33)(\$3,000,000)$, or \$1,600,000. Because the present value of the build-in-Year-Four option exceeds the current value of development under both the legislative and judicial/constitutional compensation approaches, Land Development would not accelerate development under either approach.

This analysis, of course, does not prove that either a legislative or judicial/constitutional compensation requirement will result in more preservation in aggregate than the complete absence of such a requirement. For those who remain concerned about the undeniable possibility that any form of compensation solution to the race to develop will result in less preservation, an *ex ante* approach to the race to develop may hold more appeal.

B. Ex Ante Payments

As an alternative to addressing the problem of the race to develop by means of a guarantee of *ex post* compensation, one could structure a legislative *ex ante* payment program that would achieve the same result. *Ex ante* payments could compensate property owners for retaining their land in its natural state and hence bearing the risk of future uncompensated preservation regulation.

To illustrate how such *ex ante* payments would work, let us return once again to the Land Development example. Let us assume that the risk of uncompensated regulation is .3. Under these assumptions, Land Development would choose to build in Year One because the value of the Year-One option (\$2,000,000) exceeds the present value of the Year-Four option (\$1,750,000).¹²⁰ Now imagine that the government gives Land Development \$300,000 in Year One on the condition that Land Development agrees not to develop the land between Year One and Year Four. The present value of the Year-Four option (\$2,050,000) then would exceed the value of the Year-One option (\$2,000,000). As a result of the *ex ante* payment, Land Development presumably would choose not to accelerate development.

The *ex ante* payment approach has some disadvantages in comparison to an *ex post* guarantee of compensation. For one thing, the *ex ante* approach may require payment in more cases and thus entail greater administrative and payment costs. Under an *ex ante* approach, payment must be made regardless of whether a decision to regulate is ever made; the *ex post* approach focuses on the (presum-

¹²⁰ These figures are again based on the assumptions that Land Development perceives a .5 probability that the economy will improve and a .5 probability that the economy will remain flat. The value of the development currently is \$2,000,000, its present value in an unimproved economy in Year Four is \$2,000,000, and its present value in an improved economy in Year Four is \$3,000,000. When the risk of regulation is .3, the present value of the build-in-Year-Four option is $(1 - .3)[(.5)(\$2,000,000) + (1 - .5)(\$3,000,000)] + (.3)(0)$.

ably) more limited set of cases in which regulations actually are enacted.

Moreover, an *ex post* approach is more effective than an *ex ante* approach in reducing or eliminating antiregulatory pressure from potential subjects of regulation. To illustrate this point, assume that Land Development would forego accelerated development if it were given an *ex ante* payment of \$500,000 or promised \$500,000 in *ex post* compensation for regulatory losses. Land Development would receive the \$500,000 *ex ante* payment whether or not regulation is enacted, but it would receive the \$500,000 *ex post* payment only after the passage of regulation. The defeat of preservation regulation, therefore, would be worth \$500,000 more to Land Development under an *ex ante* approach than under an *ex post* approach. Consequently, Land Development would lobby more intensely against proposed regulation under an *ex ante* approach than it would under an *ex post* approach.¹²¹

Another disadvantage of *ex ante* payments is the risk of "capture" of the legislature by payment recipients. One possible consequence of any government payment program is the creation of a powerful political constituency for the continuation of the program: once landowners begin to receive payments for maintaining land in an undeveloped state, they may organize and lobby effectively for the continuation of the payments. Thus, even if it becomes apparent that payments are unnecessary to prevent accelerated development, legislators may respond to payment recipients' entreaties and continue the payment program.¹²²

¹²¹ A legislative program of *ex ante* payments could be structured to avoid the "trust" problems that may beset a legislative program of *ex post* compensation. Developers could be given payments at the beginning of the time period in question with the proviso that, if they develop during that period, the money would have to be refunded with interest. Noncompliance by developers could be checked by levies on their property and fines.

¹²² There are, of course, many examples of government payment programs that seem to have outlived the original reason for their establishment. For example, although the protection of small family farms from financial ruin was the original rationale for federal farm subsidy programs, "such farmers are not in fact the primary beneficiaries of [the subsidies]. A disproportionate amount of federal subsidies goes to large, wealthy farmers." Dick Arme, *I Love the Family Farmer, but . . .*, WASH. POST, July 24, 1993, at A23; see also Steve Berg, *City Folks' Tough Questions Shake up Farm Debate*, STAR TRIB. (Minneapolis), July 6, 1990, at 1A (discussing criticisms of farm subsidies).

The enabling legislation for a payment program might mitigate the risk of legislative capture by requiring periodic assessments of the payment program by a relatively neutral expert agency, such as the Government Accounting Office. Alterna-

An *ex ante* payment system also entails difficulties in determining who should make payment. To the extent that the risk of uncompensated natural preservation regulation emanates from federal, state, and local government, it would seem that the burden of payment should be shared by all three. If past experience in other contexts is any guide, implementation of that sharing arrangement might well be difficult. In other "sharing" contexts, the federal government has attempted to foist financial responsibility on the states, who in turn have attempted to shift the burden to municipalities. Municipalities will reject any *ex ante* scheme that assigns them disproportionate financial responsibility.¹²³

From the perspective of the goal of maximizing preservation efforts, the principal advantage of an *ex ante* approach is that it decouples the payment to the property owners from the legislative decision whether to subject their land to preservation regulation. To the extent one believes that the race to develop may be a serious problem and that a compensation requirement may deter legislators from enacting socially beneficial preservation regulation, the *ex ante* approach is attractive; it addresses the race to develop without attaching any budgetary cost to the enactment of such regulation.

Moreover, the *ex ante* approach might create an affirmative incentive to regulate that would offset the antiregulatory pressure that landowners like Land Development would continue to exert. In classical economic theory, "sunk" or past costs are assumed to be irrelevant to any "rational" decision about future action; the only relevant data considered should be the marginal costs and benefits of the contemplated future action. As an abundance of experiments by clinical psychologists demonstrate, human beings, in fact, tend to weigh past costs heavily in prospective decision-making.¹²⁴ An *ex*

tively, the legislation might provide that the program terminates automatically after a short period of time unless the legislature votes to reauthorize it.

¹²³ See, e.g., *Environmental Conservation Organization, ECO, Announces Grassroots Campaign to Stop Unfunded Mandates*, PR Newswire, Feb. 9, 1994, available in LEXIS, News Library, PRNews File ("Unfunded Mandates' are fighting words in many cities and counties across America. The U.S. Conference of Mayors, the National League of Cities, [and] the National Association of Counties . . . have waged a strong battle to gain congressional recognition of the problems created in local communities by unfunded mandates."); Matt Lait & Lee Romney, *O.C. Cities Balk at Costs of U.S., State Mandates*, L.A. TIMES, Mar. 5, 1994, at A1 (noting that "local government leaders complain that federal and state governments continue to pass new laws—then pass the tab onto the cities").

¹²⁴ See Richard H. Thaler, *Toward a Positive Theory of Consumer Choice*, 1 J. ECON.

ex ante scheme in effect creates a sunk costs argument in favor of preservation. Having spent money to preserve the regulatory option in the form of *ex ante* payments, legislators may regard it as wasteful not to exercise that option.

C. Development Taxes

One alternative to *ex ante* subsidies is time-limited development taxes. Such taxes, in theory, could achieve the same result as *ex ante* payments. To illustrate how a development tax would address the problem of accelerated development, return to Land Development's choice between Year One and Year Four. Assume that, as a result of the risk of uncompensated regulation, the build-in-Year-One option has a value \$50,000 in excess of the present value of the build-in-Year-Four option. Under these assumptions, Land Development would accelerate development. Now assume that, in Year One, the legislature passes a development tax bill that provides that, if Land Development develops its land prior to Year Four, it will be subject to a \$75,000 special development tax. Under these assumptions, Land Development will choose to build in Year Four despite the risk of uncompensated natural preservation regulation.

Of course, a development tax solution to the race to develop, like the legislative *ex post* compensation solution, presupposes a certain level of trust between the legislature and developers. Absent some trust relationship between the legislature and a developer, it may be extremely difficult to convince the developer that it is prudent to wait based on a promise about future tax treatment and, as discussed above, there is good reason to doubt the prospects for the establishment of such a relationship of trust.¹²⁵

Moreover, because development taxes are extremely unattractive to property owners such as Land Development, they may be politically impossible to enact in the first place. There may be many jurisdictions in which the only politically viable response to the race to develop entails *ex post* or *ex ante* payments.

BEHAV. & ORGANIZATION 39 (1980) (noting that "paying for the right to use a good or service will increase the rate at which the good will be utilised" even though "[h]istorical costs should be irrelevant" to consumers); see also RICHARD H. THALER, QUASI RATIONAL ECONOMICS 148-49 (1991).

¹²⁵ See *supra* notes 113-16 and accompanying text.

D. *The Dimensions of the Response to the Race to Develop*

Under any of the approaches outlined above, there will be difficult questions of measurement. In theory, we can estimate how much, for example, Land Development must be paid or taxed in order to prevent it from accelerating development. In practice, that figure will be difficult to estimate and, even if we knew the amount with certainty at one point in time, the amount might change a great deal over time. And the necessary amount would vary enormously among different property owners and in different settings. The best we can probably achieve in practice is a system of periodically-adjusted rates of *ex ante* or *ex post* payment or tax for relatively broad geographical areas or kinds of natural resources.

Recognition of this difficulty leads me to conclude that, whatever the form of any response to the race to develop, its dimensions should be modest. As a matter of prudence and political viability, it makes sense to proceed cautiously and with the understanding that any given level of payment or tax will fail to prevent accelerated development in some cases and will provide or (in the case of taxes) take away from some property owners more than was necessary to prevent them from engaging in accelerated development in other cases. For example, assuming that the *ex ante* payment approach is the most desirable and politically feasible response to the race to develop, it may be that all that is appropriate is a quite modest tax break for individuals and companies that hold undeveloped land of well-established ecological value in geographic areas that are recognized to be under substantial long-term developmental pressure.¹²⁶

¹²⁶ Preferential tax treatment for open land already exists in some states, although the state programs have not been justified in terms of the social costs of accelerated development undertaken in response to the risk of uncompensated regulation. See Jane H. Malme, *Preferential Assessment: Policy & Practice in New England*, RESOURCE MANUAL: PREFERENTIAL PROPERTY TAX TREATMENT OF FOREST AND OPEN SPACE LAND IN NEW ENGLAND (Lincoln Inst. of Land Policy, Cambridge, Mass.), 1993, at 1, 8-10.

In order to meet the "compelling" need for "economic incentives to motivate private parties to conserve important habitat on private land," Jim McKinney, Mark Shaffer, and Jeffrey Olsen of the Wilderness Society have advocated a number of changes in federal, state, and local taxation, including property tax credits for habitat maintenance, tax credits for habitat improvement, income tax deductions for revenue from lands that support endangered species, tax penalties for habitat conversion, and prohibitions on the use of federal subsidies and tax benefits for activities causing habitat loss or degradation. Jim McKinney et al., *Economic Incentives to Preserve Endangered Species Habitat and Biodiversity on Private Land*, in DEFENDERS OF WILDLIFE,

CONCLUSION

The nonretroactivity of preservation regulation has a consequence that has long gone unexamined: it encourages races to beat the regulatory clock. In the course of that race, developers divert capital from higher-return investments and—where they are successful in winning the race—deprive society of an option to regulate in the future. Although compensation for regulatory losses traditionally has been regarded as an impediment to the project of preserving our natural resources, it can be seen as facilitating that project inasmuch as it would reduce or eliminate the race to develop. Of course, compensation proposals, like development tax proposals, present many difficulties. The question this Article has explored is whether the costs of accelerated development might outweigh the costs of the various possible responses to it. For anyone concerned about the preservation of our natural resources, that is a question demanding serious consideration.