

Liberal Environmental Jurisprudence

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TABLE OF CONTENTS

INTRODUCTION	621
I. THE FETAL DISCIPLINE OF ENVIRONMENTAL LAW	624
II. ARCHAIC ENVIRONMENTAL LAW: TORT	631
A. <i>Mediated Harms: Proxies for Environmental Concerns</i> ..	631
B. <i>The Birth of Environmental Law and the Maturation of Tort</i>	638
C. <i>The Commitments of Environmental Adjudication</i>	644
III. CLASSICAL ENVIRONMENTAL LAW: ADMINISTRATION AND THE AGGREGATION OF TORT	647
A. <i>The Aggregation of Tort</i>	647
B. <i>The Tragedy of the Commons</i>	652
C. <i>The End of Nature</i>	655
D. <i>Oedipal Struggles</i>	657
IV. MODERN ENVIRONMENTAL LAW: THE DECENTRALIZATION OF POLITICS	663
A. <i>The Atrophy of Administration</i>	663
B. <i>The Move to Incentives</i>	666
C. <i>The Invention of Nature</i>	674
V. ENVIRONMENTAL LAW IN LIGHT OF LIBERALISM	680
A. <i>The Liberal Structure of Environmental Law</i>	680

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<i>B. The Political Economy of Environmental Law</i>	684
VI. ENVIRONMENTAL LAW AT THE BOUNDS OF LIBERALISM ..	693
<i>A. The Problem of Value</i>	693
<i>B. Doctrinal Attempts to Articulate Value: Public Trust and Public Nuisance</i>	695
<i>C. Intergenerational Equity</i>	702
CONCLUSION: LIBERAL ENVIRONMENTAL LAW'S POTENTIAL.....	708

INTRODUCTION

Perusal of virtually any environmental law textbook reveals confusion in the field. American environmental law is complex, messy, and disorganized. Despite being a burgeoning area of practice, environmental law is not a discipline, because it lacks the professional consensus on a coherent internal organization of materials a discipline requires. The field's intellectual incoherence makes teaching environmental law difficult, and gives rise to widespread frustration among professors and students. Environmentalists are also frustrated by a suspicion that academic environmental law's incoherence detracts from the quality of legal and political discourse on the environment in the United States, thereby harming the environment. This Article attempts to address these problems by making environmental law coherent.

Section I of this Article documents both the frustration among teachers of environmental law, and the lack of consensus as to what environmental law is. As an academic enterprise, environmental law rests on a well-established body of basic materials, the key statutes, cases, and articles that every environmental lawyer knows and every casebook contains. Yet, the mass of materials is just that—a mass. Environmental law has no explicit unifying principles that could serve to organize the jumble of statutes, regulations, cases, and academic analyses that collectively form the academic subject of environmental law. Environmental law as currently taught does not make sense, and this failing is the source of the common frustration with environmental law.

The core of this Article demonstrates that the basic materials of environmental law can be organized into a coherent whole and related to one another in a sensible fashion. Environmental law is organized around three fundamental approaches to environmental problems: (i) common law actions (tort, particularly nuisance); (ii) the governmental aggregation of externalities whose harms are valued below the costs of their contractual resolution or judicial prosecution (administration); and (iii) the establishment of markets in order to achieve societal ends (constructed markets, such as those envisaged by the Clean Air Act).¹ Each approach to environmental law has its weaknesses, and legal attempts to remedy those weaknesses have given rise to the next approach.

¹ Clean Air Act Amendments of 1990, Pub. L. No. 101-549 (codified as amended at 42 U.S.C. §§ 7401-7671q (1988 & Supp. 1992)).

Understood successively, the three stages form an idealized history that conceptually organizes the materials of environmental law. This history, at least in rudimentary form, has long been part of a professional self-understanding. All environmental lawyers know that environmental law has its roots in the common law rights of action and occasional regulation of hazardous activities. Modern environmental law is associated with the rise of an environmental consciousness in the late nineteenth and early twentieth century. The contemporary era of environmental law began with the great statutes of the sixties and the seventies, and is being transformed by the interpenetration of economic and legal techniques. But this informal self-understanding of a profession does not adequately organize environmental law. This Article attempts to make the assumptions of the informal history explicit and to produce an ideal history that would be capable of relating the materials of environmental law in a disciplined fashion.

This Article follows the same logical order as this idealized history. Section II demonstrates ways in which archaic environmental law reveals the pervasive commitment to the basic rights of property and contract, protected by a tort regime, that characterizes the common law system. Section III discusses how classical environmental law recognizes market failure, and is therefore willing to use governmental coercion to remedy failed markets. Section IV discusses how modern environmental law constructs markets in order to accomplish the ends classically realized through regulatory interference with markets.² Section V of this Article makes the ideology of the materials explicit, and generalizes the rough-and-ready liberalism on which liberal environmental jurisprudence rests. This Section then describes the contemporary challenge for liberal environmental governance: to construct a grammar or meta-theory for deciding among mechanisms of public choice that are legitimated by liberalism.

Section VI attempts to discern the limits of liberalism. Liberalism is an unlikely creed for structuring environmental law because there can be no political value in nature, which is "outside" political participants. Environmentalism, by definition, looks outward to the

² The notes reinforce the text's argument by citing materials which, if printed, would form the skeleton of a casebook. While the notes do not contain as many references as a thousand-page casebook, they should suffice to demonstrate that the materials of standard casebooks, the elements of what the profession recognizes as environmental law, fit into the schema presented here.

surrounding world, while liberalism looks inward. Environmental law's ideal history thus reflects a sustained attempt by the legal community to square the circle, and phrase external concerns for the environment in the politically efficacious, but internal, language of liberalism.³ Section VI of this Article also discusses attempts to locate substantive value in nature and thereby to escape the constraints of liberalism through the doctrines of public trust and public nuisance, and the idea of intergenerational equity. These efforts are ultimately unpersuasive because they do not meet the political challenges posed by liberal ideology, challenges embedded in the structure of most environmental law. To answer the political questions raised by the idea of substantive value in nature requires an

³ As this Article will argue, certain environmental concerns do not make much sense to a thorough-going liberal because they do not protect individual well-being. Laws like the Endangered Species Act, which contain an expression of outward concern for the environment, rather than of inward concern for the individual, can only be justified in procedural terms to the liberal by reference to the legitimacy of the legislature that passed the Act. See Endangered Species Act of 1973, 16 U.S.C. §§ 1531-44 (1988). Such law is thus perpetually vulnerable to criticism, much of it from liberal environmentalists who wish to see more rational use of the limited resources available for environmental policies. See, e.g., Julie B. Bloch, *Preserving Biological Diversity in the United States: The Case for Moving to an Ecosystems Approach to Protect the Nation's Biological Wealth*, 10 PACE ENVTL. L. REV. 175 (1992) (criticizing the Act as reactive and therefore ineffective); Charles Mann & Mark Plummer, *The Butterfly Problem*, THE ATLANTIC, Jan. 1992, at 47. The Act has been challenged in court a great deal in recent years. See Victor M. Sher, *Travels With Strix: The Spotted Owl's Journey Through the Federal Courts*, 14 PUB. LAND L. REV. 41 (1993); *Ninth Circuit Environmental Review: Endangered Species Act*, 23 ENVTL. L. 1035, 1062-64 (1993). A currently fashionable attack on the Act draws strength from the Fifth Amendment right to compensation for takings of private property for public use. See, e.g., James S. Burling, *Property Rights, Endangered Species, Wetlands, and Other Critters—Is it Against Nature to Pay for a Taking?*, 27 LAND & WATER L. REV. 309 (1992); cf. Alyson C. Flournoy, *Beyond the "Spotted Owl Problem": Learning from the Old-Growth Controversy*, 17 HARV. ENVTL. L. REV. 261 (1993) (discussing controversy in terms of conflicts among values). But 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 (1993) (analyzing structure and defending both purpose and efficacy of the Act). As I will discuss towards the close of this Article, the problem raised for a liberal environmental law by the Endangered Species Act is more profound than the conflicts of interest to which lawyers are accustomed: the substantive arguments for preservation, and more generally for the environment itself, cannot be made—therefore cannot be weighed—within an environmental jurisprudence constrained by contemporary liberalism.

escape from the intellectual constraints of liberalism. No such philosophy is presently available to American politics.⁴ Future environmental law awaits a vision of human association more powerful than the doctrinaire liberal political economy that currently informs and limits environmental law.

Despite its theoretical limitations, however, liberal thought can be deployed to organize environmental law. For liberals, liberal environmental jurisprudence will justify today's law in terms of liberal personal political commitments. Even people who are not liberals can use liberal thought to render environmental law comprehensible, thus enabling them to participate more effectively in the debates surrounding environmental law. This Article hopes to improve the quality of legal and political discourse concerning the environment by making the materials of environmental law cogent where possible. This Article will also anticipate environmental law's future by indicating the limitations of contemporary liberal environmental thought.

I. THE FETAL DISCIPLINE OF ENVIRONMENTAL LAW

Consideration of the environment engenders a sense of crisis. The threat created by technological capability, familiar from the arms race, is presented vividly by environmental degradation. Yet, despite the high drama of the questions it raises, environmental law itself is not considered exciting. Environmental law, whether in the classroom or in practice, is not thought of as an opportunity for contentious participation in the vital issues of our day. Instead, environmental law is regarded as a barely manageable agglomeration of statutory and administrative trivia. As Professors Findley and Farber explain:

On one level, environmental law appears to be a hodgepodge of statutes, cases, and regulations dealing with matters as diverse as automobile design, bottle deposits, and dam construction. Seen at this level, the field changes so rapidly that meaningful analysis is almost impossible. At a much higher level, environmental law presents broad problems of social policy which may be analyzed

⁴ There is no end of philosophies, some of them offered by environmentalists. A pragmatic jurisprudence such as the one I try to construct, however, must be cognizant of political realities. Implicit in my argument is my belief that, at least in the immediate future for which law review articles are written, some fairly doctrinaire version of liberalism will be the regnant ideology. This Article addresses its environmental concerns to this sovereign.

more usefully by economists and ecologists than by lawyers. At this level, a unified treatment of the field is possible, but largely at the expense of those specifically legal problems which most interest attorneys.⁵

In response to this complexity, law professors frequently restrict their scope of inquiry, presumably hoping to chart a happy middle course through which problems of interest to lawyers and some resolution of issues can be found.

A book could, of course, try to give the student the illusion of knowledge by offering a superficial and disconnected journey through any number of topics in this vast field. We are convinced that such an approach ultimately fails. It misleads the student into thinking that environmental law can be practiced without the hard work and sweat that practitioners know a statutory and regulatory field requires. We have opted instead to treat some topics in depth.⁶

The success of this approach is unclear. The dean of American environmental law professors, Joseph Sax, polled teachers of environmental law throughout the country to find whether restricting the scope of inquiry, or any other method, made teaching environmental law an intellectually satisfying enterprise. The solid consensus among academics who had devoted large parts of their lives to teaching environmental law was that their field was un compelling at best.⁷

The usual reason given for the unsatisfying quality of environmental law (and of what is often regarded as its parent, administrative law) is that it is complicated. Scholars speak of environmental

⁵ ROGER FINDLEY & DANIEL FARBER, *ENVIRONMENTAL LAW: CASES AND MATERIALS* at xvii (1985). This statement is the first substantive text in the entire casebook.

⁶ JOHN E. BONINE & THOMAS O. MCGARITY, *THE LAW OF ENVIRONMENTAL PROTECTION* at xx (1984).

⁷ Joseph L. Sax, *Environmental Law in the Law Schools: What We Teach and How We Feel About It*, 19 ENVTL. L. REP. 10,251 (1989). Sax notes:

Virtually every law teacher—however broad his or her outlook—wants to introduce students to the specific materials in the field, and to provide some experience and familiarity with it. Yet, every such attempt is an encounter with statutes of numbing complexity and detail. My respondents did not find their unease markedly alleviated when they shifted (as most had) from broad survey courses to those that focused primarily on one illustrative statute, usually the Clean Air Act.

Id.

law as a tangled field, of its “bewildering variety”⁸ and “numbing complexity and detail.”⁹ Such statements are usually offered without support or further explanation, and anyone who has been exposed to the *Federal Register* is unlikely to challenge them.

These assertions may comport with the common view that human life is growing more complex, a view associated with perceptions of scientific and particularly technological progress. Upon reflection, however, it is hardly obvious that the relationships between culture and nature are inherently more complex than the arrangements among the elements of society addressed by “ordinary” political and legal language. How does environmental regulation implicate technology in ways that privacy rights, or intellectual property rights in a computer age, do not? Constitutional debates over privacy and even the arcane world of intellectual property law are not famous for mind-numbing and overwhelming complexity. So why should environmental law be considered uniquely hindered by the growth of technology?

Equally obscure is the relationship between scientific knowledge and legal articulation. Presumably, as more about the environment is learned, regulating technologies that affect the environment would become easier.¹⁰ Yet knowledge does not seem to make regulation any easier. Nobody believes that regulation is getting easier, despite the growing store of information.¹¹ Moreover, other law school courses dealing with law of mind-numbing complexity and

⁸ See BONINE & MCGARITY, *supra* note 6, at xxi.

⁹ See ZYGMUNT J.B. PLATER ET AL., ENVIRONMENTAL LAW AND POLICY: NATURE, LAW, AND SOCIETY at xxviii (1992) (quoting Sax, *supra* note 7).

¹⁰ Hence the oft-heard remark that one should be an ecologist (or an economist, or an engineer) in order to engage in environmental law. Such arguments conceal a desire for political authority that cannot be assigned appropriately (in democratic terms) or rationally to professional scientists.

¹¹ Environmental regulations often have little to do with the type of technology that generates the pollution. There is no tight fit between an activity and its regulation, so the complexity of contemporary technology does not explain the ennui of modern environmental law. Although a manufacturing process for a particular product may be more complicated today than the process that manufactured the same product yesterday, one might choose a strict liability regime to regulate both processes. See cases cited *infra* note 34 (providing examples of courts using strict liability in an environmental context). On the other hand, it would be odd to maintain there was *no* fit between an activity and its regulation. Some regulatory techniques, such as setting the appropriate rate for an environmental tax, or mandating use of a particular technology, may require a great deal of knowledge about the regulated activity.

statutory detail, such as tax, inspire a certain machismo rather than despair.¹² After all, lawyers are paid for their ability to master complexity. In light of such considerations, some analysts have concluded that complexity cannot explain the unsatisfying quality of environmental law.

Complexity as such does not seem to be the problem. Lawyers enjoy puzzles. What discourages law teachers is rather a sense of being drawn into a system in which enormous energy must be expended on something that is ultimately vacuous "Environmental law has come to be a bore . . . if the idea is to 'teach' the 'law' that we find in the 'books.' There is too much junk there, too many details. . . . Project this picture a bit and what you have for the future . . . is a bunch of lawyers who don't really know anything worth knowing."¹³

The outlook for the would-be textbook writer is grim. How can one select and organize some of the "junk" to teach an introductory three-credit course to law students? The most common approach devotes chapters to the great federal environmental statutes.¹⁴ This tactic commits the class to the media-specific approach Congress has adopted for environmental regulation. Because environmental statutes frequently use similar techniques to regulate different media, a media-specific approach ensures classroom redundancy and boredom. With the great statutes covered, supplemental chapters can be added on special topics, such as federal lands, takings, and so forth, topics with no obvious connection to specifically environmental legislation. Sometimes texts include chapters concerning labor, agriculture, land use, energy policy, or health regulations

¹² Rather than despair, one might become giddy. See William H. Rodgers, Jr., *A Superfund Trivia Test: A Comment on the Complexity of the Environmental Laws*, 22 ENVTL. L. 417 (1992) (providing a lighthearted look at the complexity of environmental legislation). Rodgers's underlying point, however, is serious. Complexity, even meaningless complexity, is a fact of life in the world of environmental law. Such complexity threatens our ability to have a meaningful environmental law, and one suspects, as fine an environment as we might.

¹³ Sax, *supra* note 7, at 10,251 (quoting Professor Krier).

¹⁴ A somewhat different approach is to focus directly on the media. See THOMAS J. SCHOENBAUM, ENVIRONMENTAL POLICY LAW: CASES, READINGS AND TEXT (1985) (containing chapters on: land, waste and toxics; water pollution; air quality and noise emission control). The media-specific approach to environmental policy is increasingly criticized for inducing polluters to simply shift toxins away from a regulated medium to an unregulated one. See NIGEL HAIGH & FRANCES IRWIN, INTEGRATED POLLUTION CONTROL IN EUROPE AND NORTH AMERICA (1990).

— areas of governance that impinge on the environment writ large. Each chapter may speak to thousands of pages of law. The student is caught between the Scylla of superficiality — not scratching the surface — and the Charybdis of minutiae — drowning in detail.

In the first “second generation”¹⁵ environmental law textbook, *Environmental Law and Policy*, Professor Zygmunt Plater and his co-authors use the structure of the legal system to organize environmental material.¹⁶ For the first time, an environmental law textbook consciously adopts a societal, as opposed to environmental, approach to structuring environmental law.¹⁷ This focus lends some coherence to the material, and the book therefore merits its reputation as an advance over prior environmental law textbooks.

Yet *Environmental Law and Policy*'s coherence is more apparent than real. The authors adopt the position of environmental plaintiffs. They note that “our approach will often be ‘how can this problem be corrected within the legal system?’ presuming in most cases that a problem does exist.”¹⁸ In defense of their perspective, they

¹⁵ Joseph L. Sax, *Foreword* to Plater et al., *supra* note 9, at v.

¹⁶ See PLATER ET AL., *supra* note 9, at xxix.

In the face of the numbing mass and complexity of modern environmental law, this coursebook uses the structure of the legal system as its organizing principle, selecting the best examples of how the process works, including a sampling of classic environmental cases, without particular regard for the type of pollution or policy involved. The way the legal system works, not the intricacy of some media-specific physical science area, is our primary concern. The book's larger organization, therefore, tries to build around the major blocks of the legal system itself.

Id.

¹⁷ Indeed, a close reading of the table of contents reveals the three-stage structure that this paper makes explicit. Part I provides a few preliminary perspectives as an introduction. Part II is titled *The Foundation of Environmental Law: Traditional Common Law Theories and Fundamental Issues of Remedies and Liabilities*. Parts III and IV are titled, respectively, *From Common Law to Public Law: The Structure and Power of Government* and *Environmental Statutes and the Administrative State: A Taxonomy of Environmental Statutes*. Each Part mirrors a commitment of the environmental law regime to an element of the liberal paradigm. Taken as a whole, the parts present most of the ideal history of environmental law sketched in the Introduction to this essay and detailed below. See PLATER ET AL., *supra* note 9, at vii-xxvi.

¹⁸ PLATER ET AL., *supra* note 9, at xxxv. “This approach seems realistic and useful as well as defensible, however, because the doctrines of environmental law have always been (and still are) developed primarily by the efforts of citizen environmentalists.” *Id.* The claim that citizen environmentalists play a leading role in the development of environmental doctrine would not be

point out that “[e]nvironmental defendants do not offer any similarly broad countervailing theory of environmental defense,”¹⁹ and continue, in a footnote, “[l]egal defenses typically amount to a series of attempts to avoid the issue. . . .”²⁰ As advocates, these authors focus on environmental legal process.²¹

Legal process may appear to be a comprehensive rubric under which to unify environmental law. Yet important aspects of environmental law and policy escape traditional notions of process altogether. Alternative dispute resolution and international environmental law, two legal regimes “outside” national legal

tenable outside the United States. Even in countries with advanced environmental policies, such as Germany, access to courts and hence to the formulation of doctrine, is limited. As a partial result, environmental politics often take place in other, less legalistic, fora. For example, although much of the environmental legislation in Europe emanates from Brussels, European law has provided little opportunity for citizens to bring environmental suits.

Citizens only have the right to bring a complaint directly before the Court of Justice under decisions or regulations addressed directly to them. Since directives are addressed to the Member States, no standing arises for citizens or citizen groups. However, citizen groups have the right to appear before the Court, if the Court agrees that the group has a legal interest in supporting the case. . . .

1 EUROPEAN COMMUNITY ENVIRONMENTAL LEGISLATION at xxiii (1992) (General Policy). Similarly, “[t]he Commission has a duty to bring cases of non-compliance, misuse, or misinterpretation of Community law before the Court of Justice. . . .” REPORT OF THE COMMISSION OF THE EUROPEAN COMMUNITIES TO THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT (RIO DI JANIERO) 25 (June 1992). At European law, not just the enforcement but the legal articulation, and hence development that the U.S. lawyer associates with environmental litigation, is strictly a matter of inter-bureaucratic relations. American lawyers have not been bashful about the virtues of litigation in environmental law. See, e.g., Patricia M. Wald, *The Role of the Judiciary in Environmental Protection*, 19 B.C. ENVTL. AFF. L. REV. 519 (1992).

¹⁹ PLATER ET AL., *supra* note 9, at xxxv.

²⁰ *Id.* at xxxv n.4.

²¹ Plater himself has contributed significantly to environmental advocacy. Also, much of the most technically interesting legal work of the last few decades has been done by environmental plaintiffs. While these are two good reasons to teach from the plaintiff’s perspective, sophisticated advocacy and jurisprudence are different things. This Article’s criticism of the book is a critique of completeness, which is always available and so of limited impact. *Environmental Law and Policy* is an excellent casebook, and in parts it is beautiful, a rare virtue in this context. I have consequently relied on it heavily throughout this Article to illustrate the substance, as well as the deficiencies, of contemporary environmental legal education and hence politics.

regimes, are haphazardly appended to *Environmental Law and Policy*. Constructed markets, which do not fit easily within traditional notions of the legal system,²² appear in a single, albeit well-written, chapter.²³

More vitally, this focus on legal process can unify environmental law only superficially, because there is no coherent set of legal processes that produce outcomes affecting the environment. The great mass of rules developed through administrative proceedings are important in environmental regulation. But the administration of environmental law also takes place through civil actions, statutory and constitutional interpretation, and even criminal proceedings. Legislative and community politics and the proprietary activities of government also produce outcomes that affect the environment. Most importantly, activities affecting the environment are usually organized through markets rather than through self-conscious governance. The legal process regards all these modes of social organization as legitimate. Without benefit of theory, legal process provides no way to resolve conflicts among various accepted procedures. *Environmental Law and Policy* is openly biased in favor of environmental plaintiffs. But is a bias sufficient to inform a discipline?

Environmental Law and Policy coheres as a set of responses available to plaintiffs in a legal regime. The book thereby reflects, rather than critiques or justifies, the commitments of the legal system. The book makes sense to a lawyer just as much, and just as little, as law in general. This naive coherence, "presuming in most cases a problem exists," obtained by structuring discussion around the remedies afforded by law, suffices for advocacy in an adversarial system. If Professor Plater *et al.* had set out to teach a course on environmental litigation, this perspective would no doubt serve them well. But by claiming to be about environmental policy, the book implicitly asserts that legal education concerns questions of legislation, which include the making of law, not just advocacy under the law. The educational program implicit in *Environmental Law and Policy* requires a thorough-going environmental jurisprudence which the book does not provide. A philosophically modest approach such as "presuming a problem exists" cannot suffice for the education of an environmental legislator, who must consider

²² Constructed markets explicitly conflate the state and civil society, that modern political theory, and hence law, has traditionally held asunder.

²³ See PLATER ET AL., *supra* note 9, at 860-81.

what the appropriate ends of environmental legislation are. *Environmental Law and Policy* is like a book on justice written by the prosecution.²⁴

Designing an environmental jurisprudence is a practical as well as a speculative undertaking. Like the jurisprudence of any doctrinally developed field of law, environmental jurisprudence should be able to critique, rationalize, justify, and generally account for the legal materials of environmental law. Moreover, the basic texts should reveal the deep commitments of environmental law. When made explicit, these commitments should form the heart of a self-conscious environmental jurisprudence. This Article now turns to the classic texts of environmental law—the things every environmental lawyer has read—in an attempt to discern the assumptions on which must rest environmental jurisprudence, and hence the internal coherence of environmental law.

II. ARCHAIC ENVIRONMENTAL LAW: TORT

A. *Mediated Harms: Proxies for Environmental Concerns*

Environmental law can be divided into three stages: tort, administration, and constructed markets. Although the impact of constructed markets has yet to be fully realized, the earlier part of this history has long been a part of the informal self-understanding of environmental law. As Professors John Bonine and Thomas McGarity note:

The early origins of environmental law can be traced from private tort and trespass remedies at common law to government control over coal burning in the sixteenth century and regulation of sewage disposal in the nineteenth century. By the early 1900's, pioneering legislation set aside national parks and governed timber and mining activities. The concept of environmental law matured with the development of administrative law and judicial review of government actions since the 1930's. Various statutes enacted throughout the twentieth century tried to extend protections in

²⁴ The authors of *Environmental Law and Policy* are aware that environmentalists have produced several ethics and a great deal of advocacy, but no environmental theory of law. As noted, *supra* note 18, they justify their plaintiff's perspective not in terms of a legal theory, but by pointing out that environmental defendants have not "produced a broad countervailing theory" of environmental law. PLATER ET AL., *supra* note 9, at xxxv. Simply asserting the intellectual poverty of one's opponents, and the ad hoc character of defenses to environmental claims, does nothing to provide environmental legislators with a theory sufficient for the wise articulation of environmental politics.

different ways. The modern era of environmental law, however, began at the end of the 1960's.²⁵

Though this informal history supports the idea that environmental law can be divided into stages, it also raises many questions. What makes a law environmental? Is it enough that the law affects the environment? (What does not affect the environment?) Why are the common law rights, collectively referred to here as tort, first?²⁶ What separates private remedies from government administration? What justifies the loose categories delineated in the passage?

Plater *et al.* refer to the common law as "the foundation of environmental law."²⁷ In a sense, the statement is historical. The common law rights of action are very old, and the Anglo-American legal tradition has long understood itself through common law development. In this traditional view, the ancient rights of Englishmen are the basis of all law, including environmental law. The legal process approach to environmental law naturally includes the fundamental relationship between human activity and its environment in the very foundation of Anglo-American law, the common law system.

Of the common law causes of action, nuisance is the most obviously environmental, and yet a nuisance claim's environmental character is only implicit. Nuisance is defined generally in terms of the use of property in a manner that obstructs another's free use and enjoyment of property. Nuisance is an invasion of rights, a tort. Many nuisances might also be characterized as harmful to the environment. For example, many nuisances concern noxious gases and smells.²⁸ Nuisances may also be characterized socially as

²⁵ BONINE & MCGARITY, *supra* note 6, at xx. The passage raises other questions: What is the relationship of administration to private tort and trespass remedies? What distinguished government legislation before and after 1900? What defines "the modern era" of environmental law? *Id.*

²⁶ See also WILLIAM H. RODGERS, JR., HANDBOOK ON ENVIRONMENTAL LAW 100 (1977):

The deepest doctrinal roots of modern environmental law are found in principles of nuisance. The infinite variety of wrongs covered by this amorphous theory is well known to any student of the law, but deserves emphasis here . . . Nuisance theory and case law is the common law backbone of modern environmental and energy law.

Id.

²⁷ PLATER ET AL., *supra* note 9, at 101.

²⁸ See, e.g., *Morgan v. High Penn. Oil Co.*, 77 S.E.2d 682, 686 (N.C. 1953). The evidence of the plaintiffs tended to show . . . the oil refinery emitted nauseating gases and odors in great quantities; that the

annoyances of other people. However, nuisances are defined legally in terms of individual rights, not environmental or social concerns. Nuisance cases do not declare activities illegal simply because they burden the environment, or even because they bother the neighbors. For example, the court in *Fontainebleau Hotel Corp. v. Forty-five Twenty-five Inc.* held that the action of nuisance was limited by the sphere of individual right.

This maxim [*sic utere tuo ut alienum non laedas*] does not mean that one must never use his own property in such a way as to do any injury to his neighbor. It means only that one must use his property so as not to injure the lawful *rights* of another. . . . [I]t was stated that "it is well settled that a property owner may put his own property to any reasonable and lawful use, so long as he does not thereby deprive the adjoining landowner of any right of enjoyment of his property *which is recognized and protected by law, and so long as his use is not such a one as the law will pronounce a nuisance.*"²⁹

Nuisance regulates mediated harms, in which the environment figures indirectly as the medium through which the harm passes.³⁰

For environmentalists and aggrieved neighbors, the attention devoted to infractions of rights may seem beside the point. From

nauseating gases and odors invaded [various properties] in such amounts and in such densities as to render persons of ordinary sensitiveness uncomfortable and sick; that the operation of the oil refinery thus substantially impaired the use and enjoyment of the nine acres by the plaintiffs

Id.

²⁹ *Fountainebleau Hotel Corp. v. Forty-Five Twenty-Five, Inc.*, 114 So.2d 357, 359 (Fla. Dist. Ct. App. 1959), *cert. denied*, 117 So.2d 842 (Fla. 1960) (citations omitted); *see also* *Prah v. Maretti*, 321 N.W.2d 182 (Wis. 1982) (reaching an opposite result using same framework).

³⁰ Even the classic case *Boomer v. Atlantic Cement Co.*, 257 N.E.2d 870 (N.Y. 1970), is not an unabashedly environmental case. In *Boomer*, the court held that the defendants should pay past, present, and future damages to the plaintiffs rather than abate their nuisance, thereby purchasing a private condemnation. The opinion emphasized the parties' rights, the victim's damages, the activity's contribution to the coffers of the community, the effects of various remedies, and other traditional concerns of the common law. The environment in *Boomer* figured as a legitimate independent concern only for legislatures. As the court noted:

A court should not try to do this [ameliorate air pollution due to the manufacture of concrete] on its own as a by-product of private litigation and it seems manifest that the judicial establishment is neither equipped in the limited nature of any judgment it can pronounce nor prepared to lay down and implement an effective policy for the elimination of air pollution.

Id. at 871.

the perspective of the legal system, however, there are good reasons to limit nuisance law to redressing legal harms. Otherwise, complete solicitude for the environment, or extremely sensitive neighbors, would make any activity illegal. In practice, a nuisance doctrine that afforded a remedy against every injury to the environment, or for every bothered neighbor, would allow unbounded judicial discretion. Therefore, nuisance law protects only the rights, not the person, of the neighbor. In so doing, courts make the environment extraneous to the judgment of nuisance cases.

The environment may be present in torts other than nuisance. In a familiar example, *Rylands v. Fletcher*, a mining operation flooded an adjacent mine. The court held the mining operation strictly liable for damages resulting from using land in an abnormal fashion.³¹ The question used to establish this standard was implicitly environmental: What was the normal use of the land in question? Certain places are inappropriate for certain activities. The analogies in *Rylands* to escaping cattle, fumes, or fire³² or breaking horses in Lincoln's Inn Field,³³ were also environmental in some sense.

Yet, this environmental concern for place can be translated into terms that safeguard individual economic rights. People in the farmland around the mine in *Rylands* have a reasonable expectation that they will not be subject to the depredations of domestic animals, fire, or inundation. If that expectation is disappointed, they have a right to monetary compensation. This reasonable expectation, then, is what the law protects in establishing strict liability standards for those who persist in conducting "unnatural" activities.³⁴

³¹ *Rylands v. Fletcher*, 159 Eng. Rep. 737 (1865), *aff'd*, 19 L.T.R. 220 (1868). See in particular the opinion of Cairns, Lord Chancellor, 19 L.T.R. at 221-22.

³² See *Fletcher v. Rylands*, 13 L.T.R. 121, 124-25 (1866) (Bramwell, B.) (focusing on fact that plaintiff was damaged on his own property, and therefore had assumed no risk).

³³ See *Mitchell v. Allestry*, 86 Eng. Rep. 190 (1676), reprinted in J.H. BAKER & S.F.C. MILSOM, *SOURCES OF ENGLISH LEGAL HISTORY: PRIVATE LAW TO 1750*, at 572 (1986).

³⁴ For a relatively recent use of the *Rylands* strict liability rationale in an environmental context, see *Branch v. Western Petroleum*, 657 P.2d 267 (Utah 1982). See also *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238 (1984). *Silkwood* is usually read against *Pacific Gas and Elec. v. State Energy Resources Cons. & Dev. Comm'n*, 461 U.S. 190 (1983), on the question of federal preemption of common law. However, the trial court in *Silkwood* applied the strict liability

Courts continue to insist that environmental harms be phrased as invasions of an individual's rights.³⁵ In *Sierra Club v. Morton*,³⁶ the Supreme Court held that plaintiffs in environmental cases must allege some injury in fact to have standing to sue. The analysis contained two parts. First, the injury must involve a "cognizable interest." That interest need not be monetary. The Court included aesthetic values or values besides simple economic loss.³⁷ Second, the injury must be to the plaintiff.³⁸

rationale from *Rylands* and awarded damages in a case involving the maintenance of a nuclear power plant. The decision was ultimately upheld by the Supreme Court. For a brilliant closing argument, illustrating the loose fit between the legal articulation of governance, here tort liability, and the regulated activity, see Gerald L. Spence, Closing Argument in *Silkwood v. Kerr-McGee* (May 14, 1979), in ROBERT M. COVER ET AL., PROCEDURE 990 (1988).

³⁵ Not so long ago, it appeared in some quarters that litigation could, and indeed should, be a mode of explicitly public discourse. See Abram Chayes, *The Role of the Judge in Public Law Litigation*, 89 HARV. L. REV. 1281 (1976); Abram Chayes, *Foreword: Public Law Litigation and the Burger Court*, 96 HARV. L. REV. 4 (1982) (modifying earlier enthusiasm in light of the retrenchment of the Burger Court). Chayes' fundamental point, however, stands, and is an important counterpoint to the analysis I employ:

It is more accurate or at least more helpful, I believe, to think of the courts [in cases involving review of administrative action] as institutions exercising an oversight function on behalf of the interests and groups as well as the individuals affected by the challenged bureaucratic actions. . . . For in the contemporary administrative state, bureaucratic actions do not necessarily bear a stamp of legitimacy as outcomes of democratic process.

Chayes, *Foreword: Public Law Litigation and the Burger Court*, *supra*, at 60. I agree, but this insight belongs in a later stage of the account offered here. See *infra* note 97-105 and accompanying text (discussing government's relationship with civil society, and the relationship among the organs of government).

³⁶ 405 U.S. 727 (1972).

³⁷ *Id.* at 734. "We do not question that this type of harm may amount to an 'injury in fact' sufficient to lay the basis for standing under Section 10 of the APA [Administrative Procedure Act]. Aesthetic and environmental well-being, like economic well being, are important ingredients of the quality of life" *Id.*

³⁸ *Id.* at 735. "But the 'injury in fact' test requires more than an injury to a cognizable interest. It requires that the party seeking review be himself among the injured." *Id.* at 734-35. See also Christopher Stone's famous article, *Should Trees Have Standing? Toward Legal Rights for Natural Objects*, 45 S. CAL. L. REV. 450 (1972) [hereafter *Toward Legal Rights*], which became a book, *SHOULD TREES HAVE STANDING?* (1972). In his *Sierra Club v. Morton* dissent, Justice Douglas adopts the fundamentals of Stone's position. *Sierra Club v. Morton*, 405 U.S. at 741 (Douglas, J., dissenting).

The Court did not define cognizable interests. It stated only that an interest need not be economic in order to be cognizable. However, the requirement that the plaintiff be injured helps illuminate the first requirement that the plaintiff have a cognizable interest. An interest that does not concern the individual is not an injury in fact, because it fails the second prong of the test. So here, the plaintiffs' frustrated interest in a valley's environment that plaintiffs did not claim to enjoy personally, failed to amount to an injury in fact. If an interest passes the second prong of the test, then it is—at least plausibly—an interest internal to the plaintiff. The plaintiff—not Mineral King Valley, not the environment—is the locus of harm.³⁹ Implicitly, the Court defined cognizable interest as a private interest. *Sierra Club v. Morton* ultimately asserts an economic view of harm as the frustration of private interests held by an individual.

The attention to individual harms in *Sierra Club v. Morton* recalls the foregoing discussion of environmental nuisance. Under nuisance law, the plaintiff's harm cannot merely be asserted but must also be formalized and rendered legally authoritative. In nuisance law, harms are justiciable if they involve infraction of a plaintiff's rights. For standing, certain harms are easily cognizable, most notably economic harms. Yet, as the *Sierra Club v. Morton* Court states, economic harms do not comprise all the environmental harms that a court should recognize. So what separates worthy from trivial claims? The solution to this problem in nuisance cases is that worthy cases involve the invasion of a sphere of autonomy protected by individual rights. But this solution does not work here. To allow standing only where rights are well established would greatly hinder the new litigation necessary to provide detail for a developing area of law such as environmental law. In *Sierra Club v. Morton*, the Court did not need to define cognizable harm because plaintiffs failed to allege they were injured. Nonetheless, the Court made a rough-and-ready distinction: worthy claims exist when the plaintiffs stand to lose an environmental commodity they had hitherto enjoyed.⁴⁰

³⁹ At this point, the litigation becomes too fictional for some tastes. See *Sierra Club v. Morton*, 405 U.S. at 741-52 (Douglas, J., dissenting); *id.* at 755-60 (Blackmun, J., dissenting); *Toward Legal Rights*, *supra* note 38, at 466 (maintaining that *Sierra Club v. Morton* litigation about environment, not restrictions on members' recreational opportunities).

⁴⁰ *Sierra Club v. Morton*, 405 U.S. at 735.

The impact of the proposed changes in the environment of Mineral King will not fall indiscriminately upon every citizen. The

The *Sierra Club v. Morton* Court virtually instructs the plaintiffs to amend their complaint and allege that they use the valley in a "way that would be significantly affected by the proposed actions of the respondents."⁴¹ A year later, in *United States v. Students Challenging Regulatory Agency Procedures (SCRAP I)*⁴² the Court made this standard explicit.⁴³ *Sierra Club v. Morton* and *SCRAP I* employ the notion of "use" to blur the two requirements of the injury-in-fact test. If plaintiff's use has been restricted, then the injury requirement has been established. But at the same time, the use requirement ensures that the cognizable interest also required for injury-in-fact is understood within the conceptual parameters of the common law system, that is, as an injury experienced by an individual. The building of a resort, or the changing of rail rates, restricted the sphere of action enjoyed by the plaintiffs, specifically their liberty to use certain land for recreational purposes. More generally, adjudication translates environmental questions into conflicts among the interests of various members of society. Injury to the environment is thus ultimately understood, in both the nuisance and the standing cases, as a limitation of individual freedom.⁴⁴

alleged injury will be felt directly only by those who use Mineral King and Sequoia National Park, and for whom the aesthetic and recreational values of the area will be lessened by the highway and ski resort.

Id.

⁴¹ *Id.*

⁴² 412 U.S. 669 (1973).

⁴³ *Id.* at 684-85. As the Court noted:

The appellees respond that unlike the petitioner in *Sierra Club v. Morton*, their pleadings sufficiently alleged that they were "adversely affected" or "aggrieved" within the meaning of § 10 of the Administrative Procedure Act (APA), 5 U.S.C. § 702, and they point specifically to the allegations that their members used the forests, streams, mountains, and other resources in the Washington metropolitan area for camping, hiking, fishing, and sightseeing, and that this use was disturbed by the adverse environmental impact caused by the nonuse of recyclable goods brought about by a rate increase on those commodities.

Id.

⁴⁴ As discussed in the next Section, the limitations on freedom that standing requires may be too occasional to be adequately addressed by a regime of rights vindicated in court. Since *Sierra Club v. Morton*, the Supreme Court has continued to use standing to require that environmental litigation be phrased in terms of individual rights. Indeed, the emphasis of the Court on the individual, as opposed to the environment, has deepened over the years. See *Lujan v. Defenders of Wildlife*, 112 S. Ct. 2130 (1992); *Lujan v. Nat'l*

B. *The Birth of Environmental Law and the Maturation of Tort*

Common law adjudication protects a pre-existing system of rights, that is, an orderly delineation of particular social relations among individuals.⁴⁵ An action in tort is a plea for judicial restoration of the system of rights that the plaintiff alleges has been disturbed by defendant's tortious action. Environmental law—as opposed to law with environmental effects—arises when the legal system restores the natural order, not the social order.⁴⁶ Archaic environmental law harks back to a natural order disturbed by human agency and attempts to restore that order through legal action. As discussed in the last Section, the legal effort to restore the natural order requires phrasing the natural order in terms of individual legal rights and freedoms. In archaic environmental law,

Wildlife Fed'n, 497 U.S. 871 (1990); see also Antonin Scalia, *The Doctrine of Standing as an Essential Element of the Separation of Powers*, 17 SUFFOLK U. L. REV. 881 (1983). For a critique of Scalia's jurisprudence on environmental standing, see Patti A. Meeks, *Justice Scalia and the Demise of Environmental Law Standing*, 8 J. LAND USE & ENVTL. L. 343 (1993).

⁴⁵ This protection extends to relations between the individual and the state, and to the state's own configuration, as stoutly maintained by Coke in his controversy with King James I. See *Dr. Bonham's Case*, 77 Eng. Rep. 638 (1610); *Case of Prohibitions del Roy*, 77 Eng. Rep. 1342 (1608). The relationship between the individual and the state assumed by environmental law is discussed in terms of administration.

⁴⁶ See FREDERICK R. ANDERSON ET AL., ENVIRONMENTAL PROTECTION: LAW AND POLICY at xxiii (1984) ("Until the late 1960s what we now call environmental law did not exist; the term was first used in 1969."). This text also notes:

The first suggestion that a body of law might be built around the duty to consider nondevelopmental values was the Second Circuit's opinion in *Scenic Hudson Preservation Conference v. FPC*, 354 F.2d 608 (2d Cir. 1965), *cert. denied sub nom.*, *Consolidated Edison Co. v. Scenic Hudson Preservation Conference*, 384 U.S. 941 (1966), which remanded a hydroelectric power license for a pumped storage project because the FPC had failed to consider adequately the project's impact on scenic values and on fish and wildlife.

Id. at xxiii; see also *id.* at 70 (calling *Scenic Hudson* "the litigation that provided the first theoretical underpinning for environmental law.").

Legal academe seems to have been aware of the emergence of a new area of law. See A. Dan Tarlock, *Current Trends in the Development of an Environmental Curriculum*, in LAW AND THE ENVIRONMENT 297 (Malcolm F. Baldwin & James K. Page, Jr. eds., 1970); Harrison C. Dunning, *Notes for an Environmental Law Course*, 55 CORNELL L. REV. 804 (1970); Frances Irwin, *The Law School and the Environment*, 12 NAT. RESOURCES J. 278 (1972).

the environment can only be represented by the proxy rights and interests of individuals.

Today, common law adjudication is used to further the ends of each stage of environmental law: archaic, classical, and modern. In archaic environmental law, the tort regime has been deployed to deal with large-scale damage caused by industry.⁴⁷ Innovative approaches to financing, discovery, proof, and damages have made tort law applicable to a range of previously unregulated problems. This includes a variety of environmental problems.⁴⁸

Classically, courts used tort concepts to complement environmental regulation. In 1971, Professor Frank Michelman observed:

⁴⁷ Since archaic environmental law rests on the non-environmental conceptual apparatus of common law, the new field of toxic torts uses doctrine largely developed for substantively different problems. A revolution has occurred in showing causation that is critical to the adjudication of diffuse environmental harms. See *Sindell v. Abbott Lab.*, 607 P.2d 924 (Cal. 1980), *cert. denied*, 449 U.S. 912 (1980) (holding that plaintiff in a DES case could hold drug manufacturer liable upon showing that manufacturer produced substantial percentage of drug in marketplace); Charles Nesson, *Agent Orange Meets the Blue Bus: Factfinding at the Frontier of Knowledge*, 66 B.U. L. REV. 521 (1986); David Rosenberg, *The Causal Connection in Mass Exposure Cases: A "Public Law" Vision of the Tort System*, 97 HARV. L. REV. 849 (1984).

Many of the mass exposure cases are environmental in some sense, though they are usually treated as expansions of traditional tort concepts. As this Section argues, even explicitly environmental law is only tangentially environmental. Certain cases that might plausibly be viewed in terms of the environment often are not. See *Allen v. United States*, 588 F. Supp. 247 (D. Utah 1984), *rev'd*, 816 F.2d 1417 (10th Cir. 1987), *and cert. denied*, 484 U.S. 1004 (1988) (regarding exposure to radioactive fallout from weapons testing); *Fischer v. Johns-Manville Corp.*, 512 A.2d 466 (N.J. 1986) (regarding asbestos); PETER H. SCHUCK, *AGENT ORANGE ON TRIAL: MASS TOXIC DISASTERS IN THE COURTS* (1987) (summarizing Agent Orange cases involving exposure of Vietnam War veterans to chemical defoliant).

An analytical distinction (perhaps with legal ramifications) needs to be maintained between an implicitly environmental aspect of the mass exposure cases and cases that rely on environmental regulation to establish liability. See Troyen A. Brennan, *Environmental Torts*, 46 VAND. L. REV. 1 (1993) (attempting to develop a jurisprudence for environmental torts, narrowly construed); see also Jeffrey Trauberman, *Statutory Reform of "Toxic Torts": Relieving Legal, Scientific, and Economic Burdens on the Chemical Victim*, 7 HARV. ENVTL. L. REV. 177 (1983).

⁴⁸ See, e.g., *Anderson v. Beatrice Foods*, 900 F.2d 388 (1st Cir. 1990), *cert. denied*, 498 U.S. 891 (1990) (discussing causation problems); *Ayers v. Jackson Township*, 525 A.2d 287 (N.J. 1987) (discussing damages questions); PHIL BROWN & EDWIN J. MIKKELSEN, *NO SAFE PLACE* 110-11 (1990) (discussing *Beatrice Foods*).

There is now abroad in the land a lively interest in viewing private lawsuits as an important component of any system of air-pollution control law. More specifically, there is great interest in using privately-initiated nuisance litigation, perhaps with some modification of the common law doctrines, in such a manner.⁴⁹

Virtually all the classical environmental statutes use archaic environmental law by creating causes of action for injunctive relief, damages, or both.⁵⁰ Civil claims in environmental statutes serve two functions. First, as Michelman indicated, the causes of action may complement statutory law as a federal "nuisance law," so that plaintiffs can bring environmental claims as both a nuisance and a violation of federal statute. This offers plaintiffs more flexibility than if they sued under common law, which could restrict plaintiffs to state law under the *Erie* doctrine.⁵¹ In addition, some federal statutes

⁴⁹ Frank I. Michelman, *Pollution As a Tort: A Non-Accidental Perspective on Calabresi's Costs*, 80 YALE L.J. 647, 666 (1971); see Guido Calabresi & A. Douglas Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972) (discussing use of nuisance litigation); see also *Spur Indus., Inc. v. Del E. Webb Dev. Co.*, 494 P.2d 700 (Ariz. 1972) (using nuisance litigation to combat odorous cattle operation).

⁵⁰ See Toxic Substances Control Act, 15 U.S.C. § 2615 (1988); Endangered Species Act of 1973, 16 U.S.C. § 1540 (1988); Surface Mining Control and Reclamation Act of 1977, 30 U.S.C. §§ 1201-11, 1231-38 (1988); Federal Water Pollution Control Act, 33 U.S.C. § 1365 (1988); Marine Protection, Research, and Sanctions Act of 1972, 33 U.S.C. § 1415; Public Health Service Act, 42 U.S.C. § 300j-8 (1988); Solid Waste Disposal Act, 42 U.S.C. § 6972; Clean Air Act, 42 U.S.C. § 7604 (Supp. 1992); Comprehensive Environmental Response, Compensation, and Liability Act of 1980, 42 U.S.C. § 9613 (1988); Emergency Planning and Community Right-to-Know Act of 1986, 42 U.S.C. § 11046.

Interestingly, the National Environmental Policy Act of 1969 (NEPA), 42 U.S.C. §§ 4321-70, establishes no private cause of action, nor does it expressly give Article III courts substantive review powers. Section 102 was read as legally enforceable from the beginning, however, because it patently established a legal duty. See *Calvert Cliffs' Coordinating Comm. v. United States Atomic Energy Comm'n*, 449 F.2d 1109 (D.C. Cir. 1971). Although the Administrative Procedure Act (APA), 5 U.S.C. §§ 551-706 (1988), provides for citizen suit challenges to agency procedures, the courts have read Section 102 more broadly than the APA's citizen suit procedures.

⁵¹ See *Erie R.R. v. Tompkins*, 304 U.S. 64 (1938). Much environmental law is federal statutory law, and yet its structure and many of its claims are based on the common law, which is state law. The "modification of the common law doctrines" lightly referred to by Michelman thus raises a procedural problem for American law. In *Milwaukee v. Illinois*, 451 U.S. 304 (1981) (*Milwaukee II*), the Supreme Court held that the Federal Water Pollution Control Act, 33 U.S.C. §§ 1251-1387, as amended by the Clean Water Act, had pre-empted federal common law. In *Illinois v. Milwaukee*, 731 F.2d 403 (7th Cir. 1984), *cert. denied*, 469 U.S. 1196 (1985) (*Milwaukee III*), a state common law claim was

support plaintiffs' suits by providing resources not usually available to the common law litigant, including lowering litigation's risks through fee shifting and increasing plaintiffs' odds by providing governmental research results.⁵²

The second function statutory causes of action serve is enforcement through a system of private attorneys general.⁵³ The procedural resources of civil litigation are mobilized in defense of the

denied because the court found the claim pre-empted by the comprehensive legislative scheme of the Clean Water Act. *But see supra* note 34 (discussing *Silkwood v. Kerr-McGee Corp.*, 464 U.S. 238 (1984)). For still more on the vexed relation between common law and federal law, see *International Paper Co. v. Ouellette*, 479 U.S. 481 (1987); *Middlesex County Sewerage Auth. v. National Sea Clammers Ass'n*, 453 U.S. 1 (1981).

⁵² For example,

The emphasis of the Superfund program on demonstrable dangers to health ties it back closely to tort law. . . . Of course, where there has been demonstrable damage to health, there has always been the possibility of tort actions, but Superfund injects the resources of the government into developing the facts on which tort cases can be developed.

Angus Macbeth, *Superfund: Impact on Environmental Litigation*, ENVIRONMENTAL LAW (ABA Standing Committee on Environmental Law), Winter 1982-83, at 6. Macbeth continues:

The Hooker cases bring that point home as well. In its litigation against the government, Hooker sought a protective order aimed at maintaining the confidential character of materials it turned over to the government. The motion was denied, the judge ruling that the claim that disclosing discovery materials would unquestionably be detrimental to Hooker in the parallel private suits was not good grounds for granting the order. In other words, the private plaintiffs can "ride piggyback" on the government's discovery. In short, Superfund actions, particularly where the government is put to the effort of substantial factual development, increase the likelihood of tort actions if the facts are there to make a respectable claim.

Id.

⁵³ It has been argued that the universal civil claims clause of the Clean Air Act, 42 U.S.C. § 7604 (Supp. 1992), which grants "any person" the right to bring a claim, is a legislative attempt to offer universal standing.

The constitutional policy of checks and balances that underlies judicial review, however, can be said to argue in favor of a construction of "case" and "controversy" that would permit Congress to extend standing beyond the injured. . . . When the harm is widespread and individually small, however, as is often true in pollution cases, it may be that no victim will find it worth the cost to sue. There is even the possibility in some environmental situations that no one is injured in the *Sierra Club*

regulatory regime. Private suits also provide political benefits by decentralizing the enforcement process, making the system more resistant to regulatory capture. The statutes give private plaintiffs (individuals and non-governmental organizations) rights both to enjoin private parties from committing prohibited actions, and to compel governmental agencies to perform their statutory duties. Environmental statutes thus use the relative incorrigibility of the court system and the stamina of environmental activists to remedy the problems of bureaucratic inertia and regulatory capture which plague administrative law.⁵⁴

The RCRA/CERCLA regime for hazardous waste management exemplifies the use of tort in the modern, as well as in the archaic and the classical stages of environmental law.⁵⁵ Under this regime, tort liability not only provides traditional remedies and contributes to the efficacy of the regulatory structure, but also profoundly affects the operation of the market itself.⁵⁶ At the beginning of the

sense, as when a deep-sea species protected by the law is threatened with extinction.

David P. Currie, *Judicial Review Under Federal Pollution Laws*, 62 IOWA L. REV. 1221, 1278 (1977); see also RODGERS, *supra* note 26, at 26 (providing similar argument regarding NEPA). Most environmental statutes that provide for civil claims grant the right to bring a civil action to "any person." See, e.g., statutes cited *supra* note 50. Courts have not read this language to imply universal standing. See *Sierra Club v. Morton*, 405 U.S. 727 (1972); *United States v. Students Challenging Regulatory Agency Procedures (SCRAP I)*, 412 U.S. 669 (1973); *supra* notes 36-44 and accompanying text (discussing *Sierra Club v. Morton* and *SCRAP I*). More generally, it could be argued that the environmental statutes create new rights, that is, any person in the United States has a right to the substance of the legislative promises made in the environmental statutes. See FINDLEY & FARBER, *supra* note 5, at 65-66. To date, this argument has not found judicial favor, and probably will not under current due process doctrine.

⁵⁴ See GUIDO CALABRESI, *THE COSTS OF ACCIDENTS: A LEGAL AND ECONOMIC ANALYSIS* (1970); Michelman, *supra* note 49, at 647-68 (describing and deploying the analytic structure developed by Guido Calabresi for analyzing accidents). Michelman's *Pollution as Tort* is an early example of a law and economics approach to legal and institutional design. By affecting the liability, and hence the cost associated with an activity, the tort regime subtly and powerfully influences the behavior of economic actors. Tort thus contributes to the market's construction.

⁵⁵ Solid Waste Disposal Act, 42 U.S.C. §§ 6901-87 (1988) (including amendments to Resource Conservation and Recovery Act (RCRA) and Comprehensive Environmental Response, Compensation, and Liability Act of 1980 (CERCLA)).

⁵⁶ Because the RCRA/CERCLA regime coordinates all three periods of environmental law—archaic, classical, and modern—it represents an example

1980's, it was argued that CERCLA alone had made tort the heart of contemporary environmental practice.⁵⁷ Real estate transactions, corporate mergers, banking, and bankruptcy are all affected by environmental law operating through the RCRA/CERCLA tort regime. Far from being outmoded, tort has emerged from its encounter with economics as one of the most sophisticated techniques of contemporary environmental policy.⁵⁸

In addition to these new-found strengths, archaic environmental law retains the combination of accessibility, analytic power, and conceptual flexibility that has made the common law so durable. This was illustrated in the wake of the *Exxon Valdez* oil spill, when plaintiffs brought many common law claims, even though state and federal statutes provided a plethora of causes of action.⁵⁹ Tort is a shared language, learned by every first-year law student, and a sophisticated doctrinal structure capable of resolving a wide array of conflicts among various parties. In contrast, statutory specifics are seldom examined prior to litigation, and both the sophistication of statutory drafting and the foresight employed by the drafters is highly variable. Tort can also offer remedies when statutory

of modern environmental governance. See *infra* notes 156-60 and accompanying text (discussing the moments of environmental law).

⁵⁷ Macbeth argues:

Superfund is bringing major changes to the practice of environmental law, in some ways returning to its roots in the concepts of tort law. This is the third revolution in environmental litigation since the passage of the National Environmental Policy Act (NEPA) in 1970. During the first years, litigation focused on how the balance of competing interests recognized by NEPA was to be struck on projects undertaken or permitted by the federal government. The mid-seventies brought controversies over the detailed regulatory statutes for controlling air and water pollution. The eighties are opening with the introduction of tort concepts.

Macbeth, *supra* note 52, at 7. Note the offhand claim that environmental law is rooted in tort.

⁵⁸ See, e.g., Joan M. Ferretti, *Looking for the Big Picture—Developing a Jurisprudence for a Biotechnological Age*, 10 PACE ENVTL. L. REV. 711 (1993) (discussing the interrelationship between the common law and regulatory regimes in establishing the appropriate climate for market activity).

⁵⁹ See PLATER ET AL., *supra* note 9, at 164. Plater served as advisory counsel to the State of Alaska. See *id.* at 165-66 (excerpting Alaska's complaint in *Exxon* case); see also Bruce B. Weyhrauch, *Oil Spill Litigation: Private Party Lawsuits and Limitations*, 27 LAND & WATER L. REV. 363 (1992).

agreement does not exist, notably in conflicts between sovereigns.⁶⁰ In sum, environmental law remains firmly rooted in tort.

C. *The Commitments of Environmental Adjudication*

Within the common law system, law was long defined as private law, based on individual rights.⁶¹ The common law emphasis on individual economic autonomy protected by a regime of rights fit the contractual view of society prevalent—at least as a legal theory—throughout the nineteenth century.⁶² Burgeoning technolog-

⁶⁰ In the absence of a statute, common law principles can organize relations among states. See *Illinois v. Milwaukee (Milwaukee I)*, 406 U.S. 91, 99-100 (1972) (holding that common law principles apply, absent specific federal statute); *Georgia v. Tenn. Copper Co.*, 206 U.S. 230 (1907); *Texas v. Pankey*, 441 F.2d 236, 240 (10th Cir. 1971). In *Milwaukee II*, 451 U.S. 304, 317-20 (1981), the Supreme Court held that the Federal Water Pollution Control Act, 33 U.S.C. §§ 1251-1387 (1988), as amended by the Clean Water Act, had superseded federal common law. Although concepts of wrong at international law are at least as closely allied with continental notions of delict as with common law notions of tort, basic delictual concepts can also organize the relations among nation states. See *The Trail Smelter Case (U.S. v. Can.)*, 3 R.I.A.A. 1905, 1965 (1941) (containing dicta that one state could not inflict harm on another); see also *Affaire du Lac Lanoux (Spain v. Fr.)*, 12 R.I.A.A. 281 (1957); *The Corfu Channel Case (U.K. v. Alb.)*, 1949 I.C.J. 4 (1949) (maintaining same proposition outside environmental context); Brunson MacChesney, *Judicial Decisions*, 53 AM. J. INT'L L. 156 (1959) (digesting international cases).

⁶¹ Already in the eighteenth century, Blackstone wrote:

[I]t would be dangerous to allow any private man, or even any public tribunal, to be the judge of this common good, and to decide whether it be expedient or no. Besides, the public good is in nothing more essentially interested, than in the protection of every individual's private rights, as modeled by the municipal law.

1 WILLIAM BLACKSTONE, COMMENTARIES *135. No doubt American law received much of its emphasis on private law from Blackstone, who was overwhelmingly concerned with common law actions in property, contract, tort, and so forth, subjects a continental jurist would label private law. Blackstone greatly influenced the formative periods of American law. "[N]o other legal figure equaled his impact on the colonies." KERMIT L. HALL, *THE MAGIC MIRROR: LAW IN AMERICAN HISTORY* 52 (1989). This is not to deny that private law has enormous public effects.

⁶² This view was summarized in Henry Sumner Maine's famous aphorism, "the movement of progressive societies has hitherto been *from Status to Contract*," and has been associated with substantive due process and the *Lochner* era in U.S. law, when courts allowed natural rights to contract to trump other laws. HENRY J.S. MAINE, *ANCIENT LAW* 170 (10th ed. 1901). The regnant historical understanding of American law divides American history into three periods: a founding, devoted to the establishment of a basic

ical development gave rise to new kinds of harm, including environmental harm, but law nonetheless remained essentially private, and tort actions remained the primary remedy for harm.⁶³ As discussed in the preceding Section, even today environmental harms are presented as infractions of individual liberties, particularly individual economic rights.

At the same time, “environmental” efforts to define the acceptable scope of economic activity respond to and delineate the bounds of individual autonomy.⁶⁴ Although individuals may not intrude on other’s rights, within the ambit of autonomy defined by their own rights they may act pretty much as they please. The recurrent issue for archaic environmental law is whether a particular activity should be characterized as “inside” an actor’s sphere of autonomy, or as an invasion of another’s autonomy and hence impermissible. The process of adjudication thus continually orients archaic environmental law to the problem of defining the appropriate scope of individual autonomy.

In archaic environmental law, the environment figures only as the medium through which harm is transmitted. Thus, archaic environmental law is only environmental law by proxy, and is therefore unsatisfying to those who care about nature. Yet environmental law needs this archaic emphasis on the common law to be effective in a market society. The common law rights of action are basic to environmental law because they define the core rights of private property and contract, and, through tort, the basic expecta-

governmental framework; the nineteenth century era, devoted to economic growth; and a modern era, devoted to the modern welfare state and the universal procurement of individual liberties. *See generally* BRUCE ACKERMAN, *WE THE PEOPLE: FOUNDATIONS* (1991); GRANT GILMORE, *AGES OF AMERICAN LAW* (1977) (using this framework).

⁶³ Considerable controversy exists about the tort regime’s effect on the process of industrialization in nineteenth century America. *See* MORTON J. HORWITZ, *THE TRANSFORMATION OF AMERICAN LAW, 1780-1860* (1977). Many scholars have criticized Horwitz. For an annotated bibliography, see HALL, *supra* note 61, at 368-69. My argument requires no position on the Horwitz thesis beyond the very basic point—not contended to my knowledge—that nineteenth century American lawyers (practitioners, judges, academics, even usually legislators) thought of their work within the conceptual structures of the common law, including tort.

⁶⁴ A contract regime and a property regime also have much to say about the matter. Contract and property, however, are more concerned with liberty than harm. Therefore it seems most appropriate to think of environmental problems in tort terms, and so “tort” and “the common law” are used virtually indistinguishably here.

tions of conduct essential to the market's function. Insofar as environmental law seeks to respond to market activity and to the desires that cause people to be consumers, manufacturers, and polluters, it cannot be (and has not been) insensitive to the internal logic of the market itself. This logic is based on autonomous individuals.⁶⁵

Despite its inherent qualities and new-found possibilities, the common law has fundamental limitations as a legal expression of environmental concerns.

[T]he common law alone, even when supplemented by imaginative use of other bodies of law, is often not capable of handling larger problems of environmental degradation. Common law remedies may be too limited in character: they neither provide redress for widespread public harms, nor do they provide a mechanism that allows for insightful anticipatory intervention that would avert the harmful consequences of environmentally unsound practices. Stated differently, tort judgments for damages, and even injunctions, are generally private remedies for past wrongs. The remedies are limited to those whose interests are represented in court, and many would-be plaintiffs are deterred from making that effort by the difficulty and expense of legal action. In that way tort law remedies fail to compensate and assist all victims of pollution and other environmental harms, and the law governing environmental tort cases is reactive rather than protective.⁶⁶

⁶⁵ Violations of the sphere of what is now seen as the autonomy defined by the writs have, for a very long time, been actionable. However, a caveat is necessary. Rights defined by the writs are considerably older than the philosophical tradition that characterized them as private. This later tradition informs this paper. Hobbes was born in 1588. The earliest English nuisance case of which we have record was *Rikhill's Case*, Y.B. Mich. 2 Hen. 4, pl. 48 (1400), reprinted in BAKER & MILSOM, *supra* note 33, at 581. This case was brought as trespass, though nuisance was also discussed. I rely on the authority of Baker and Milsom, who call *Rikhill* the first nuisance case. Several new writs emerged in the fifteenth century. This serves to confuse the issue of "the first nuisance" but supports my basic point, which is that one should not draw easy conclusions from radically different legal systems. It would be anachronistic to maintain that nuisance arose in a world in which government and the individual were conceived of as opposed entities, in which the liberties of the individual circumscribed a sphere of autonomy, and in which the function and perfection of governance was the protection of that autonomy. The culture that produced trespass and nuisance actions was different from the milieu in which Blackstone wrote. Although one should not view the historical rise of the ancient writs in terms of contemporary political emphasis on individual autonomy, the common law can support political and economic autonomy, as Blackstone also demonstrates.

⁶⁶ PLATER ET AL., *supra* note 9, at 241.

Archaic environmental law is radically incomplete. Law therefore has had to develop mechanisms that can (i) respond to environmental harms when their costs were below the cost of judicial prosecution, and (ii) act to prevent damage. A partial answer can be found in bureaucratic regulation.

III. CLASSICAL ENVIRONMENTAL LAW: ADMINISTRATION AND THE AGGREGATION OF TORT

A. *The Aggregation of Tort*

The classical federal environmental statutes empower an agency, usually the Environmental Protection Agency (EPA), to set standards, conduct tests, adjudicate conflicts, require certain technologies, order or oversee the clean-up of polluted sites, or otherwise constrain governmental and private actors. The majority of regulations, including the constraints imposed by EPA, are justified by a theory of market failure. In the view of neo-classical economics, market failure is the only justification for such constraints.⁶⁷

Market failure occurs in a variety of forms. Market failures that justify the pollution statutes, and thus most U.S. environmental law, are called spillover costs, or negative externalities.⁶⁸ When this

⁶⁷ "Some might argue that there are numerous other justifications for regulatory programs. Through lengthy argument, it should be possible to persuade those who advance other justifications that 'market defects' of the sort listed in Chapter One lie at the bottom of their claims." STEPHEN BREYER, *REGULATION AND ITS REFORM* 7-8 (1982). I do not here defend the claim that market defects are the only justifiable reason for regulation. Instead, I attempt to demonstrate that the logic of market failure underpins American thinking about administration. Toward the end of this Article, I argue that environmental policies that cannot be justified in terms of the market pose problems within liberal discourse. See *infra* notes 156-168 and accompanying text.

⁶⁸ Environmental law almost invariably concerns negative rather than positive externalities. As used in this Article, "externality" implies negative externality. The European Community (EC) passes much regulation in order to harmonize the conditions for the single market. The single market is used to justify regulation without relying directly on a distortion within a market. Even so, a market rationale exists for EC regulation, because it is presumed that the single market will be more efficient than national markets. But EC regulatory activity often seeks distant benefits for a future Europe, rather than correction for localized market failure. *Contra* BREYER, *supra* note 67. See generally Single European Act, arts. 100a, 130r-t, 1987 O.J. (L 169) 1, 8, 11-12. More importantly, the European approach organizes market thinking in political terms, emphasizing the desirability of sustainable markets over unsustainable ones. See COMMISSION OF THE ECONOMIC COMMUNITIES, 26TH

market failure is present, an activity's social effects are not adequately reflected in the price. Market actors respond to the price, not the true cost of an item, so the social effects not reflected in the price are "external" to market transactions.⁶⁹

For example, dumping noxious manufacturing by-products into the air creates negative externalities. The pollution imposes costs upon society: health risks, reduced quality of life, lower property values, and so forth. In an unregulated market, the manufacturer pays neither to prevent nor to remedy the situation.⁷⁰ The costs associated with the pollution are borne by parties, such as the people downwind, who do not participate in the economic transactions surrounding the manufacture of the item. The people downwind are outside the process of economic decision. The harms they suffer are externalities.

A failed market inaccurately assesses the decisions of consumers, and thereby gives producers and the economy bad information. As a result of cost-shifting to downwind parties, the manufacturer in

GENERAL REPORT ON THE ACTIVITIES OF THE COMMUNITIES 197-210 (1992); *Fifth Environmental Programme*, 25 BULL. E.C. 3-1992, at 1.2.115; *see also id.* at 1.3.145, 1.3.151, 1.3.179 (providing opinions on resolution).

⁶⁹ Judge Stephen Breyer provides a typical example:

Suppose a factory can produce sugar either through production method A or production method B. Method A costs 9 cents per unit of production but sends black smoke billowing throughout the neighborhood to the annoyance of neighbors for miles around. Method B costs 10 cents per unit of production and produces no smoke at all. The profit maximizing factory owner adopts A although, if those injured by the smoke would willingly pay more than 1 cent (per pound of sugar) to be rid of it, method A is socially more expensive. Then B, not A, should be chosen, because its total social costs—including costs of harm inflicted—are lower. . . . Where the public prefers reduced pollution yet finds no practical way to bribe the producer, too many of society's resources are attracted (by lower prices not reflecting the cost of pollution) into polluting processes and products, and too few are attracted into pollution-free products and processes. Government intervention arguably is required to help eliminate this waste.

BREYER, *supra* note 67, at 23.

⁷⁰ That is, assuming the usual case, that transaction costs and free rider problems are too great for the parties to contract. Even when the parties may be able to contract, resulting in an allocatively efficient solution, a distributional problem may result: The downstream users would have to pay the manufacturer to stop poisoning the water. Governmental intervention might be necessary to insure convergence on a Pareto optimal outcome, i.e. an outcome in which allocative gains do not require localized losses.

this market can offer the item at a price that is too low. The market price is lower than the price that all of society pays, including manufacturers, consumers, and the people downwind. Consequently, demand and production are higher than in a well-functioning market. This market has failed to transmit accurate information concerning the cost of production to consumers, and inaccurately signals consumer demand to producers. Society uses the market to decide how much of something to produce, what price it will cost, who gets the product and what other goods will be avoided. Just as not counting votes in an election vitiates the legitimacy of that election, the market's failure to assess consumer demand accurately results in an illegitimate economic outcome.⁷¹

The godfather of American law and economics, Judge Richard Posner, points out that “[a]n important function of law is to internalize costs and benefits. Laws against pollution illustrate this function on the cost side”⁷² Environmental law can create a more

⁷¹ Economic outcomes may also be illegitimate because they work social inequities. See UNITED CHURCH OF CHRIST COMMISSION FOR RACIAL JUSTICE, TOXIC WASTES AND RACE IN UNITED STATES (1987); UNITED STATES GENERAL ACCOUNTING OFFICE, SITING OF HAZARDOUS WASTE LANDFILLS AND THEIR CORRELATION WITH RACIAL AND ECONOMIC STATUS OF SURROUNDING COMMUNITIES 3 (1983). The interaction between social and environmental concerns, and the sometimes conflicted politics among various “progressive” concerns, have increasingly drawn the attention of legal academics. See generally ROBERT BULLARD, DUMPING IN DIXIE: RACE, CLASS AND ENVIRONMENTAL QUALITY (1990); Regina Austin & Michael Schill, *Black, Brown, Poor & Poisoned: Minority Grassroots Environmentalism and the Quest for Eco-Justice*, 1 KAN. J.L. & PUB. POL’Y 69 (1991); Vicki Been, *What’s Fairness Got to Do with It? Environmental Justice and the Siting of Locally Undesirable Uses*, 78 CORNELL L. REV. 1001 (1993); Luke W. Cole, *Remedies for Environmental Racism: A View from the Field*, 90 MICH. L. REV. 1991 (1992); Richard J. Lazarus, *Pursuing “Environmental Justice”: The Distributional Effects of Environmental Protection*, 87 NW. U. L. REV. 787 (1993); Peter L. Reich, *Greening the Ghetto: A Theory of Environmental Race Discrimination*, 41 KAN. L. REV. 271 (1992). Recently, the political system has begun to respond to the problem. See Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, Exec. Order No. 12,898, 59 Fed. Reg. 7629 (1994). In a different arena, see Global Convention on the Control of Transboundary Movements of Hazardous Wastes: Final Act and Text of Basel Convention, Mar. 22, 1989, 28 I.L.M. 649 (entered into force May 5, 1992). But see THE INTERNATIONAL TRADE IN WASTES: A GREENPEACE INVENTORY 15 (1990) (“By providing a legal framework within which to trade waste, the Convention legitimizes a practice that should be considered a criminal activity.”).

⁷² RICHARD POSNER, LAW AND LITERATURE: A MISUNDERSTOOD RELATION 320 (1988). Posner continues: “[T]he charitable exemption from income taxation

accurate market by making the market price of an item approximate its true social cost. The manufacturer who must install a filter to comply with environmental regulation passes the cost of the filter along to consumers. Consumers, in buying the now more expensive product, show the extent to which they value this product over other goods. By making prices reflect consumer preference more accurately, environmental law legitimates market processes as a mode of social decision.

Does the market-based society really require environmental law? In an influential article, Professor Ronald Coase argues that when transaction costs are zero, it does not matter which party has the entitlement, because the parties will contract around the entitlement.⁷³ The "Coase Theorem" states that, if bargaining is costless, no government regulation will be necessary to achieve an allocatively efficient outcome. This allocation will reflect the greatest total social benefit, regardless of distributional effects. The entitlement to pollute is generally presumed to belong to the manufacturer. The local residents have to pay the factory to stop the pollution. In Judge Stephen Breyer's terms, "they [the public] would bribe the producer."⁷⁴ Alternatively, one could entitle the local residents to be free from pollution. In order to pollute, the factory must then buy the right from the local residents. Either way, the costs of externalities would be balanced against the income from production. In the absence of transaction costs, Coase argues that when information is perfect, bargaining will strike the right balance between industrial production and pollution production. The position of the legal entitlement does not matter: the market will find an efficient outcome. If this argument is true, it would seem that environmental law is not needed.⁷⁵

illustrates it on the benefit side (by making it cheaper to give to charity, the exemption lowers the cost of producing an external benefit)." *Id.*

⁷³ Ronald H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1, 1-15 (1960).

⁷⁴ BREYER, *supra* note 67, at 24.

⁷⁵ Coase, *supra* note 73, at 29-30. Coase's article has been singularly influential among lawyers. It may be the only economics article many have read, and is oft-alluded to even by those who have not read it. Certainly a discussion of Coase is in every environmental law textbook surveyed here. But why? Coase's argument never applies in the real world. Transaction costs are always positive; information is never perfect. At more theoretical levels, problems abound, most of which Coase knew well. First, free-rider problems may make bargaining impossible even where transaction costs are zero and information is perfect. Second, the offer-acceptance problem may well mean that the price paid by the factory for the purchase of the right to pollute will

In the real world, however, bargaining is not costless and information is not perfect. When transaction costs become too high, downwind parties will not join to solve the pollution problem through contract. The transaction cost problem is exacerbated by the diffuse nature of many harms. For instance, a polluting manufacturer may impose a minor inconvenience on a million people. No individual will have an incentive to contract with the polluter even though the aggregate harm is considerable. Neither will individual victims litigate. The cost of litigation, like the cost of contract, exceeds the cost of the harm suffered by each individual. Where transaction costs are sufficiently high, rational victims suffer.

Externalities may therefore justify regulation, whereby government interferes with the performance of markets. Rephrased, the market's failure to process information sometimes requires the imposition of another information processing mechanism—regulatory bureaucracy.⁷⁶ By promulgating a pollution regulation, government aggregates the harms the manufacturer inflicts on its neighbors. Because the regulated market internalizes costs that would be externalities in an unregulated market, the regulated

be too high. Third, distributional problems, which the Coase theorem attempts to avoid, affect activity levels. For example, if the locals bribe the factory to use a filter, making production tolerable, the factory will still be able to offer the sugar at the lower price associated with the dirtier method of production. Consumers at the margin, who would not buy the more expensive sugar will buy the less expensive sugar. Consequently, output of sugar will be too high. Fourth, ordinary distributional problems abound. *See supra* note 71 (discussing environmental justice). My only explanation for the ubiquity of Coase's argument—even though I have never encountered a situation in which allocation of the entitlement was unimportant—is that Coase has become a warning to one's interlocutor that one is about to enter a certain mode of discourse. Our society has become increasingly configured by the output of markets, and our politics has become increasingly discussed in the language of economics. Although economics is not new, the relative absence of comparable modes of public discourse is. Technology has given us a new politics, and that politics is discussed, sensibly enough, in the language of economics. Coase, for all his undoubted merit, is constantly referred to because lawyers feel a need to legitimate their use of the new discourse. (Funny that the part of a lawyer's soul that begs for authority would be satisfied by something as thin as a footnote to an article published in a then-obscure academic journal over a generation ago.) Coase is thus a way of referring to the new world, the Amerigo Vespusci of contemporary political language, constantly mentioned heedless of his achievement.

⁷⁶ This holds only in those instances in which bureaucratic failure is less than market failure. *See infra* notes 110-14 and accompanying text (discussing the failure of bureaucracy).

market more closely approximates a perfect market. Ideally, the regulated market produces an outcome that would result if bargaining and information were costless.

Because regulation compensates for market failure, classical environmental law succeeds archaic environmental law. The market failure concept shows the need for internalizing externalities, and also demonstrates tort's inability to vindicate fully environmental harms. Regulation is thus required when the common law system cannot internalize the environmental harms associated with market activity.

B. *The Tragedy of the Commons*⁷⁷

Government action may also be used to prevent destructive collective action phenomena, which in the environmental context are often collectively called "the tragedy of the commons." Introducing the phrase, Garret Hardin delivered a canonical statement of the collective action problem:

The tragedy of the commons develops in this way. Picture a pasture open to all. It is to be expected that each herdsman will try to keep as many cattle as possible on the commons. . . . As a rational being, each herdsman seeks to maximize his gain. Explicitly or implicitly, more or less consciously, he asks, "What is the utility *to me* of adding one more animal to my herd?" This utility has one negative and one positive component.

1) The positive component is a function of the increment of one animal. Since the herdsman receives all the proceeds from the sale of the additional animal, the positive utility is nearly +1.

2) The negative component is a function of the additional overgrazing created by one more animal. Since, however, the effects of overgrazing are shared by all the herdsman, the negative utility for any particular decision-making herdsman is only a fraction of -1.

Adding together the component partial utilities, the rational herdsman concludes that the only sensible course for him to pursue is to add another animal to his herd. And another; and another. . . . [B]ut this is the conclusion reached by each and every rational herdsman sharing a commons. Therein is the tragedy. Each man is locked into a system that compels him to increase his herd without limit—in a world that is limited. Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons. Freedom in a common brings ruin to all.⁷⁸

⁷⁷ Garrett Hardin, *The Tragedy of the Commons*, 162 *Sci.* 1243 (1968).

⁷⁸ *Id.* at 1244.

The tragedy of the commons is not limited to goods extracted from the commons, such as grazing land, fish stocks, or individual use of national parks. It also exists in problems of pollution:

Here it is not a question of taking something out of the commons, but of putting something in—sewage, or chemical, radioactive, and heat wastes into water; noxious and dangerous fumes into the air; and distracting and unpleasant advertising signs into the line of sight. The calculations of utility are much the same as before. The rational man finds that his share of the cost of the wastes he discharges into the commons is less than the cost of purifying his wastes before releasing them. Since this is true for everyone, we are locked into a system of “fouling our own nests,” so long as we behave only as independent, rational, free-enterprisers.⁷⁹

The solution preferred by Hardin is one that this Article takes up in the next Section: eliminating the commons through privatization. If the herdsman in the example owned his own land, it would not be rational to overgraze it. In other situations, however, privatization may not be feasible. To use two of Hardin's examples, it is difficult to imagine a government privatizing either the high seas or the visual environment. In such circumstances, limiting use of the common through regulation is a better solution. The collective action phenomena that justify privatization will also justify traditional regulation, although one or the other approach may produce a better outcome in a particular case.

By articulating the problem posed by collective action phenomena, Hardin translates the problem of externalities into the language of the commons. The vocabulary of externalities and the vocabulary of the commons describe the same phenomena, but each lexicon implies a certain perspective. The vocabulary of externalities presents decisions such as whether or not to manufacture a product in a microeconomic context. The producer evaluates the costs of production against expected returns on sales. Certain harms associated with pollution, for example the loss of health due to the manufacturing process, may be borne by society but not communicated to the producer.⁸⁰ Such externalities are dumped into an undefined space outside of the transaction under discussion.

In contrast, the language of the commons is global. The imagery of the commons gives substance to the idea of the environment as what is held in common. In our example, the atmosphere is a com-

⁷⁹ *Id.* at 1245.

⁸⁰ The victims may suffer reduced health, and they, or some societal organ (but not the producer), pays the cost of health care.

mon. Although the language of externalities defines the world in terms of the producer and consumer, the imagery of the commons places the producer within the context of a larger world. In the language of externalities, the polluting producer is unaware of and unconnected to the havoc wreaked outside its cost structure. From the perspective of the commons, the producer is defrauding the public by taking its clean air without paying. The choice of imagery within each model reveals a bias. Small wonder that the language of the commons is often used among environmentalists and the language of externalities among economists of a libertarian bent.⁸¹

⁸¹ Perhaps environmentalists should be wary. I find the popularity and influence of *The Tragedy of the Commons* bizarre. Hardin's article seems to have hardly been read. This Article's text reproduces the standard environmentalist misinterpretation of Hardin, which uses the imagery of theater and commonality to stress individual and collective obligation to a context. While this interpretation is poetic, it is not at all supported by Hardin's article. For Hardin, the common environment is not the context of our general obligation, but an evil to be remedied by massive privatization. What are we to make of Hardin's substantive argument? Hardin draws arguments, without much care, from Nietzsche, bank robbers (reminiscent of Augustine), Hegel, and others. Once one learns what an externality is, it is difficult to know what to do with this jumble. Hardin quotes Nietzsche, "a bad conscience is a kind of disease," and buttresses that with Bateson's studies of schizophrenia, to argue that conscience should be abolished. His mode of doing so is coercive privatization. In the perfectly privatized world, self-interest, sans conscience (or, one assumes, any other sympathetic feeling) will lead to optimal allocation. Hardin is quite aware of the coercive quality of his prescription. "Every new enclosure of the commons involves the infringement of somebody's personal liberty. . . . It is the newly proposed infringements that we vigorously oppose; cries of 'rights' and 'freedom' fill the air. When men mutually agreed to pass laws against robbing, mankind became more free, not less so." Hardin, *supra* note 77, at 1248.

Four points deserve mentioning. First, whatever the situation viewed from Hardin's atemporal eminence, I find some of his "newly proposed infringements on liberty" troubling. For example, as much as I share Hardin's aversion to advertising, I am unwilling to sweep away First Amendment freedoms, including the right to play music in one's store. (I find it particularly difficult to blame our advertising—which is nothing if not lascivious—on the Puritans.) Second, in small compass, Hardin explicitly makes Hobbes's argument for the omnipotence of the state, an argument that underpins all liberal notions of administration. Third, Hardin's imperialism is rarely remarked upon. The requirement of security, however, leads to an unbounded liberalism, in which potential enemies are drawn into the consensual web of the liberal order. While this may indeed be the world's fate, it certainly has imperial aspects, best stated by Immanuel Kant in *To Perpetual Peace: A Philosophical Sketch*, reprinted in *PERPETUAL PEACE AND OTHER ESSAYS* 107 (Ted Humphrey trans., 1983) (1795). Fourth, despite my use of

C. *The End of Nature*⁸²

The global commons idea has gained a great deal of currency. The notion that the entire globe should be common and within the domain of politics has been uncritically adopted by the international environmental community.⁸³ Hardin's argument implicitly claims that all which is not private, or at least controlled by the government, is common and organized within human dominion.⁸⁴ Similarly, for the economist using the language of externalities, the idea of the commons is also implicit.⁸⁵ Although radical, the claim that politics is literally omnipresent is not new. Immanuel Kant explicitly denied the possibility of a realm outside politics by denying the possibility of a rational law that could separate the world of legislation from a natural world.

It is possible for me to have any external object of my choice as mine, that is, a maxim by which, if it were to become a law, an object of choice would *in itself* (objectively) have to *belong to no one* (*res nullius*) is contrary to rights.⁸⁶

Sophocles in Section III D, I doubt that Hobbesian man is capable of tragic greatness, or whether the liberal order is likely to instill or can sustain *megalopsychia*.

⁸² The title of this section is from Bill McKibben's excellent book, *THE END OF NATURE* (1989).

⁸³ "The traditional forms of national sovereignty are increasingly challenged by the realities of ecological and economic interdependence. Nowhere is this more true than in shared ecosystems and in 'the global commons'—those parts of the planet that fall outside national jurisdictions." *WORLD COMMISSION ON THE ENVIRONMENT AND DEVELOPMENT, OUR COMMON FUTURE* (The Brundtland Report) 261 (1987) [hereafter *OUR COMMON FUTURE*].

⁸⁴ *But see generally* EDWARD ABBEY, *DESERT SOLITAIRE; A SEASON IN THE WILDERNESS* (1968); ALDO LEOPOLD, *A SAND COUNTY ALMANAC* at viii (1949) (arguing that land should not be viewed as a commodity belonging to humans).

⁸⁵ Those not inside the microeconomic transaction, including the economist, are equally outside the microcosm; the common is indeterminate, and hence open to discussion by all. (The commons is the ground of future analysis.)

⁸⁶ IMMANUEL KANT, *THE METAPHYSICS OF MORALS* 68 (Mary Gregor trans., 1991) (1797). Kant continues:

For an object of my choice is something that I have the *physical* power to use. If it were nevertheless absolutely not within my *rightful* power to make use of it, that is, if the use of it could not coexist with the freedom of everyone in accordance with a universal law (would be wrong), then freedom would be depriving itself of the use of its choice with regard to an object of choice, by

Interested in the bounds of moral reason, Kant posited the potential dominion that a rational agent might have over a thing. In a technological society, however, everything is an object of human agency. Modern technology has realized Kant's argument. What lies outside global climate change? The answer is nothing, because technology allows human activity to affect the entire globe. With that answer, the distinction between nature and culture is gone. This is the point of Bill McKibben's book, *The End of Nature*.

The idea of nature will not survive the new global pollution—the carbon dioxide and the CFCs and the like. This new rupture with nature is different not only in scope but also in kind from salmon tins in an English stream. We have changed the atmosphere, and thus we are changing the weather. By changing the weather, we make every spot on earth man-made and artificial. We have deprived nature of its independence, and that is fatal to its meaning. Nature's independence is its meaning; without it there is nothing but us. . . .

*But we have ended the thing that has, at least in modern times, defined nature for us — its separation from human society.*⁸⁷

For Kant in theory, and for McKibben in practice, liberal environmental jurisprudence verges on being an oxymoron. The thorough-going liberal acknowledges no law regarding nature, and acknowledges no political authority not contained within liberalism itself.⁸⁸ The planet has become an object of human concern and

putting *usable* objects beyond any possibility of being *used*; in other words, it would annihilate them in a practical respect and make them into *res nullius*, even though in the use of things choice was formally consistent with everyone's outer freedom in accordance with universal laws. But since pure practical reason lays down only formal laws as the basis for using choice and thus abstracts from its matter, that is, from other properties of the object *provided only that it is an object of choice*, it can contain no absolute prohibition against using such an object, since this would be a contradiction of outer freedom with itself. But an object of my *choice* is that which I have the physical capacity to use as I please, that whose use lies within my power (*potentia*) . . . It is therefore an a priori presumption of practical reason to regard and treat any object of my choice as something that could objectively be mine or yours.

Id. at 68-69.

⁸⁷ MCKIBBEN, *supra* note 82, at 58, 64.

⁸⁸ This argument is restricted to Kant's rational being of the moral works. A Kantian response to the passage would be that much of law is a human enterprise, not a purely moral one. Humans may be contrasted with purely moral beings in part by their finitude—their consciousness of limitations other than purely rational ones. This response refutes my remark that Kant

responsibility, not the ground of our actions, but the world of our possibility. "This new reality, from which there is no escape, must be recognized—and managed."⁸⁹ If there is no separate nature, environmental law can only address the use of things.

D. Oedipal Struggles

Perhaps due to a historical imagination that conjures an age of minimal participation in economic activity by formal politics, regulation requires a level of political justification not required of markets.⁹⁰ Widespread regulation of economic activity is a relatively recent phenomenon, associated in the United States with the New Deal. Regulation continues to be seen as artificial governmental interference with the prior order of things. For example, Judge Breyer maintains that "the relation between the regulator and the regulated is adversarial. In part, this is because the regulator must lead the industry to perform in a way different from that dictated by the incentives of the unregulated market."⁹¹

For this reason, conscientious regulation can only follow market failure. Yet market failure is insufficient to justify regulation.⁹² Government intervention is only justified when a bureaucratic deci-

denies the possibility of a realm outside politics—he denies the possibility of a realm outside morality. While perhaps fruitful for a future politics that draws on the Kant of the *Critique of Judgment*, my initial remark is nonetheless true for contemporary politics, which draws on the Kant of the moral works. Cf. IMMANUEL KANT, *CRITIQUE OF JUDGMENT* (J.H. Bernard trans. 1951) (1790).

⁸⁹ OUR COMMON FUTURE, *supra* note 83, at 1; *see also* Special Issue, *Managing Planet Earth*, *SCI. AM.*, Sept. 1989, at 1.

⁹⁰ I take no stand on the question of whether the United States ever experienced an economy that might be called *laissez faire*; my claim is only that the idea of the unregulated or natural market remains a vital part of our self-understanding. *See, e.g.*, ACKERMAN, *supra* note 62, at 113-30.

⁹¹ BREYER, *supra* note 67, at 6.

⁹² Throughout this Article, markets are privileged over administration. Markets are presumptively the mode of public choice, and other modes are used essentially to supplement market processes. The substantive reasons for this presumption may be summarized, first, as a result of historical prejudice. Second, liberal ideology inherently prefers markets. Individual choice is exercised more frequently and more directly through markets than through legislatures, so markets are more authentic. Third, markets are preferable due to their superior efficiency and information allocation, as discussed below. Even so, these substantive reasons for the prejudice that marks this argument are dwarfed by my sense that contemporary politics is conducted in the language of economics. *See infra* note 172 and accompanying text (discussing relationship between markets and politics).

sional process can provide a "better" outcome, such as by choosing a technology for pollution abatement.⁹³ Better is usually defined as what an efficient market would have done. The works of neo-classical liberal regulatory theorists such as Judge Breyer categorize administrative ways to simulate market behavior and ways to balance bureaucratic weaknesses with the imperfections of existing markets.⁹⁴ Similarly, the perspective of the commons justifies privatization (indirect government allocation through the establishment of a market) because of the structural weaknesses built into the market. Both rationales assume that the market cannot provide the optimal outcome.⁹⁵

But just as no simple market exists, in the real world there is no simple government, and the turn from liability regimes to administration is a complex process, the maturation of the body politic. The classic cases under the major environmental statutes⁹⁶ are struggles over how to realize an idea of society mandated—in the

⁹³ There are some theorists who baldly hold this theory. See, e.g., BREYER *supra* note 67. I think market failure serves better as a conceptual tool with which to think about regulation, than as an absolute prerequisite.

⁹⁴ Legislatures are not theorists, and may act from a variety of motives. Nonetheless, legislative action has seemed broadly in line with the thoroughgoing commitment to market structures protected by the common law. "In the environmental field, despite the potential reach of legislative supremacy, legislatures have usually not been eager to displace the working of the common law. Most legislation has sought to supplement or clarify pre-existing common law norms." PLATER ET AL., *supra* note 9, at 243.

⁹⁵ See KENNETH ARROW, *SOCIAL CHOICE AND INDIVIDUAL VALUES* (2d ed. 1963). "If we exclude the possibility of interpersonal comparisons of utility, then the only methods of passing from individuals tastes to social preferences which will be satisfactory and which will be defined for a wide range of sets of individual orderings are either imposed or dictatorial." *Id.* at 59; see also Bernard Grofman, *Public Choice, Civic Republicanism, and American Politics: Perspectives of a "Reasonable Choice" Modeler*, 71 TEX. L. REV. 1541 (1993). The market cannot provide a rational outcome for another reason, as discussed by economist Kenneth Arrow. Arrow's Theorem holds that in any group of three or more actors, the behavior of the actors must in some way be constrained in order for any decision-making process to produce a necessarily rational outcome. ARROW, *supra*, at 46-60. Facially neutral economic arguments thus presuppose some level of choice, and therefore political bias. I do not discuss Arrow's Theorem in the text because the theorem seems useless for arguing for any specific policy. The debate between various modes of politics, here bureaucracy and the market, is not over which will provide a truly rational outcome, but over which will produce a more rational outcome. For all its elegance, in policy debate Arrow's Theorem is just a formal reminder that the entire enterprise of ordering human affairs is dubious.

⁹⁶ See, e.g., statutes cited *supra* note 50.

abstract and so incomplete—by Congressional legislation. Environmental law cases are as much about governance and the uses of law as they are about the environment. From this perspective, the classic environmental law cases fall into two types. Each type addresses a basic political relationship transformed by an environmental statute.

The first type of environmental litigation challenges the use of regulation rather than market mechanisms (reined in by the safeguards of archaic environmental law)⁹⁷ to reach a particular societal outcome. The statutes at issue in these cases alter the relationship between the political mechanisms of regulation and the market, and thereby raise litigable questions about the details of the new relationship.⁹⁸ In refining the legislative notion of appropriate administrative action under the statute, and, conversely, the area of autonomy marked off by the regulation, courts give nuance and detail to the relationship between the government and the governed, and thereby articulate the manner in which government exercises power over society.⁹⁹

The second group of classical environmental law cases challenges environmental administration,¹⁰⁰ not vis-a-vis the claims of society, but in terms of governance itself. In particular, National Environ-

⁹⁷ At the same time, archaic environmental law has expanded into new areas, such as toxic tort. In many instances archaic law provided more than minimal safeguards to individual rights, and by extension, to the environment. See *supra* notes 45-60 and accompanying text (discussing archaic environmental law).

⁹⁸ See, e.g., *Ruckleshaus v. Sierra Club*, 463 U.S. 680 (1983); *Duke Power Co. v. Carolina Envtl. Study Group, Inc.*, 438 U.S. 59 (1978); *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc.*, 435 U.S. 519 (1978); *Natural Resources Defense Council, Inc. v. Environmental Protection Agency*, 683 F.2d 752 (3d Cir. 1982); *Reserve Mining Co. v. Environmental Protection Agency*, 514 F.2d 492 (8th Cir. 1975), *modified sub nom.* *Reserve Mining Co. v. Lord*, 529 F.2d 181 (1976).

⁹⁹ There are many procedural ways to do this. Plaintiffs may challenge government action or inaction by challenging the statute itself, perhaps through a takings claim. See *infra* note 183 and accompanying text (discussing takings cases). Plaintiffs may also challenge the defendant's failure to act under the statute, or argue that the defendant's action is not authorized by the statute, or that the defendant has misread the statute, so that the defendant's action does not reflect the true meaning of the law. Each of these tactics has a political result, and further defines the relationship between government and governed.

¹⁰⁰ See *Weinberger v. Romero-Barcelo*, 456 U.S. 305 (1982) (challenging other governmental agencies' administration insofar as they affect environment).

mental Policy Act (NEPA) Section 102 mandates that environmental values be considered in the decisions of virtually every organ of the federal government alongside its other goals.¹⁰¹ “Congress did not establish environmental protection as an exclusive goal; rather, it desired a reordering of priorities, so that environmental costs and benefits will assume their proper place along with other considerations.”¹⁰² NEPA explicitly raises a conflict inherent in environmental politics between environmental values and other values. This second set of classical environmental cases challenges whether the environmental end in question is appropriately pursued to the disadvantage or advantage of some competing policy. These cases basically ask whether the government has correctly ordered its priorities.¹⁰³

The distinction between classical environmental law cases is primarily analytical. The inquiries undertaken by the two types of cases overlap. A government that does not set its priorities correctly treads on its citizenry.¹⁰⁴ Similarly, a government that treads on its citizenry has an indefensible set of priorities. This is a basic lesson from American constitutional history—the proper relationship between government and civil society requires the proper relationship among the parts of government. Classical environmental law

¹⁰¹ 42 U.S.C. §§ 4321-70 (1988).

¹⁰² *Calvert Cliffs' Coordinating Comm., Inc. v. United States Atomic Energy Comm'n*, 449 F.2d 1109, 1112 (D.C. Cir. 1971). Judge Skelly Wright's opinion set the tone for subsequent interpretation of NEPA.

¹⁰³ See, e.g., *Weinberger*, 465 U.S. at 305; *Tennessee Valley Auth. v. Hill*, 437 U.S. 153 (1978); *Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council*, 435 U.S. 519 (1978); *Kleppe v. Sierra Club*, 427 U.S. 390 (1976); *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402 (1971), *overruled by* *Califano v. Sanders*, 430 U.S. 99 (1977); *Public Citizen v. United States Trade Rep.*, 5 F.3d 549 (D.C. Cir. 1993); *Natural Resources Defense Council, Inc. v. Morton*, 458 F.2d 827 (D.C. Cir. 1972).

¹⁰⁴ In the context of environmental crime, the implicit tension between regulation and private action, between the will of the state and that of the individual, makes for a dramatic conflict. Both case law and statutory law increasingly provide for criminal liability for environmental violations. See generally Helen J. Brunner, *Environmental Criminal Enforcement: A Retrospective View*, 22 ENVTL. L. 1315 (1992); Thomas M. Downs, *Recent Developments in Environmental Crime*, 17 WM. & MARY J. ENVTL. L. 1 (1992); *Eighth Survey of White Collar Crime: Environmental Crimes*, 30 AM. CRIM. L. REV. 565 (1993); Symposium, *Environmental Criminal Law*, 34 ARIZ. L. REV. 571 (1992); Symposium, *Crimes Against the Environment: Current Policies and Future Trends in Environmental Criminal Enforcement*, 16 COLUM. J. ENVTL. L. 201-391 (1991). Because of its kinship to tort, environmental crimes might also be understood—and taught—in relation to archaic environmental law.

thus recapitulates the fundamental concerns of the American legal heritage.¹⁰⁵

The prevalence and technicality of environmental litigation re-emphasizes the complexity of the turn from market-based archaic environmental law to regulatory classical environmental law. Administrative law makes explicit the idea of limited government implicit in archaic environmental law. Administrative agencies take over only when markets have failed and government action could do better. The courts serve to ensure that administration does not aggregate too much power. Classical environmental law is thus a complement to the market that is, somewhat paradoxically, obsessed with the market.

Even where markets fail, the structure of classical environmental law incessantly recalls its market origins. Administrative law begins by recognizing the failure of the market to harness properly the disparate wills of actors. By passing regulations, bureaucrats attempt to replace consumer choice aggregated through the flawed unregulated market with reasoned guesses about the aggregation of consumer choice in a hypothetical well-functioning market.¹⁰⁶ In doing so, bureaucrats, like Oedipus, try to take various and inchoate desires that converge disastrously, and place them within a rational frame in which the exercise of will leads to satisfaction rather than disaster. In contrast to Oedipus, at least the Oedipus at Colonus, the bureaucrats who create classical environmental law do not cease to glorify the individual will. The exercise of rational choice remains the lodestar of regulation; regulation justifies itself by claiming to satisfy the will of more individuals than a flawed market.

But administrative law can only satisfy the will of some people by thwarting the will of others. Regulation is deliberately coercive, and the relation between regulator and regulated is adversarial.¹⁰⁷ To justify this coercion, theorists of administrative law refer to nega-

¹⁰⁵ See CASS SUNSTEIN, *AFTER THE RIGHTS REVOLUTION* 13, 25-29 (1990) (situating right to clean environment in fabric of constitutional law).

¹⁰⁶ In what may be characterized as the antitrust approach, regulators may struggle to imagine, and then provide, a well-functioning market. This approach is both important and different from direct regulation, but has been of less importance in the environmental context than classical regulation. Moreover, this approach more fundamentally resembles constructed markets, discussed below, than it does classical regulation. See *supra* note 68 and accompanying text (discussing the establishment of a European market).

¹⁰⁷ BREYER, *supra* note 67, at 6.

tive externalities and destructive collective action phenomena. Against such anarchy, the rule of bureaucrats is the only safeguard.¹⁰⁸ In the practice of administrative law, the conscious rationality of bureaucrats replaces the will of market actors, but that practice is preceded and legitimated by the autonomous choices of the marketplace. While administration straddles the divide between consciousness and unconsciousness, it ultimately locates all normative authority in the will of individuals.¹⁰⁹

To summarize the ideal history so far, archaic law conceptually precedes classical law because the market or archaic law failed to provide remedies, thus necessitating the aggregation of tort in regulation. Archaic law precedes classical environmental law in another sense: archaic law depends for its authority on the prior order, because it harks back to the order disturbed by the tortious activity. Classical environmental law, in contrast, has no authoritative prior order. Prior to regulation, the market was flawed, and therefore has little authority. Instead, classical environmental law draws authority from an ideal efficient market. By providing its own authority, classical environmental law is atemporal, and is continually justified.

¹⁰⁸ Ultimately justified by necessity in a tragic world, administrative law recapitulates the birth of the liberal order. (Those who might think my use of the word "tragic" not only wrong but also excessive may recall the title of Garrett Hardin's article, *supra* note 77.) Administrative law is thus a response not only to market failure, but also to the failure of human solidarity.

¹⁰⁹ It might be argued that the appropriate, and perhaps the actual, model for the agency is the well-functioning legislature, not the efficient market.

Implicit in this development [of modern administration review] is the assumption that there is no ascertainable, transcendent "public interest," but only the distinct interests of various individuals and groups in society. . . . This analysis suggests that if agencies were to function as a forum for all interests affected by agency decisionmaking, bargaining leading to compromises generally accepted to all might result, thus replicating the process of legislation. Agency decisions made after adequate consideration of all affected interests would have, in microcosm, legitimacy based on the same principle as legislation. . . .

Richard B. Stewart, *The Reformation of American Administrative Law*, 88 HARV. L. REV. 1667, 1712 (1975). Stewart conceives of legislatures, however, as similar to markets; that is, as institutions for the aggregation of private interests. Even in Stewart's terms, bureaucracies are engaged in an Oedipal struggle.

IV. MODERN ENVIRONMENTAL LAW: THE DECENTRALIZATION OF POLITICS

A. *The Atrophy of Administration*

In recent years the belief that centralized government can accomplish the ends it sets for itself has dramatically diminished.¹¹⁰ Broad social ends, associated with the Russian Revolution and its aftermath, including the New Deal, now seem beyond the capability of government and its bureaucratic methods. The argument for why the old faith in governance was misplaced is familiar. Government regulation is wasteful, government functionaries lack the incentives to do their jobs well or creatively, and so forth. In contrast, competitive markets ensure that people work hard, study their business, and seek creative solutions to defend or enlarge their market share in the face of competitive innovation. In sum, government regulation is ineffective in comparison with market mechanisms.¹¹¹

As belief in governmental efficacy has declined, so has faith in the legitimacy of governmental processes. Traditionally, United States laws have been legitimated by the democratic process through which they were established. Laws have not drawn legitimacy from either showing efficiency in distributing goods, or, at least not formally, from demonstrating that a certain legal arrangement is allocatively optimal. But lately the claim that a law, as the outcome of a legislative process, is democratically legitimate has been undermined, both within the academy and among the citizenry. Governments are seen as prey to a host of special interests that are not representative of the people. The scale of contemporary national politics gives force to the argument that government is too large to know and care about the welfare of its ant-like constituents.

¹¹⁰ This Section attempts to summarize several aspects of the intellectual milieu that influence American environmental doctrine, and is necessarily somewhat vague. It would be difficult to show that my characterization of this diffuse milieu is basically correct, and certainly I have simplified. To specify somewhat: by neo-classical economics I mean the collection of doctrines espoused by the editorial board of *The Economist*.

¹¹¹ *But see* Jonas Prager, *Contracting-Out: Theory and Policy*, 25 N.Y.U. J. INT'L L. & POL. 73 (1992) (arguing that significant contracting costs, such as monitoring performance and opportunistic contractor behavior, may make government provision of many services less costly than private sector provision of same services).

Many who had traditionally defended an activist government in partisan politics are now dissatisfied with government action. Discontent with democratic political processes has encouraged the widespread turn toward markets.¹¹² Markets are arguably more neutral than legislatures dominated by special interest groups. Moreover, the enjoyment of private property has an intimate quality regardless of how broad the market might be. In a consumer society, people—even political theorists—express and define themselves largely through market activity, particularly shopping. Consumption, not participation in representative politics, defines the bourgeois inhabitants of large polities.¹¹³ In brief, markets are currently seen as more efficacious, and if not exactly more legitimate, then at least more authentic, than legislatures. Consequently, laws should defer to the market whenever possible. In the environmental arena, the change in the zeitgeist has engendered modern environmental law, which is the attempt to realize environmental policy through the construction of markets. As yet, little explicitly modern environmental law exists. Most modern environmental law is still merely an argument for incentive-based systems of regulation.¹¹⁴

Incentive systems may be considered analytically in one of two forms. The first involves the legislation of entitlements and the sec-

¹¹² See BRUCE A. ACKERMAN ET AL., *THE UNCERTAIN SEARCH FOR ENVIRONMENTAL QUALITY* (1974) (providing an early example). Other responses do not turn to markets. Among legal academics, much of contemporary discontent with democratic politics is expressed in communitarian and civic republican critiques of democratic politics. These perspectives, while interesting, have yet to make themselves politically relevant.

¹¹³ For a more elaborate version of this argument, see David A. Westbrook, *One Among Millions: An American Perspective on Citizenship in Large Polities*, 2 *ANNALES DE DROIT DE LOUVAIN* 333 (1993).

¹¹⁴ See generally, FREDRICK R. ANDERSON ET AL., *ENVIRONMENTAL IMPROVEMENT THROUGH ECONOMIC INCENTIVES* (1977); JOHN H. DALES, *POLLUTION, PROPERTY AND PRICES* (1968) (providing an early statement of the idea of pollution charges, offered in the context of water pollution); TIMOTHY E. WIRTH & JOHN HEINZ, *PROJECT 88: HARNESSING MARKET FORCES TO PROTECT OUR ENVIRONMENT: INITIATIVES FOR THE NEW PRESIDENT* (1988); Bruce A. Ackerman & Richard B. Stewart, *Reforming Environmental Law*, 37 *STANFORD L. REV.* 1333 (1985); Adam Chase, *The Efficiency Benefits of "Green Taxes": A Tribute to Senator John Heinz*, 11 *UCLA J. ENVTL. L. & POL'Y* 1 (1992); Jerold S. Kayden, *Market-Based Regulatory Approaches: A Comparative Discussion of Environmental and Land Use Techniques in the United States*, 19 *B.C. ENVTL. AFF. L. REV.* 565 (1992).

ond involves the imposition of taxes.¹¹⁵ The legislation of entitlements, like granting a subsidy, is a use of the positive power of government to favor actors in the marketplace. In contrast, the imposition of taxes disfavors actors in the marketplace. Neo-classical economics characterizes subsidy and tax as interventions in a prior, and presumably healthy, market. The dichotomy between entitlement and tax both reflects and differs from the neo-classical economist's tendency to characterize virtually every market intervention as either a subsidy or a tax.¹¹⁶ This vision looks backward, to a time of consumer choice unconstrained by the distortions of intervention.¹¹⁷ Modern environmental law, by contrast, looks forward to an accurate market, in which allocative efficiency is attained because the true societal cost of an item is represented by its price. To achieve this market, a far more complex legal regime is required than the simple collection of common law property and contract rights, and the other minimal accoutrements of civilization, beloved by neo-classical economists.

In its attempt to construct an accurate market, modern environmental law has adopted many of the normative arguments of classical economics. These arguments counsel that government should not interfere with healthy markets, should limit centralized governance to providing an infrastructure required for market activity, and should act to heal a badly flawed market. Theoretically, modern environmental law arises only when markets are unhealthy or when new markets are required. But on inspection, environmentalists find most markets unhealthy, so opportunities to heal flawed markets abound. Moreover, in a technological age, new markets

¹¹⁵ Many economic interventions, for example labeling requirements, may not be well described as either subsidies or taxes. See generally *infra* notes 116, 140 and accompanying text (discussing subsidies and taxes).

¹¹⁶ The bifurcation between subsidy and tax may hide as much as it reveals. Important differences among the members of each category abound. Moreover, one might characterize the same intervention, such as a hazardous waste regulation, as both a tax on one industry (manufacturers) and a subsidy of others (lawyers or waste management consultants). Because it obscures nuance, lends itself to specious polarization, and masks the problem of tense addressed in the text, the subsidy and tax categories have probably had a deleterious effect on politics.

¹¹⁷ I would go further and say that the aspiration of neo-classical economics is for a market in which there are no external intrusions on consumer choice, which would be a market prior to culture. While I know of no economic work that is entirely forthcoming with this desire, I am reminded of Rawls' argument from the original position. See JOHN RAWLS, A THEORY OF JUSTICE (1971).

are constantly being created. In contrast to neo-classical economics, which tends to favor restricting the scope of governance, modern environmental law uses economic arguments to increase the ambit of governance over environmental questions.¹¹⁸

B. *The Move to Incentives*

As discussed above, the tragedy of the commons justifies regulatory limitations on use of the commons. It also justifies abolishing the public ownership of the commons through privatization and free market environmentalism.¹¹⁹ To return to Hardin's example: If the common grazing land is converted into freehold property, then it will no longer be in the herdsman's interest to overgraze the land.¹²⁰ In the long run, overgrazing would make him poor. Consequently, he will not buy more cows than his land can support. Also, because exclusive use is one of the characteristics of ownership, the herdsman can exclude other herdsman's cows. Likewise, other owners can exclude his cows. Because no herdsman can free-load by grazing cows on another's land, each herdsman will buy no more cows than the land can support. He will buy the maximum number of cows that his land can support. The result is allocatively optimal: wealth, measured in cows, is maximized, and resources are only minimally depleted.

Now suppose that one farmer is a genius of cattle farming, and can produce healthy calves more cheaply than the other farmers. He will start selling extra calves to his neighbors rather than turning them into veal for his own table. As his operation expands, he will need more land, which he can afford to buy from less efficient farmers. Over time, as productivity increases the land will be transferred into the hands of those who are better at raising cattle. The creation of entitlements (through land ownership) thus provides the incentives not only for husbandry of existing resources, but also for material progress. Where the overgrazed common had experienced a disastrous fall in productivity, the privatized common

¹¹⁸ Given the geneology of the argument, the tendency of modern environmental law to argue for more government—albeit government of a new sort—is ironic enough.

¹¹⁹ This Article argues that there is a logical progression of legal responses to environmental problems. For a similar argument, rooted in the language of the commons, see Carol M. Rose, *Rethinking Environmental Controls: Management Strategies for Common Resources*, 1991 DUKE L.J. 1.

¹²⁰ See *supra* notes 77-80 and accompanying text (discussing Hardin's example).

experiences instead optimal productivity, improving as new techniques for cattle production are discovered. All these benefits rest on creating an entitlement to a part of the once-common grazing land.

Free market environmentalism advocates creating property rights and then allowing market behavior in the property rights to achieve environmental ends. Stewardship of the environment is motivated by the property owner's self-interest. Good stewardship results because the owner, unlike the government, is in close contact with the environment, and therefore pays attention to the environment's needs.¹²¹

This argument should not be overstated to imply that government is not necessary: ordinary markets require government, and so does environmental policy achieved through creating entitlements.

Free market environmentalism emphasizes an important role for government in the enforcement of property rights. With clearly specified titles—obtained from land recording systems, strict liability rules, and adjudication of disputed property rights in courts—market processes can encourage good resource stewardship. It is when rights are unclear and not well enforced that over-exploitation occurs.¹²²

This view of the role of government in the creation of entitlement systems is still too narrow. Even when it does not exercise stewardship over the environment itself, governmental activity includes more than enforcement. The government creates the property right.¹²³ As the passage above notes, much of the value of rights

¹²¹ As Anderson and Leal argue:

At the heart of free market environmentalism is a system of well-specified property rights to natural resources. Whether these rights are held by individuals, corporations, non-profit environmental groups, or communal groups, a discipline is imposed on resource users because the wealth of the owner of the property right is at stake if bad decisions are made. Of course, the further a decision maker is removed from this discipline—as he is when there is political control—the less likely it is that good resource stewardship will result. Moreover, if well-specified property rights are transferable, owners must not only consider their own values, they must also consider what others are willing to pay.

TERRY ANDERSON & DONALD LEAL, *FREE MARKET ENVIRONMENTALISM* 3 (1991).

¹²² *Id.*

¹²³ To extend a common metaphor: Government cuts the wood of liberty into lengths and bundles the sticks together. We call the finished product

stems from their transferability.¹²⁴ Free market environmentalism thus recreates the private law system of property, contract, and tort that archaic environmental law relied on and that classical environmental law attempted to simulate.¹²⁵ Modern politics sees the primary role of government as creating and maintaining markets, not providing extra-market remedies or correcting market failure. Modern environmental law creates markets that will realize environmental policies in a decentralized and presumptively efficient fashion.

The Clean Air Act (CAA)¹²⁶ illustrates the role of government in creating entitlements. It also provides the most developed use of an entitlement regime for environmental ends in American law. Prior to 1990, the regulatory regime established under the CAA defined three methods of trading pollution: bubbles, netting, and offsets.¹²⁷ All three allow an enterprise to operate an otherwise impermissible source of pollution if the enterprise "trades" the pollution for a pollution reduction elsewhere. These trades allow the enterprise to comply with CAA required emission reductions. Bubbles and netting involve trade-offs among sources of pollution within a single firm. In contrast, offsets are traded frequently among firms, and are therefore of the most theoretical interest.¹²⁸

Offset entitlements¹²⁹ allow (otherwise prohibited) new large stationary sources of air pollution within areas that have not attained the air quality levels required by the CAA. If the owner of a new source of pollution can show that the total level of air pollution will drop, regulators will permit the new source of pollution. In theory,

private property, but it is the creation of governmental efforts. Alternately, the availability of enforcement mechanisms can be understood, in American Legal Realist fashion, as the creation of the right.

¹²⁴ Transfers require a healthy market. To preserve the health of the market requires a law of corporations, antitrust, and so forth.

¹²⁵ Archaic environmental law attempts to recover a functional market; classical environmental law attempts to simulate an efficient market; modern environmental law attempts to create an accurate market.

¹²⁶ 42 U.S.C. §§ 7401-7671q (1988 & Supp. 1992).

¹²⁷ The CAA also allows emissions banking. Some of the incentive systems "under" the CAA have been devised largely by the Environmental Protection Agency (EPA). See *Chevron v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 845 (1984), *reh'g denied*, 468 U.S. 1227 (1984) (affirming validity of EPA's decision to employ bubbles).

¹²⁸ See generally Robert W. Hahn & Gordon L. Ester, *Marketable Permits: Lessons for Theory and Practice*, 16 *ECOLOGY L.Q.* 361 (1989) (disussing offset trading).

¹²⁹ 42 U.S.C. § 7503(c) (Supp. 1992).

offset entitlements will allow pollution to be reduced on a least-cost basis.

The 1990 CAA amendments¹³⁰ apply this offset approach to the problem of sulfur dioxide (SO₂) deposition. As amended, the CAA provides a tradeable permit system for electric power plants that emit SO₂. EPA will issue a fixed number of permits to existing plants.¹³¹ All plants must have a permit to operate.¹³² These permits are freely exchangeable between plants, thus providing the means for a market for pollution rights and increasing incentives for plants to reduce their own emissions. EPA will oversee a systematic reduction in the total number of permits over a period of years.

Both the offset program and the SO₂ permit program illustrate the close relation between regulation and entitlement. The entitlements established by EPA are rather intangible forms of property. They establish rights enforceable against EPA itself. EPA will not allow the polluting activity unless a plant has a permit. Not coincidentally, the CAA entitlement programs have been established in situations where classical regulation would have been relatively easy. The offset program applies to large, stationary sources, and the new SO₂ regime applies primarily to public utilities. Such enterprises are amenable to regulation—EPA can monitor their activities and understands the relevant technologies. Also, these enterprises have a long history of government involvement. Entitlements may be a more efficient way to achieve environmental ends. However, at least as demonstrated by the CAA, entitlements do not offer clear

¹³⁰ Clean Air Act Amendments of 1990, Pub. L. No. 101-549 (codified as amended at 42 U.S.C. §§ 7401-7671q (1988 & Supp. 1992)). The Clean Air Act amendments of 1990 “easily represent the most significant legislation ever passed to control air pollution.” Warren H. Husband, Comment, *New Approaches and New Polluters: The Practical Impact of the Clean Air Act Amendments of 1990*, 19 FLA. ST. U. L. REV. 861 (1992). Already, the literature is correspondingly vast. Because of the CAA’s impact on business, the American Bar Association and the Practising Law Institute have published innumerable pieces for practitioners. Significant academic contributions include: John P. Dwyer, *The Use of Market Incentives in Controlling Air Pollution: California’s Marketable Permits Program*, 20 ECOLOGY L.Q. 103 (1993); Symposium, *Proceedings and Papers of the Conference on Environmental Law: Air Pollution Control in the 1990s—Learning from Past Mistakes*, 1990 ANN. SURV. AM. L. 13; Symposium, *The Clean Air Act Amendments of 1990*, 21 ENVTL. L. 1549 (1991); Henry J. Handzel, Jr., *The 1990 Clean Air Act Amendments*, 64 WIS. L., May 1991, at 14.

¹³¹ 40 C.F.R. § 73.70(c) (1992). Sulfur dioxide (SO₂) is a leading cause of acid rain.

¹³² 42 U.S.C. § 7661a(a) (Supp. 1992).

guidance on how to bring problems within the ambit of environmental law which have not been amenable to classical regulation. Typical of modern environmental law, the issuance of entitlements not only constitutes an alternative to classical regulation, but also deepens EPA's administrative reach.¹³³

An incentive system with more widespread potential is taxation. Taxes are primarily considered a means for raising revenue, and only secondarily a means for governance. Every tax produces a distortion because rational individuals will avoid the tax. Generally, socially approved activities (making money, holding property) have been taxed, and so attempts to avoid the tax are viewed as unfortunate side effects of the government's need for revenue. The great exceptions are sin taxes such as those on alcohol and tobacco, which are intended to discourage use of the harmful product as well as to raise revenue. Reduction in the use of tobacco is considered a proper governmental purpose, rather than a distortion of a beneficial market.

Modern environmental law considers sin taxes a model for governmental activity in a market. For modern environmental law, taxes are primarily a means of governance, and only secondarily a means for raising revenue. Rather than producing an unfortunate distortion, the tax actively shapes a market by inhibiting an undesirable state of affairs. Despite considerable theoretical discussion, there is no good example of a national statute that uses taxation for environmental ends.¹³⁴ However, in theory, and in very limited practice, there are three approaches to setting an environmental

¹³³ The CAA does not clearly address a number of problems particular to entitlements. Because it applies to relatively few producers, who were in some degree consigned to being regulated, the CAA largely avoids what may be the largest political problem in establishing an entitlement system: difficulties with the fair distribution of the resource. Despite the various problems involving political lobbying over the issue of soft coal/hard coal, the CAA involves a relatively small number of actors operating in a well-defined legal system. The problems attendant to more ambitious entitlement systems, such as combatting global climate change, are exponentially more complex.

Another pollution market will develop in California's South Coast Air Quality Management District (SCAQMD). The SCAQMD has developed a smog market in which businesses can trade pollution allocations. Marla Cone, *Smog Market Set to Open in Southland*, L.A. TIMES, Dec. 28, 1993, at A1; see Gregory J. Wilcox, *Smog-Credits Auction Postponed*, L.A. DAILY NEWS, Dec. 28, 1993, at 1 (noting that auction was postponed from Jan. 10 to Mar. 24, 1994).

¹³⁴ One might add that various penalty schedules are in effect taxes. Neither fees nor fines, unless set with a view to a particular environmental result, constitute a tax in the proactive sense used here.

tax, which may be roughly categorized according to how they are set.

The first and most ambitious approach is to imagine a state of the world, and then to create a tax structure that provides the incentives for private actors to bring about this state of the world. The problem here is finding the correct quantum for the tax. An excessive tax causes inefficient behavior as taxpayers struggle to avoid the tax at the cost of some beneficial activity. Yet an inadequate tax is ignored or accepted as a cost by the taxpayer, and the desired result is not attained. If the desired result is as complicated as a given level of ambient air pollution, setting a tax may be impossible, because it requires the taxing agent to make a "cost of abatement" calculation for each business. The costs of gathering and processing so much data are enormous, and results obtained from such calculations are necessarily provisional. When the tax rate becomes effective, business behavior changes. As the calculations setting the tax become obsolete, officials find it increasingly difficult to make predictions of any sort, and unintended distortions are inevitable.

The second type of tax uses the cost of an activity to set the level of the tax. For example, an effluent tax is imposed on firms that discharge into the Emscher river, a tributary of the Rhine. The tax money is used to pay for a water treatment plant at the juncture of the Rhine and the Emscher. The rate of the tax is a function of the costs of the plant.¹³⁵ In the United States, the rapid rise of fees for the disposal of waste have a dampening effect on the production of waste. Although generally not collected by the state, and generally not set with a view to optimal levels of production of waste or long term land use, such fees do imperfectly reflect the cost of waste disposal. An increasing amount of work is being done on environmental accounting, which attempts to ascertain the diffuse and long-term costs of various activities.¹³⁶ At least theoretically, such

¹³⁵ See Zygmunt J.B. Plater, *Coal Law from the Old World: A Perspective on Land Use and Environmental Regulation in the Coal Industries of the United States, Great Britain, and West Germany*, 64 Ky. L.J. 473, 477 (1976). Note that the cost of running the treatment plant is simply equated with the cost of the damage. So the river Emscher, which runs dirty until its juncture with the Rhine, and the pollutants that the treatment plant fails to remove and that are dumped into the Rhine, are not costs.

¹³⁶ Although the difficulties of environmental valuation are obvious, the law seems to be trending towards requiring such valuation. See *Colorado v. Department of Interior*, 880 F.2d 481 (D.C. Cir. 1989) (allowing environmental trustees to demand replacement costs); *Ohio v. Department of Interior*, 880 F.2d 432 (D.C. Cir. 1989), *reh'g denied*, 897 F.2d 1151 (D.C. Cir.

work suggests the possibility of using taxes to internalize all significant costs of an activity in the price of the product. Although distributional problems would remain, the result would be an allocatively true market.¹³⁷

The third approach to environmental taxation sets the tax in hopes of encouraging some change for the better, but without worrying about the precise contours of the goal or the exact costs of the undesirable behavior. This approach resembles sin taxes most closely. It may be difficult to imagine the optimal relationship between a culture with wine and a society with cirrhosis, but many polities place some tax, usually flat, on alcohol. The most discussed examples of such taxes in the environmental context are the gasoline tax suggested most famously by Vice President Gore¹³⁸ and the

1989) (striking down regulations establishing CERCLA damages as the lesser of restoration or replacement costs). In the wake of the *Exxon Valdez* oil spill, Congress passed the Oil Pollution Act, Pub. L. No. 101-380, 104 Stat. 494 (codified as amended at 33 U.S.C. § 2706(e)(1) (1986)), which imposed a requirement that natural resources be valued in the event of an oil spill. See generally Symposium, *Oil Pollution Act Rulemaking*, 45 BAYLOR L. REV. 215 (1993).

Over the last few years, important work toward developing a system of environmental accounting has been done under the auspices of the World Bank. See, e.g., ERNST LUTZ & SALAH EL SERAFY, ENVIRONMENTAL AND RESOURCE ACCOUNTING: AN OVERVIEW (World Bank, Environment Dept. Working Paper No. 6, June 1988); MOHAN MUNASINGHE & ERNST LUTZ, ENVIRONMENTAL-ECONOMIC EVALUATION OF PROJECTS AND POLICIES FOR SUSTAINABLE DEVELOPMENT (World Bank, Environment Working Paper No. 42, Jan. 1991); HENRY PESKIN & ERNST LUTZ, A SURVEY OF RESOURCE AND ENVIRONMENTAL ACCOUNTING IN INDUSTRIALIZED COUNTRIES (World Bank, Environmental Working Paper No. 37, Aug. 1990); HENRY M. PESKIN, ACCOUNTING FOR NATURAL RESOURCE DEPLETION AND DEGRADATION IN DEVELOPING COUNTRIES (World Bank, Environment Dept. Working Paper No. 13, Jan. 1989).

¹³⁷ See Ernst U. von Weizsacker, Prices Should Tell the Ecological Truth, (May 8-12, 1990) (paper given at Conference on Sustainable Development: Science and Policy, Bergen, Norway) (on file with author). "Bureaucratic socialism collapsed because it did not allow prices to tell the economic truth. Market economy may ruin the environment and ultimately itself if prices are not allowed to tell the ecological truth." Obviously, the practical and theoretical barriers to using a tax or some other mechanism to provide true pricing are overwhelming. The perfect is the enemy of the good, however, and taxes can make prices more accurate than they otherwise are.

¹³⁸ See Michael Arndt, *Clinton Revises Energy Tax Plan*, CHI. TRIB., June 9, 1993, at News 1 (discussing Vice President Gore's plan to base energy taxes on fuel carbon content).

proposed European Community "carbon tax."¹³⁹ Both taxes are designed to combat global climate change. Neither tax has been implemented, so discussion of their effects is premature. Yet, as proposed, they both lack the detailed calculus of the cost of abatement required for an optimally efficient tax. This may be entirely necessary. We have little quantified knowledge of how anthropogenic carbon output affects the climate. Consequently, we cannot know the substance of the tradeoff between activities that contribute to global warming and environmental quality. There seems to be good reason, however, to think carbon output is too high, and that it should be discouraged. By setting a tax, and observing the effects on both social activities and the environment, we can work towards a better state of the world while better understanding our choices.

Each taxation alternative has a different functional identity. The first type—setting a tax to attain a specific state of the world—is executive. The political process, presumably through a legislature, chooses a desired future, and then expresses the desire through legislation. The tax realizes an ideal established by the political system. The second type of tax, which uses remedial costs to approximate the costs of harm, is economic. The tax facilitates the functioning of the market by improving the accuracy of its price signals. In contrast to the first type of tax, the market is the mechanism of social choice, not the political system. The third type of tax, which provides incentives to move society toward a preferred state, is also economic. But because it distorts existing markets to generate information about social preferences, this type of tax has a legislative bent. The tax uses the marketplace not just to process information, but also to generate information about possible futures facing the society. If taxes raise gasoline costs to five dollars a gallon, preferences regarding public transportation, automobiles for teenagers, or for living fifteen miles from work, may change along with air quality. The tax thus adds nuance to private and societal considerations regarding the balance between clean air and automobile use. The distinction between executive, economic, and legislative taxes helps clarify the justification for environmental taxes within modern environmental law.¹⁴⁰

¹³⁹ See Bill Mintz, *Energy Taxes to Put OPEC on Defensive*, HOUS. CHRON., May 19, 1993, at Business 2 (discussing proposed European Community carbon tax).

¹⁴⁰ This Article has focused on the creation of entitlements and taxes because they are the most obviously market-oriented ways to effect

More generally, this political approach to market construction helps explain the earlier stages of environmental law, archaic environmental law and classical environmental law, in the terms of constructed markets in modern environmental law. Properly constructed tort and regulatory regimes contribute to the appropriate internalization of costs, and can therefore be understood not only as legal expressions of government, but also as ways of informing the market. A typology of modern environmental law would discuss all the ways law establishes the context for decentralized activity in the marketplace. A theory of modern environmental governance would be able to organize these techniques into a body of practical wisdom.

C. *The Invention of Nature*

The opposition between nature and culture is one of the major ways in which Western cultures have understood their world and themselves. The tension between ideas of nature and culture has played a large role in America, a nation formed by people who imagined themselves imposing culture upon the terrain of nature.¹⁴¹ Certainly by the nineteenth century, this enterprise was questioned by those who saw value in nature, or who wished to criticize American culture, which was radically transforming the land.

environmental policy, but policymakers can also resort to other incentive approaches not discussed here. For example, this Article has not discussed environmental labeling. See, e.g., Jamie A. Grodsky, *Certified Green: The Law and Future of Environmental Labeling*, 10 YALE J. ON REG'N 147 (1993) (discussing environmental labeling); Ciannat M. Howett, *Note: The "Green Labeling" Phenomenon: Problems and Trends in the Regulation of Environmental Product Claims*, 11 VA. ENVTL. L.J. 401 (1992). For another example, this Article has not discussed deposit systems, which are useful to control litter and may have other uses. Deposits are a tax on modes of disposal other than returning the item. Deposits do not seem like taxes because they are collected to ensure the return of consumer items, ranging from used film cartridges to household utilities. In certain circumstances, the item's return might be inconvenient. Deposits on soft drink bottles work well in part because return points are widespread. As the difficulty of returning an item increased, the tax on improper disposal would have to increase to provide sufficient deterrence.

Disclosure requirements, such as those mandated by various state and federal statutes, and labeling, such as that mandated by the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), also facilitate the flow of information. Federal Insecticide, Fungicide, and Rodenticide Act, 7 U.S.C. §§ 136-136y (1988).

¹⁴¹ See Mark Sagoff, *On Preserving the Natural Environment*, 84 YALE L.J. 205 (1974).

The American environmental consciousness—and hence indirectly the law—was formed by a long succession of writers like Thoreau, Muir, Leopold, Carson, and McKibben.¹⁴² These writers adopted an informed ideal of nature as a critical stance. From their perspective, nature was something that needed protection and preservation from the ravages of American enterprise. The preservationist instinct reflected a sense of piety toward nature, a sense that nature is valuable for reasons that have nothing to do with humanity. The preservationist claim was also political. Preservationists maintained that the splendor of the continent was a part of the American heritage. They believed nature needed to be preserved as a sphere outside human activity. Nature was like history, a sphere within which a nation defined itself.¹⁴³ Because much recent American history had been about the taming and channeling of the great land, and the reaping of its bounties, Americans needed to be understood—or criticized—in terms of their natural heritage,¹⁴⁴ that is, their great common experience. The preservationist movement was informed by the dialogical ideal of nature as the nation's interlocutor, a belief which required that nature be preserved as a sphere distinct from human activity.¹⁴⁵

¹⁴² See, e.g., RACHEL CARSON, *SILENT SPRING* (1962); LEOPOLD, *supra* note 84; MCKIBBEN, *supra* note 82; JOHN MUIR, *WILDERNESS ESSAYS* (Peregrine Smith Books ed.) (1985) HENRY DAVID THOREAU, *WALDEN; OR, LIFE IN THE WOODS* (1854) reprinted in *THE ANNOTATED WALDEN* (Philip Stern ed., 1970).

¹⁴³ Indeed, the forerunner of today's ecology is natural history, which contains accounts of how things happen in the natural world. The most famous American natural historians are probably John James Audubon and William Bartram. Daniel Boorstin maintains that the American experience is particularly congenial to the pursuit of natural history. DANIEL J. BOORSTIN, *THE AMERICANS: THE COLONIAL EXPERIENCE 164-68* (1958). This consciousness of nature, history, and identity is also amply illustrated by American landscape painting, in which the drama traditionally if not exclusively associated with history paintings is lavished on celebrations of the American land.

¹⁴⁴ See Sagoff, *supra* note 141, at 232.

In imposing civilization on so vast a landscape, Americans were, in fact, doing what had never been done. They had a mission—if not the one that brought them—and the world watched. And they had become conscious of new symbols, stories, and beliefs and so had begun to unite themselves, without relying on the traditions, memories, and myths of their European origins. In a word, Americans started to describe nature in a way that could help them describe themselves.

Id.

¹⁴⁵ The preservation movement illustrates the difference between the logical progression around which this paper is constructed and the actual

Early on, preservationists were challenged by conservationists who believed in the protection of natural resources against mismanagement. At stake was the disposition of lands acquired through the westward expansion of the nation. Conservationists advocated the management of one-time wilderness not for its own sake, or out of a romantic understanding of a mystical discourse between the American people and their antecedent environment, but to promote the economic health of the nation. Conservationists did not dispute the importance of using the land, but they wished to see the land used wisely. Conservationists have been more politically successful. Throughout American history, the disposition of federal lands has favored development, and successful environmental efforts have required conservation, rather than preservation. Even so, the preservationists have not been wholly unsuccessful. For instance, in 1891 Congress authorized the President to set aside public reservations—that is, to remove land from development.¹⁴⁶ Yet in 1897, Congress restricted the President's ability to reserve land, thereby reinforcing the development-oriented land use regime in place and supporting the notion that limitations were to be placed on that regime according to the prudence of conservation rather than the piety of preservation.¹⁴⁷ Preservationist and conservationist impulses have remained strong throughout the twentieth century, with both affecting modern land policy. The legacy of these conflicting ethics has been the establishment of the national parks and the wilderness areas, guided by preservationist principles, while everything else, most notably the national forests, was guided by conservationist principles.¹⁴⁸

The preservationist ethic maintains that nature is intrinsically important, and that law should be written around nature. The commitment to a substantive environmental law, however, underwrites very little environmental law. Instead, the environment is

sequence of history. As a matter of history, an explicitly environmental legal consciousness first appears in legislation, not adjudication. At issue for the preservationists was the fate of wilderness, and they sought to protect wilderness through the legislature, not the courts.

¹⁴⁶ Creative Act of 1891, ch. 561, § 24, 26 Stat. 1103 (1891).

¹⁴⁷ Organic Administration Act of 1897, 16 U.S.C. § 475 (1988).

¹⁴⁸ The legislative history of the National Park System, the National Forest System, and public lands in general, is labyrinthine. *See generally* JOSEPH SAX, MOUNTAINS WITHOUT HANDRAILS: REFLECTIONS ON THE NATIONAL PARKS (1980).

usually represented by proxy and thus figures only indirectly.¹⁴⁹ Even in instances involving federal lands, where the government often acts in a proprietary manner and so worries less about coercing civil society, the government has seldom maintained that the land has intrinsic value. Instead the government has generally adopted a conservationist approach that land is no more than a resource.¹⁵⁰

Nonetheless, the preservationist impulse has engendered important environmental legislation, for example the Endangered Species Act and the Wilderness Act.¹⁵¹ Such statutes require that our legal system take account of nature's intrinsic value. Even more importantly, the preservationist impulse has inspired an important part of American environmental law. Although environmental law is a system of proxies, the environmental concerns represented by proxy are themselves significant. The fact that the Clean Air Act is conceived in terms of externalities—harms inflicted on individuals—does not mean that its drafters, or enforcers, do not care about clean air. For most of U.S. environmental law, the preservation of nature is merely a notional presence, but that presence informs the way environmental law has been constructed.

Although the preservationist perspective has generally been a minority position, the question is whether or not it is currently a defensible position at all. Technology has made management ubiquitous, so the law has no place for the alien nature revered by preservationists. If modern environmental law proves successful, the opposition between nature and culture will be dissolved.

¹⁴⁹ "Natural rights" arguments that support the substantive value of the environment for its own sake have rarely justified legal action, and are unlikely to in the foreseeable future. See RODERICK NASH, *THE RIGHTS OF NATURE* (1989).

¹⁵⁰ Although one can point to preservationist statutes, the general attitude of the federal government toward the land has been exploitative. Findley and Farber write of the nonenvironmental scheme governing public lands, and remark that "[h]istorically, resource development on public lands has been the rule rather than the exception. Most public land law was geared toward encouraging resource development, while preservation was an exception." FINDLEY & FARBER, *supra* note 5, at 754, 757. The President's authority to withdraw public land from development has been upheld by the Supreme Court. *United States v. Midwest Oil*, 236 U.S. 459 (1915). See generally GIFFORD PINCHOT, *THE FIGHT FOR CONSERVATION* (1910) (discussing withdrawal of public land).

¹⁵¹ Wilderness Act of 1964, 16 U.S.C. §§ 1131-36 (1988); Endangered Species Act of 1973, 16 U.S.C. §§ 1531-44.

Nature as something outside society to be engaged, conquered, preserved, worshiped, and contemplated, will become man-made, fostered by the declaration of entitlements or other market-shaping environmental activity. Nature's construction will take place either by declaring a realm apart from the flux of the markets, a natural theme park, or by structuring markets for a particular result. For example, as the Clean Air Act takes effect, the "natural" state of the air we breathe will be mandated by legislation.

With the dissolution of the opposition between nature and culture, much that we looked to nature to find, a sense of wildness, humility, irrationality, mystery, or religion, may be found in the unpredictable combinations of markets. Just as society once moved from external religion to internal psychology, it may again move from the unknowable outside human agency to the unknowable vagaries of aggregate human preference, from the mysteries of the cosmos to the mysteries of fashion. One of the fashions may well be for wild things, and presumably, markets will be used to distribute outdoor goods.¹⁵² As once people walked out back into the woods, they will now scuba dive off the Thai island of Phuket.¹⁵³ But one wonders how successful the market could possibly be in providing the sublime.¹⁵⁴

¹⁵² The provision of biology through the workings of culture creates further problems, some of which are beginning to receive the attention of the legal community. *Foundation on Economic Trends v. Heckler*, 587 F. Supp. 753 (D.D.C. 1984), *aff'd in part and vacated in part*, 756 F.2d 143 (D.C. Cir. 1985); see Gregory Aplet & Marc Miller, *Biological Control: A Little Knowledge is a Dangerous Thing*, 45 RUTGERS L.J. 285 (1993); Ferretti, *supra* note 58; Thomas O. McGarity & Kari O. Bayer, *Federal Regulation of Emerging Genetic Technologies*, 36 VAND. L. REV. 461 (1983).

¹⁵³ Phuket is an island in Thailand, an exotic place to vacation, featured in the James Bond movie *The Man with the Golden Gun*.

¹⁵⁴ See, e.g., ANDERSON & LEAL, *supra* note 121, at 34.

Some environmental groups have proposed that wolves be reintroduced into Yellowstone National Park, but ranchers oppose the plan because they fear that the wolves will leave the park and prey on livestock. Could the wolves be fenced? Technology is currently available for "fencing" dogs by burying a cable that emits a radio signal on the perimeter of a piece of land; the signal, received in the dog's collar, shocks the animal, which then retreats from the perimeter. Could the same technology be applied to wolves? When red wolves were reintroduced into South Carolina wildlands, they were equipped with radio collars that allow the animals to be tracked. If a wolf wanders too far afield, a radio activated collar injects the animal with a tranquilizing drug so that it can be returned to its designated habitat.

If we lose our idea of nature, we may lose more than environmental amenities.¹⁵⁵ This is particularly true in America, where wilderness and its conquest have occupied so much of our energies. Our natural heritage must be explored if we are to make sense out of the living brutality—and the grandeur—of our history. Without

Id. The call of the wild, indeed.

¹⁵⁵ The thorough-going humanist, like the thorough-going economist, may be untroubled by this prospect.

What's wrong with plastic trees? My guess is that there is very little wrong with them. Much more can be done with plastic trees and the like to give most people the feeling that they are experiencing nature. We will have to realize that the way in which we experience nature is conditioned by our society—which more and more is seen to be receptive to responsible inventions.

Martin H. Krieger, *What's Wrong with Plastic Trees?*, 179 *Sci.* 446, 453 (1973). With his very title Krieger extends utilitarian argument to the point of absurdity. Less obvious is how Krieger's utilitarian argument is implicit in, and infects, intentionally "pro-environmental" arguments for environmental rights such as those offered by Stone and Tribe. See *Toward Legal Rights*, *supra* note 38; Lawrence H. Tribe, *Ways Not to Think About Plastic Trees: New Foundations for Environmental Law*, 83 *YALE L. J.* 1315 (1974). These arguments are fundamentally flawed in their attempt to phrase concerns for the external environment in terms of internal desires. This contradiction leads to no end of problems, notably the assumption that "nature" somehow "desires" to remain wild, as skewered by Sagoff:

Nature is a war of each against all, as Hobbes said, and man and beast alike prefer the safety and comfort of an artificial environment. . . . Why wouldn't Mineral King want to host a ski resort, after doing nothing for a billion years? . . . The Sequoia National Forest tells the developer that it wants a ski lift by a certain declivity of its hills and snowiness during the winter—immediately obvious to the sight—and that it needs a four lane highway by the appearance of certain valley passages and obvious scenic turnouts on the mountainsides.

Sagoff, *supra* note 141, at 222. The problem with Stone's and Tribe's argument is akin to, but different from, the problem that I used to organize environmental law. Stone's and Tribe's position is ultimately utilitarian; liberal environmental jurisprudence is founded on a notion of morality that is expressly anti-utilitarian. See IMMANUEL KANT, *CRITIQUE OF PRACTICAL REASON*, (Lewis W. Beck trans., 3d ed. 1993) (1788) (providing foundational principles of liberal jurisprudence). As this Article argues below, however, this difference does not protect liberal environmental jurisprudence from the errors Sagoff describes. Sagoff is therefore ultimately correct to turn to history and aesthetics. My differences with Sagoff are essentially practical; I think there is more to be gained by organizing environmental law around doctrinaire liberalism than he apparently does.

that self-knowledge, it is difficult to know not only how to structure environmental law, but also how to legislate at all.

V. ENVIRONMENTAL LAW IN LIGHT OF LIBERALISM

A. *The Liberal Structure of Environmental Law*

The preceding ideal history organizes environmental law by presenting it as a set of legal responses to environmental concerns. The substance of the responses, and the way the different responses relate to each other, reveal the commitments of our legal culture. The first stage, archaic environmental law, emphasizes the individual as the locus of environmental harms. By focusing on infringements of individual rights, more generally through emphasizing diminution of individual liberty as a precondition for adjudication, archaic environmental law translates environmental concerns into the language of individual rights used by the common law. Nature is peripheral to the conflict in archaic environmental law.

The second stage, classical environmental law, requires collective government action. Classical environmental law focuses on legislation and administration rather than adjudication, and on collective responses to large scale problems rather than resolving conflicts between individuals. Classical environmental law does not conceive of the government's authority to regulate as a prerequisite for environmental law, a preliminary matter to be discussed as a preface to the real issues.¹⁵⁶ Instead, the social authority for environmental law is derived from society's felt need for legislation. The government's authority is therefore not prior to, but created by, the popular realization that individuals acting on their own cannot solve their environmental problems. Classical environmental law thus produces a theory of the state.¹⁵⁷

¹⁵⁶ This is in marked contrast to environmental law texts. See, e.g., ANDERSON ET AL., *supra* note 46; BONINE & MCGARITY, *supra* note 6; FINDLEY & FARBER, *supra* note 5; PLATER ET AL., *supra* note 9. Each of these books devotes chapter(s) to government regulatory powers and judicial review powers before tackling the substance of environmental law.

¹⁵⁷ Many readers are no doubt aware that I have merely recapitulated the Hobbesian progression from the state of nature toward modernity in the context of environmental concerns. This entire story could be repeated in an international context. The safety of the international environment cannot be assured by the actions of individual states; collective action is required. International environmental law does not "fit in" with the story I tell throughout this article. Instead, it is a retelling of the same story on the international, as opposed to the municipal, plane.

Although classical environmental law moves away from the preoccupations of archaic environmental law, most of the classical statutes are justified in terms of market failure.¹⁵⁸ By using market failure to justify government action, classical environmental law reasserts the normative primacy of the market. The insistence on the idea that value is internal to the individual has two important results. First, the internal character of value means that all value is politically determined. There are no conceptual limits on collective action regarding the environment.¹⁵⁹ A managerial, even triumphal, view of humanity's role on the planet emerges, and with it, the distinction between nature and culture disappears. Second, governance is defined as a matter of attempting to insure the maximum level of real autonomy. The major environmental cases, which add nuance to the classical statutes, serve to articulate the limited social scope and the proper organization of government.¹⁶⁰

Unlike archaic or classical environmental law, the third stage, modern environmental law, acts through, rather than in response to, the marketplace. Modern environmental law's moment of governance, when government action takes place, is the establishment of a market, which means that modern environmental law is intrinsically committed to the market. The collapse of the distinction between markets and politics, the idea that political ends can be pursued through economic means, has meant that the values of the marketplace have penetrated the values of governance. The ideas of political and economic autonomy, which had been conceived distinctly, are now virtually indistinguishable.

¹⁵⁸ There is a certain anachronism in my entire argument. Many of the great statutes were passed in the name of substantively environmental values. But Marxism was then a viable philosophy and arguments that worked then do not work now. My effort is to organize environmental law in the face of the virtual hegemony of doctrinaire liberalism, particularly given the success of economic thinking in law.

¹⁵⁹ Political only in the modern sense, as the aggregation of individual preference.

¹⁶⁰ The great statutes thereby aggravated the anxiety about the use of governmental power inherent in classical environmental law. This anxiety stems from simultaneous recognition of environmental law's coercive quality coupled with a belief that the personal liberty of market behavior is more important than the collective liberty of governments. Classical environmental law is thus preoccupied with whether or not its diagnosis of market failure is correct. This preoccupation makes it increasingly less likely that a substantively environmental argument can prevail.

Considered collectively and systematically, the political commitments of all three stages of U.S. environmental law can only be described as liberal. The word "liberal" has served many masters, and little consensus exists on the details of its meaning.¹⁶¹ This Article adopts a simple working definition of liberalism: liberalism is a social theory built upon the value of autonomy, which is the individual's capacity to make choices.¹⁶² In the liberal view, each individual knows what is best for her. This is not because each individual has better information about what is best for her (though few liberals would deny this) but because statements of value—what is best—are ultimately statements of personal opinion. Liberalism, considered most broadly, is the argument that social processes should be established through which individuals have the opportunity to make their own choices. The realm in which such choices are made is called the sphere of individual autonomy.

Liberalism requires mechanisms to protect the sphere of autonomy against invasion by other individuals or by the state. The exercise of one person's will may limit the autonomy of another individual. Proverbially, your right to swing your fist ends where my nose begins, and your right to discharge waste ends where my intake pipe begins.¹⁶³ Even though the state may invade individual

¹⁶¹ Many scholars offer richer notions of liberalism than the one I use here. Most currently trenchant ideas of liberalism may be reduced to the moral individual of Kant's *Groundwork to a Metaphysics of Morals*, *Metaphysics of Morals*, and *Critique of Moral Reason*, largely familiar from John Rawls' *A Theory of Justice* and the economic individual of Hobbes's *Leviathan* and Adam Smith's *The Wealth of Nations*. This is a bit unfair, both to the fonts of the liberal tradition and to contemporary scholarship. For example, FRANCIS FUKUYAMA, *THE END OF HISTORY AND THE LAST MAN* (1992), uses Hegelian ideas of liberalism, and his arguments differ importantly from those derived from Kant or Hobbes. Similarly, RONALD DWORKIN, *LAW'S EMPIRE* (1986), cannot be easily classified as an expression of one or the other kind of liberalism. Nonetheless, I believe these are the scholarly exceptions that prove the political rule.

¹⁶² A more complex definition of liberalism would not add much to this particular argument. Additionally, it would have the grave drawback of raising more objections, thereby distracting attention from my main argument. Therefore, this Article defines liberalism in minimal, yet serviceable, fashion.

¹⁶³ A full-fledged theory of liberalism would have to develop a more rigorous notion of rights, and would have to discuss the relationship between fundamental rights and the rights granted merely as a matter of statute. That discussion is necessarily abstract, and can be omitted here in the interest of this Article's main points. Consequently, the term "rights" is used in the familiar multivalent, even sloppy fashion. See generally RONALD DWORKIN, *TAKING RIGHTS SERIOUSLY* (1977). For a doctrinaire version of my political thinking on this matter see Westbrook, *supra* note 113.

autonomy, for instance through regulating the use of private property, the liberal state promises to protect the individual's autonomy from both other individuals and from the state itself. Liberal government therefore requires the rule of law, binding even upon the state, as a guarantee for the state's promise not to violate individual autonomy. Within the area in which the state cannot legally act and other individuals are not permitted to interfere, the individual is free to make choices. So, in the absence of a legal prohibition one is free to pollute.

Liberalism has emphasized autonomy in a variety of human affairs, but the two areas most relevant to environmental law are politics and economics. This Article presumes that political action is legitimate.¹⁶⁴ In liberal societies, economic activity is also presumed legitimate. Economic activity can be illegitimate, however, when it unduly burdens another by limiting the autonomy of another individual. For instance, a plastics company conducts a legitimate activity when it opens a new manufacturing facility, even a facility that pollutes, but acts illegitimately when it poisons the local water table. Liberal environmental law is a debate over whether or not a particular economic activity unduly restricts the autonomy of another individual.¹⁶⁵

Although based on individual autonomy, political and economic liberalism both have public consequences. Government action, which liberalism characterizes as the collective action of a nation's individuals, is one way in which a society achieves its ends, including the protection of the environment. Collective private action through the marketplace is another way society achieves its ends, classically, the distribution of goods and services. For example, the supply of automobiles in the United States, with the attendant network of roads, reflects a collective decision taken primarily through the market, and not through government.

As most environmental cases illustrate, markets and legislatures frequently produce mutually exclusive outcomes. Conflicts emerge between economic liberalism, which uses markets as the context for public choice, and political liberalism, which relies on consent, usu-

¹⁶⁴ This assumption is convenient but not necessary. The problem of illegitimate government action does arise in environmental law, for example in the consideration of takings claims. Generally, however, the political debates in environmental law concern appropriate policies, not basic issues of legitimacy.

¹⁶⁵ See *supra* note 71 and accompanying text (discussing environmental justice).

ally through the mechanism of a democratically elected legislature. Despite mutually exclusive outcomes, both processes are justified within liberal thought as collective expressions of the value choices made by individuals. The task of the political economy of environmental law is to decide among legitimate mechanisms of public choice.

B. *The Political Economy of Environmental Law*

This Article shows that the problems in each stage of environmental law are addressed and partially remedied by the next stage. So problems of externalities and diffuse harms endemic to nuisance are addressed by the emergence of regulation; problems of information, creativity, and efficiency inherent in bureaucracy are addressed by constructed markets. In each stage, government corrects the failings of the market by operating through environmental law. Conversely, the market is transformed by the process of governance. The "natural" market, to which no law is applied, is remedied by the tort regime; the "simple" market, where the common law system fails to provide a remedy, is addressed by regulation; and the "modern" market, where administrative regulation proves too cumbersome to provide the sophisticated controls demanded by technological innovation, is constructed by modern environmental law. Each type of market requires its own type of governance. From the act of governance a new type of market emerges, requiring a new form of governance.

It would be a mistake to limit each conceptualization of liberal environmental law to replacing the preceding one.¹⁶⁶ Environmental law has often been reimagined, most recently in terms of economic incentives and the decentralization of politics, but tort and administrative law are still integral to modern environmental law. Tort and regulation have not remained, however, in the form in which they were originally introduced. Instead, archaic and classical modes of environmental law are put to modern uses. Property rights are today defined both by the liability regimes of archaic environmental law and the regulatory imperatives of classical environ-

¹⁶⁶ My argument is essentially Hegelian. We can understand environmental law if we imagine it as an ideal history through which we move. Later stages in the story do not invalidate earlier stages; narrative, even logical narrative, is a cumulative form of understanding. In Hegelian terms, the process of sublation (*Aufhebung*) retains its occasion. See, e.g., HEGEL, *PHILOSOPHY OF RIGHT* 32 (T.M. Knox trans., 1942) (1821) (discussing subjectivity and objectivity).

mental law. Conversely, the problem of designing markets by creating new property rights entails assumptions about tort liability and regulatory obligations.¹⁶⁷ Liberal environmental jurisprudence, encompassing all of these perspectives and concerns, thus raises the question of doctrine: how do the techniques for structuring a market interact?¹⁶⁸

The doctrinal effort involved in reconciling these techniques is enormous, and requires no less than reimagining the problem of governance.¹⁶⁹ One way to structure the problem is to consider the moment of governance. This Article structures environmental law around the temporal attitude of the legislator: archaic environmental law looks to the past; classical environmental law looks at the present (more precisely, is atemporal); and modern environmental law looks to the future. Liberal environmental jurisprudence subsumes these various tenses into an ideal future, the purposive tense of normative debate. But even within the forward-looking perspective in which this doctrinal discussion takes place, one can find these various temporal attitudes. It is still possible to detect different relationships between the moment of governance and the constraints on the market, and between the legislator's rationality and the expectations of the governed.

A liability regime adjusts existing entitlements. For example, a factory might be strictly liable for all harms resulting from its activities. Liability does not occur until after the fact of harm. Consequently, the liability rule tends to allow freedom of action up until the moment of judgment. The factory may adopt any of several policies to cope with expected liability. A regulatory regime, associated with classical environmental law, encumbers existing property rights. Though a regulation is usually a general statement, the effect of the statement is often fairly specific, and may impose a given level of pollution, or even type of technology. The regulator's

¹⁶⁷ Rephrased, the *ex post* perspective of archaic law and the atemporal perspective of classical law are yoked to the *ex ante* concerns of modern environmental law—the problem of designing good markets.

¹⁶⁸ The coalescence of liberal environmental jurisprudence also raises a further speculation: what will the next stage of legal environmental thought be like? What are the inconsistencies and inadequacies within modern environmental law which need to be addressed?

¹⁶⁹ See Richard Stewart, *Reconstitutive Law*, 46 MD. L. REV. 86 (1986) (discussing the enormity of the task).

attitude is atemporal. Both liability and regulatory regimes attach to property rights that are defined outside the regime.¹⁷⁰

The enterprise of creating new entitlements is prospective. The moment of governance occurs with the declaration of the entitlement, not with subsequent market activity that uses the entitlement. The entitlement fixes a part of the world, and allows the market to form around the expectation that this part will remain fixed.¹⁷¹ Taxation is the converse of the creation of an entitlement. Taxation inhibits an activity that has not yet begun, so it governs a state of the world that does not yet exist. More subtly, legislative taxation can be used to defer the moment of governance, by using the market to pose questions that legislatures and bureaucracies have trouble formulating. For example, a tax may show how to strike the balance between the benefits of automobile use and environmental harm from that use. Both the legislation of entitlements and taxation must be perfected by market activity subsequent to the moment of governance.

The problem of structuring a market precludes any notion that a market is literally prior to politics.¹⁷² In a constructed market, public rationality must precede the incentive-driven market. Although some arguments from law and economics attempt to minimize the "interference" of legal structures with economic transactions, economic transactions cannot be understood without legal structures. The most obvious examples are contract and property, but liability and regulatory regimes figure more prominently in the environmental arena. In recent years, efforts to privatize occasioned by the collapse of applied Marxism have been seen as vindication of capitalist modes of public choice across a broad spectrum of issues. But insofar as Eastern Europe and other areas of the world *ought* to adopt more economically rational structures of public choice, the

¹⁷⁰ An injunction can be a hybrid, a regulation administered by an adjudicatory institution.

¹⁷¹ While there are few existing environmental examples of this process, the process of creating a market for previously nonexistent entitlements is central to patent law, and enables the establishment of complex markets in rights to use intellectual property, i.e., licenses. In this context, the vital policy issue is how to shape the patent right in order to engender the optimal market. See, e.g., Robert P. Merges & Richard R. Nelson, *On the Complex Economics of Patent Scope*, 90 COLUM. L. REV. 839, 868-69 (1990).

¹⁷² This Article argues that markets are prior to politics in another sense: markets precede governance in the narrative this Article uses to organize environmental law. It is important, however, to distinguish narrative, and hence conceptual, priority from actual or normative priority.

creation of markets becomes a political question and a challenge for governance.

As a matter of governing our relationship to the environment, economics and politics interpenetrate one another. Although it is difficult to speak of a difference between the two, in a fundamental sense the dialectic employed here has been essentially economic rather than political. Psychologically, the argument has not presumed motives other than those of self-interested individuals atomistically conceived.¹⁷³ Institutionally, markets have been privileged over legislatures as modes of public choice. Substantively, positions that could not be squared with market choices, such as the preservationist movement, have been ignored or branded as essentially illiberal, even if they emerged from liberal political processes. Politics reacts to situations created by economic forces; the impetus for each stage of the argument is economic in nature. Although idea and will have been assumed to be complementary, the aggregation of wills, by markets and by governmental attempts to imitate or create markets, has driven the argument.

The economic approach to the environment this Article uses to organize environmental law has been criticized, notably by Professor Mark Sagoff. "Laws like the Endangered Species Act flout this conception of economic efficiency. This is how most Americans would have it: most Americans reject the notion that the natural environment should be made over to serve the wants of the self-

¹⁷³ This Article argues from Hobbes rather than from Aristotle or Rousseau. To a large extent, as suggested in the Introduction, I have chosen this approach because my argument is political. I have written in the tenor of the times, rather than written from my own temperament. But under the pressure of technology, the times they are a changin', and liberalism as conceived in contemporary politics is insufficient to answer many pressing questions of our day. See KANT, *CRITIQUE OF PRACTICAL REASON*, *supra* note 155; *GROUNDWORK TO A METAPHYSIC OF MORALS* (1785); *THE METAPHYSIC OF MORALS* (Mary Gregor trans., 1991) (1797). Potential may lie in the Kant of the *Critique of Judgment*, and, more generally, in aesthetics rather than in practical morality. Hannah Arendt thought that judgment provided the ground for a liberal political, as opposed to moral, philosophy. HANNAH ARENDT, *LECTURES ON KANT'S POLITICAL PHILOSOPHY* (Ronald Beiner ed., 1982) (1972). Unfortunately, she died before the project could be completed.

With this in hand, the project is to broaden liberalism from its noble but narrow reliance on the *Critique of Practical Reason* to a more expansive vision of the mind. A good place to start, particularly for liberals, would be the Kantian psychology writ large, i.e. to define liberalism in order to encompass the *Critique of Pure Reason*, the *Critique of Practical Reason*, and the *Critique of Judgment*.

interested consumer."¹⁷⁴ For Sagoff, economic analysis of environmental problems involves a category mistake. Economic arguments begin by positing a market system that would value the commodity in question.¹⁷⁵ But if the environment is a matter of public order as opposed to private preference, the question is not how much will consumers pay, but what kind of world citizens believe should exist. By conflating public principle and private preferences, economic argument renders individual choice a matter of comparative economic values, thereby making the political discussion of public choice unnecessary.¹⁷⁶ Liberal economics, taken to its extreme, obviates liberal politics.

¹⁷⁴ Mark Sagoff, *Economic Theory and Environmental Law*, 79 MICH. L. REV. 1393, 1396 (1981); see also MARK SAGOFF, *THE ECONOMY OF THE EARTH* (1988).

¹⁷⁵ Methods of valuation vary, and even in the hypothetical cases usually deployed in debates over the environment, methodological difference can matter. The most important difference for environmental policy is the so-called offer-acceptance problem. Generally, the values obtained using a model that measures a consumer's willingness to pay are often substantially lower than the values obtained by a model which discusses a consumer's willingness to accept change. Consumers are much less willing to buy an entitlement (to make an offer) than they are to give up an entitlement they already possess (to accept a deprivation). For instance, a canyon with environmental importance that is useful for hydroelectric power generation will be valued differently if consumers have to offer to pay the power company not to build the dam, perhaps through recreational user fees, or if the power company must pay the consumers in order to destroy the land. Facially neutral economic arguments thus often conceal a prejudice: environmentalists will assume an asset, here the canyon, is in the public domain, and will use acceptance costs to set a price on destruction, with the result that the development will not take place. Conversely, those in favor of development tend to argue as if the proposed developers already had the entitlement, and environmental special interest groups were forced to purchase the parcel. I assume that Sagoff disputes the validity of willingness-to-pay arguments because he is an environmentalist, and willingness-to-pay is the mode of valuation most frequently proffered by his opponents in environmental politics. See SAGOFF, *THE ECONOMY OF THE EARTH*, *supra* note 174, at 99-123.

Finally, note the offer-acceptance problem is independent of the transaction cost problem discussed in relation to the Coase theorem. See *supra* notes 74-76 and accompanying text (discussing Coase theorem). Discussions of the Coase theorem elude the offer-acceptance problem by innocuously assuming rational actors and perfect information as well as no transactional costs.

¹⁷⁶ As Sagoff notes:

An alternative—technocracy—quarantines or localizes conflict so that it may be resolved by the application of some mechanical rule or decision procedure. Cost-benefit approaches to public policy, if

Sagoff's argument is powerful, but it does not explain contemporary environmental law, and does not organize environmental law into a discipline.¹⁷⁷ At least five reasons support organizing environmental law with an essentially economic liberalism. First, as discussed above, centralized government has become less defensible. The unconscious rationality of the market seems in many respects superior to the efforts of conscious rationality. Markets are much better than governments at organizing activities such as producing, trading, and consuming, that do so much environmental harm, and are therefore central to environmental law.

Second, environmental law and economic analysis have considerably more kinship than Sagoff allows. Technology is largely a product of market forces. Much environmental law may be characterized as an attempt to articulate rules for the use of technology. In a capitalist society, technology is often used by commercial undertakings whose motivations are economically rational, and who are therefore amenable to economic-based governance.

Third, liberalism is hesitant to analyze the presumptively autonomous individual. Even though the structure of liberal society, in which each individual is both consumer and citizen, presumes that people function differently in different situations, how they do so is their business.¹⁷⁸ Therefore, neither markets nor elections are

taken to their extreme, would do this, and thus they would make useless the institutions of democratic government. Cost-benefit analysis localizes conflict among affected individuals and prevents it from breaking open into the public realm. This suggests that the reason that industry favors economic approaches to public policy is not necessarily the obvious one, namely, that cost benefit analysis is sensitive to the costs of regulation. The deeper reason may be that cost-benefit analysis defines a framework that keeps the public *qua* public and the citizen *qua* citizen out.

Sagoff, *Economic Theory and Environmental Law*, *supra* note 174, at 1414-15.

¹⁷⁷ Indeed, I agree with Sagoff as a speculative matter, but I disagree as a practical matter. Sagoff's account cannot serve to inform an environmental jurisprudence that can rationalize most of American environmental law. As a normative matter, in a market society one cannot simply assert the supremacy of non-market methods for ordering values. The current task for environmental theory is to make Sagoff's desire for a multiplicity of political methods available to a society in thrall to doctrinaire economic liberalism.

¹⁷⁸ A more abstract version of the same argument: political liberalism holds forth the moral ideal of the autonomous individual, capable of rational choice. The moral responsibility of the liberal individual is to ignore her own situation and make ethical decisions on a principled, that is, abstracted, basis. Moral choice requires only a principled process of decision; the substance of

likely to banish the other procedure as a mode of social choice. Market arguments will always be available to criticize legislative decisions, and one cannot simply assert — as Sagoff does — the legitimacy of democratic processes in the face of market processes. Sagoff's alternative, of defining an area of legislative politics distinct from that of the market, would require defining the citizen *qua* citizen. This alternative would introduce an element of substantive value into liberal autonomy, thereby corrupting the neutral process on which liberalism stakes so much.¹⁷⁹ From a liberal perspective, therefore, the autonomous individual who participates in both liberal markets and elections cannot be defined in relation to the market or to the election, as merely an actor playing a role. The individual must be treated as an independent self, the perpetual recipient of both political and economic arguments.¹⁸⁰

the choice is the liberal individual's own business. Autonomy, the ability to choose, is therefore considered indivisible. See STEPHEN MACEDO, LIBERAL VIRTUES 208-10 (1989) (arguing for the indivisible quality of autonomy). The argument that autonomy is the basic principle of the system, and therefore somewhat inscrutable from within the system is too simple. Autonomy is actually a shorthand for a number of characteristics. The autonomous individual, presumed by the Anglo-American liberal tradition since Hobbes, is capable of consent. To consent, one must be at least rational, that is, in possession of some capability to ratiocinate and to communicate. One must also possess some sense of being distinct from others. Although these distinctions seem only analytical, liberalism is unwilling to examine the substance of autonomy in practice, because in practice, the analysis would be into the substance of choice, and keeping the process of choice inviolate is the central enterprise of liberal politics.

¹⁷⁹ For example, one might argue that liberal participation through voting requires that one be a "good" voter. Such an idea seems at best strange, and at worst a way for the politically powerful to maintain their power by subjugating the "bad" voters. As a matter of American legal history, voting requirements have been made considerably more lax, due as much or more so to our history of racial discrimination than to our theory of democracy. In the abstract, ensuring that voters are informed and care about the community is not inherently anti-democratic.

¹⁸⁰ Despite the preceding two notes and the accompanying text, this is the space in liberal argument various contemporary efforts, including my own, are trying to develop, by basing political structure on a more nuanced theory of consciousness, of social participation, and of political language. See *supra* note 155 and accompanying text; see also Sagoff, *supra* note 141, at 245-67 (describing a non-utilitarian rationale for preserving the environment). The indivisibility of autonomy under current ideas of liberalism is one reason why the United States has had problems with the interface between formal politics and the market, for example, with election reforms laws that limit First Amendment rights. See, e.g., Buckley v. Valeo, 424 U.S. 1 (1976).

Fourth, Sagoff argues directly from the authority of democracy. As discussed above, electoral politics is increasingly characterized in market rhetoric. Interest groups negotiate for legal outcomes by which they will prosper. Government is increasingly thought of as a market. In this light, the outcome of Sagoff's democratic environmental argument is unclear. His example, the Endangered Species Act, is vulnerable to attack as inherently illiberal. One can argue that the Act is an illegitimate interference with the true collective will of the people as revealed by the market.¹⁸¹ So the liberal response to Sagoff's argument may be that the Act is legitimate as the outcome of the democratic process, but a right-thinking legislature would repeal, rather than reaffirm, the Act.¹⁸²

Fifth and finally, as a matter of mechanics rather than ideology, the competition between markets and legislatures as a mode of public choice is canted in favor of markets. The claim that markets should be the mode of choice in any particular conflict, such as that over wetlands, is strongly voiced by the parties who stand to gain the most. Most of the economic benefits of developing a wetland are captured by a few people. The environmental benefits are far more diffuse. Developers are therefore willing to expend huge amounts of political capital to keep wetlands in the market, to minimize regulation, and so forth. In extreme cases, developers use political arguments against the exercise of legislative power, contending that their property rights have been taken by government interference.¹⁸³ In general, environmental law is fought on the terrain of economics.

¹⁸¹ Perhaps the attack on democratically liberal, but economically irrational, laws such as the Endangered Species Act contains a deep premise that property rights are prior to political rights. See generally BLACKSTONE, *supra* note 61.

¹⁸² Sagoff's argument depends on an idea that voting is different than buying, and that public preference is different than private preference. This idea is often derided as hypocritical, and as the basis for the free-rider problem.

¹⁸³ This argument is a strong claim in American politics. Claims brought under the Takings Clause of the Fifth Amendment to the Constitution have received a great deal of attention from academics in the last few decades. Because, theoretically at least, regulatory takings can be found unconstitutional, takings claims occupy a definite niche in environmental law. See, e.g., *Lucas v. South Carolina Coastal Council*, 112 S. Ct. 2886 (1992); *Nollan v. California Coastal Comm'n*, 483 U.S. 825 (1987); *Keystone Bituminous Coal Ass'n v. DeBenedictis*, 480 U.S. 470 (1987); *Andrus v. Allard*, 444 U.S. 51 (1979); *Kaiser Aetna v. United States*, 444 U.S. 164 (1979); *Penn Cent. Transp. Co. v. City of New York*, 438 U.S. 104 (1978), *reh'g denied*, 439

Although these arguments may justify an economic approach to organizing environmental law, they do not fully respond to Sagoff's contention that economic argument ultimately precludes other forms of political discourse.¹⁸⁴ Arguments should not simply assert the priority of democratic politics, as Sagoff does, or of economics, as arguments defining the problem in terms of real or imagined markets do.¹⁸⁵ Instead, it is necessary to construct political economy anew by asking when we should use markets or representative politics to determine public choices regarding the environment.

Fortunately, the corpus of existing environmental law can be organized without resolving this conflict. That is, a dualistic and somewhat ill-resolved notion of liberalism can organize most of the materials of environmental law. Principled resolution of the conflicts between markets and legislatures is necessary, however, to complete liberal environmental jurisprudence, and to inform a defensible environmental legislation.

U.S. 883 (1978); *Pennsylvania Coal v. Mahon*, 260 U.S. 393 (1922); *Just v. Marinette County*, 201 N.W.2d 761 (Wis. 1972); *State v. Johnson*, 265 A.2d 711 (Me. 1970).

A similar political argument—that governmental action interferes with the national commitment to structure social arrangements through markets—is made by litigation brought under the Commerce Clause of Article I of the Constitution. *See, e.g., Minnesota v. Clover Leaf Creamery*, 449 U.S. 456 (1981), *reh'g denied*, 450 U.S. 1027 (1981); *City of Philadelphia v. New Jersey*, 437 U.S. 617 (1978); *Baldwin v. Fish & Game Comm'n of Montana*, 436 U.S. 371 (1978); *Hughes v. Alexandria Scrap Corp.*, 426 U.S. 794 (1976); *Swin Resource Systems, Inc. v. Lycoming County*, 883 F.2d 245 (3d Cir. 1989), *cert. denied*, 493 U.S. 1077 (1990); *Proctor and Gamble v. City of Chicago*, 509 F.2d 69 (7th Cir. 1975), *cert. denied*, 421 U.S. 978; *National Solid Waste Management Ass'n v. Voinovich*, 763 F. Supp. 244 (S.D. Ohio 1991), *rev'd*, 959 F.2d 590 (6th Cir. 1992).

¹⁸⁴ Sagoff's real concern is with substance, not process. He relies on most Americans' sense that nature is worth something, and that this piety is more easily expressed in legislatures than through markets. *See* Sagoff, *Economic Theory and Environmental Law*, *supra* note 174, at 1414-18.

¹⁸⁵ Commenting on the ubiquity of willingness-to-pay arguments, Sagoff asks, "Why do economists believe that opinions that oppose theirs deserve a price and not a reply?" *Id.* at 1418. After all, an economic argument's validity is not assessed on the basis of its proponents' willingness to pay for them. By valuing economic arguments more than environmental amenities, economists imply that environmental arguments for non-monetizable values are mere preferences, and hence should be priced.

VI. ENVIRONMENTAL LAW AT THE BOUNDS OF LIBERALISM

A. *The Problem of Value*

The ideal history explains the structure of environmental law in terms of liberal ideology. Liberalism both explains and rationalizes the majority of environmental law, and gives environmental law a coherent, even defensible, structure. This structure will prove useful for instruction, and maybe for more thoughtful legislation.

Does liberalism adequately rationalize *all* environmental law? Even statutes that undoubtedly realize liberal ends often seem to speak of something beyond. As NEPA Section 2 illustrates:

The purposes of this Chapter are: To declare a national policy which will encourage productive and enjoyable *harmony between man and his environment*; to promote efforts which will *prevent or eliminate damage to the environment and biosphere* and stimulate the health and welfare of man; to enrich the understanding of the ecological systems and natural resources important to the Nation; and to establish a Council on Environmental Quality.¹⁸⁶

It is difficult to include harmony or environmental damage as goods within the intellectual framework of liberalism. Harms to the environment, beyond the minimal level of environmental quality necessary for people to remain autonomous, are goods external to liberalism. The liberal may justify the environmental protection sought by NEPA as an amenity obtained by the polity acting through legitimate procedures, akin to spending tax money on a civic center or some other permissible purpose. But there is no liberal requirement for either the prevention of specific environmental harms nor the construction of a civic center. Without a substantive justification, the policy objectives set forth by NEPA are merely publicly articulated preferences subject to change.

Even if the conflict between political and economic liberalism can be resolved, liberal environmental jurisprudence must contend with the limitations of liberalism itself. Critics charge that liberalism does not answer the question, what is good?¹⁸⁷ Within their spheres of autonomy, what should liberals choose? Liberal thought is silent on this issue because individuals themselves should know what is best for them. Liberalism does not maintain an idea of the good; it presumes an autonomous individual who will—at some

¹⁸⁶ 42 U.S.C. § 4321 (emphasis added); *see also* Wilderness Act, 16 U.S.C. §§ 1131-36; Endangered Species Act of 1973, 16 U.S.C. §§ 1531-44.

¹⁸⁷ For a review and bibliography, see LIBERALISM AND ITS CRITICS (Michael J. Sandel ed., 1984).

future date—seek the good.¹⁸⁸ The only liberal political task is to protect the autonomy of the individual. Liberalism is thus devoted to political process and the conditions of politics, rather than to the conditions of life that politics should bring to pass.

Just as liberalism recognizes no good other than autonomy, liberal environmental law is restricted to harms that can be expressed as reductions of autonomy. A hazardous waste site that leaches toxins into groundwater, thereby endangering human health and lowering property values, is such a harm. Regulating this site requires no particularly environmental justification because hazardous waste harms *people*. Hazardous waste law can be justified without reference to nature. Other concerns cannot be expressed as reductions of autonomy, for instance preserving wilderness that few people will ever see, and that many would like to exploit. A belief that there is something sacrosanct about nature that requires legislation to prohibit drilling for oil near Alaska's Brooks Range is not based on a liberal argument. Arguments based on nature explicitly rely on values that have nothing to do with autonomy, and that liberalism characterizes (and dismisses for political purposes) as essentially private. Insofar as liberalism is the dominant ideology, arguments that place intrinsic value in nature do not sound and will not be heard.¹⁸⁹

¹⁸⁸ Michael J. Sandel, *Introduction to LIBERALISM AND ITS CRITICS*, *supra* note 187, at 4. "Now the commitment to a framework neutral among ends can be seen as a kind of value—in this sense the Kantian liberal is no relativist—but its value consists precisely in its refusal to affirm a preferred way of life or conception of the good." *Id.*

¹⁸⁹ The following is an example:

[M]ost Americans will pay marginally higher prices for petroleum products if oil production is not allowed in the Arctic National Wildlife Refuge. Because this cost to each individual is low and the costs of information and action are high relative to the benefits, *each person will rationally remain ignorant*, that is, he will not become informed on the issue. But organized groups that favor preserving wildlife habitat in the pristine tundra can gain by stopping drilling in the refuge. To the extent that those who benefit from wildlife preservation do not have to pay the opportunity costs of forgone energy production, they will demand "too much" wildlife habitat.

ANDERSON & LEAL, *supra* note 121, at 15 (emphasis added). *Free Market Environmentalism* serves as something of an interlocutor for this Article. It is ideologically doctrinaire and explicit. Though I found more subtle deployments of economic arguments in environmental politics, I could not find statements that pose the profound differences in outlook more clearly.

As discussed above, environmental concerns in the context of liberalism are represented by proxies, whose claims are based not on nature, but on reductions of individual autonomy. Environmental law can be understood as a succession of attempts to square the circle and phrase claims of the external environment within the internal logic of liberalism. This Article now discusses a series of attempts to avoid this problem altogether by phrasing environmental values within the potential framework derived from individual autonomy, instead of phrasing the claims as reductions of individual autonomy.

B. Doctrinal Attempts to Articulate Value: Public Trust and Public Nuisance

The public trust doctrine bars actions that harm interests in the environment held by the public as a whole. The doctrine is ancient, with roots in Roman law: "By the law of nature, these things are common to mankind: the air, running water, the sea, and consequently the shores of the sea. . . ." ¹⁹⁰ Though long part of U.S. law, the doctrine was renovated and put in the service of the environmental movement by Professor Joseph Sax, who defined the basis of public trusteeship.

The scattered evidence, taken together, suggests that the idea of a public trusteeship rests upon three related principles. First, that certain interests—like the air and the sea—have such importance to the citizenry as a whole that it would be unwise to make them the subject of private ownership. Second, that they partake so much of the bounty of nature, rather than that of individual enterprise, that they should be made freely available to the entire citizenry without regard to economic status. And, finally, that it is a principle purpose of government to promote the interests of the general public rather than to redistribute public goods from broad public uses to restricted private benefit. ¹⁹¹

¹⁹⁰ J. INST. 2.1.1. Professor Joseph Sax has repeatedly cited this passage, and so it has entered the mythos of the public trust doctrine. Little historical work is entailed in the modern appropriation of Justinian for environmental ends. I doubt this matters; since the time of Justinian, Roman law has traditionally been used to justify the present, most notably in the nascence of the Western legal tradition in the eleventh century. See generally HAROLD J. BERMAN, *LAW AND REVOLUTION* (1983).

¹⁹¹ JOSEPH L. SAX, *DEFENDING THE ENVIRONMENT: A STRATEGY FOR CITIZEN ACTION* 165 (1970). Professor Sax's writings on the environmental uses for the public trust doctrine include: *The Limits of Private Rights in Public Waters*, 19 ENVTL. L. 473 (1989); *Liberating the Public Trust Doctrine from Its Historical*

The public trust doctrine has been used to protect the public interest in the environment against three types of abuse: alienation, diversion, and degradation.¹⁹² Alienation is the transfer of public wealth to private hands.¹⁹³ Diversion is the transfer of control of environmental resources within the government but apart from the interests of the governed.¹⁹⁴ The injunctive relief offered by the courts for cases of alienation and diversion can be understood as limitations on the abuse of government power. This explanation fits easily within liberal process concerns and ultimately provides a guarantee of individual autonomy.¹⁹⁵ Degradation is different. In a number of public trust cases the court did not base its remedy on abuse of government process, but rather on a basic commitment of government to preserve certain aspects of the environment. At least in degradation cases, the public trust doctrine is essentially substantive, and therefore cannot be justified by the liberal commitment to process.¹⁹⁶

Shackles, 14 U.C. DAVIS L. REV. 185 (1980); *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 471 (1970).

The federal government did not, for the most part, retain title to Western water. Yet under the reserved rights doctrine, when Congress dedicated public lands to a particular purpose, such as an Indian reservation, a national monument, or a national forest, it reserved adequate water to accomplish that purpose. See *United States v. New Mexico*, 438 U.S. 696 (1978); *Arizona v. California*, 373 U.S. 546 (1963); *Winters v. United States*, 207 U.S. 564 (1908). See generally Bruce Babbitt, *The Public Interest in Western Water*, 23 ENVTL. L. 933 (1993); *Symposium on the Public Trust and the Waters of the American West*, 19 ENVTL. L. 421-735 (1989).

¹⁹² In *The Public Trust Doctrine in Natural Resource Law*, *supra* note 191, Professor Sax discussed the public trust doctrine in terms of alienation and diversion. Degradation is my own term, adopted for rhetorical reasons. See PLATER ET AL., *supra* note 9, at 405 (speaking of resource defense or derogation, terms that imply a political standard legitimately adopted and judicially enforced through public trust doctrine). Whatever the public trust doctrine is enforcing, it is not a clear standard. The impulse behind public trust is an ill-defined substantive value in nature.

¹⁹³ See, e.g., *Illinois Central R.R. v. Illinois*, 146 U.S. 387 (1892), *aff'd*, 154 U.S. 225 (1894).

¹⁹⁴ See, e.g., *Gould v. Greylock Reservation Comm'n*, 215 N.E.2d 114 (Mass. 1966).

¹⁹⁵ Sax does just this in his discussions of *Illinois Central*, 146 U.S. at 387, and *Gould*, 215 N.E.2d at 114. See Sax, *The Public Trust Doctrine in Natural Resource Law*, *supra* note 191, at 489-509.

¹⁹⁶ See *In re Steuart Transp. Co.*, 495 F. Supp. 38 (E.D. Va. 1980); *Sierra Club v. Department of Interior*, 398 F. Supp. 284 (N.D. Cal. 1975); *National Audubon Soc'y v. Superior Court*, 658 P.2d 709 (Cal. 1983) (en banc), *cert. denied sub nom. City of Los Angeles Dep't of Water & Power v. National*

What interests in the environment are covered by the public trust doctrine? Water has traditionally been the stronghold of the public trust doctrine,¹⁹⁷ but parks are now also considered within the public trust,¹⁹⁸ as is wildlife.¹⁹⁹ How the public trust doctrine applies to the disposition of federal lands is unclear.²⁰⁰ The public trust doctrine also applies to assets controlled by government in a proprietary, rather than a governmental capacity.²⁰¹ The public trust

Audubon Soc'y, 464 U.S. 977. In such cases, the court "is analytically focused on defense of the quality of the resource against derogation rather than protecting the character of ownership. Emperor Justinian, remember, began his list of public trust resources with *air*, for which issues of ownership are irrelevant, but issues of quality essential." PLATER ET AL., *supra* note 9, at 405.

¹⁹⁷ See, e.g., *Illinois Central*, 146 U.S. at 387. Water law interacts in subtle ways with the doctrine of public trust. Regarding navigable waters, the United States government enjoys extensive powers. See *United States v. Rands*, 389 U.S. 121 (1967) (discussing rights over navigable waters in terms similar to public trust). Two other areas of water law that bear on the public trust are water rights in the arid West and beach access. See DAVID J. BROWER, *ACCESS TO THE NATION'S BEACHES: LEGAL AND PLANNING PERSPECTIVES* (1978); JOSEPH L. SAX & ROBERT H. ABRAMS, *LEGAL CONTROL OF WATER RESOURCES* (1986); Note, *Public Trust Doctrine—Beach Access*, 15 SETON HALL L. REV. 344 (1985).

¹⁹⁸ See, e.g., *Paepcke v. Public Bldg. Comm'n*, 263 N.E.2d 11 (Ill. 1970).

¹⁹⁹ See, e.g., *In re Steuart Transp. Co.*, 495 F. Supp. 38 (E.D. Va. 1980) (concerning wildlife); *Sierra Club v. Department of Interior*, 398 F. Supp. 284 (N.D. Cal. 1975) (concerning trees).

The literature on the scope of the public trust doctrine in environmental law is growing. See Scott W. Reed, *The Public Trust Doctrine: Is it Amphibious?*, 1 J. ENVTL. L. & LITIG. 107 (1986); Alison Rieser, *Ecological Preservation as a Public Property Right: An Emerging Doctrine in Search of a Theory*, 15 HARV. ENVTL. L. REV. 393 (1991).

²⁰⁰ See *Light v. United States*, 220 U.S. 523, 537 (1911) ("All the public lands of the nation are held in trust for the people of the whole country.' And it is not for the courts to say how that trust shall be administered. That is for Congress to determine.") (quoting *United States v. Trinidad Coal & Coking Co.*, 137 U.S. 160, 170 (1890)). More recently, lower federal courts have argued that the federal government is judicially accountable for violations of the public trust. See *United States v. 1.58 Acres of Land Situated in City of Boston*, 523 F. Supp. 120, 124 (D. Mass. 1981); *In re Steuart Transp. Co.*, 495 F. Supp. at 40. The public trust doctrine has been more vital on the state level, an observation reaffirmed by the Supreme Court in *Phillips Petroleum Co. v. Mississippi*, 484 U.S. 469 (1988), *reh'g denied*, 486 U.S. 1018. Perhaps the public trust doctrine should be understood as an ownership issue, and hence primarily, if not exclusively, a matter of state common law. This position, however, leaves ill-defined the question of the disposition of federal lands.

²⁰¹ E.g., *National Audubon Soc'y v. Superior Court*, 658 P.2d 709 (Cal. 1983) (en banc), *cert. denied sub nom. City of Los Angeles Dep't of Water &*

doctrine can be used in numerous areas, but its principles and contours remain unclear.

At a minimum, however, the modern public trust doctrine reflects the contemporary understanding of property as a bundle of rights tied together by socially reasonable expectations. In a society with pervasive environmental law, it would be unreasonable for government agencies to assert, without more, that developmental policies are automatically in the public interest, whether carried out by private actors (alienation) or governmental organs (diversion). It would also be unreasonable for private actors not to recognize that their use of their own property is constrained by prior, and public, expectations of their behavior.²⁰² At this point, public trust doctrine shares much with modern takings doctrine, which maintains that reasonable private property holders form their ownership expectations in light of substantial government activity, and therefore are not harmed unfairly by foreseeable state activities that may devalue their property.²⁰³

Whereas takings questions challenge the organization of governance, citizenship, and property by focusing on the nature of property, the public trust doctrine focuses on the nature of government. The language of the public trust suggests that government is a fiduciary. Government thus has a benevolent but controlling duty toward environmental interests held by the beneficiary, the public. This avuncular image of government is in profound tension with other conceptions of government. The role of a fiduciary government is different from a representative government, as an expres-

Power v. National Audubon Soc'y, 464 U.S. 977. The City of Los Angeles held water rights as a proprietor rather than in its capacity as a government. *Id.*

²⁰² See, e.g., *State ex rel. Thornton v. Hay*, 462 P.2d 671 (Or. 1969).

²⁰³ Sax, *Liberating the Public Trust Doctrine from Its Historical Shackles*, *supra* note 191, at 188.

The central idea of the public trust is preventing the destabilizing disappointment of expectations held in common but without formal recognition such as title. The function of the public trust as a legal doctrine is to protect such public expectations against destabilizing changes, just as we protect conventional private property from such changes.

Id. (footnotes omitted). In a footnote, Sax discusses the relationship between takings doctrine and *Penn Central Transp. Co. v. New York City*, 438 U.S. 104 (1978). Sax, *Liberating the Public Trust Doctrine from Its Historical Shackles*, *supra* note 191, at 188 n.13.

sion or perhaps agent²⁰⁴ of the collective will of the people, and different yet again from the image of regulatory government discussed in Section III as the aggregate expression of private interests. Perhaps most importantly in this context, the idea that the government holds environmental goods in the interest of the governed is simply antagonistic to the idea that the government is a proprietor over its own lands. When should one image of government be normative, and when should another?²⁰⁵

Modern environmental law raises the same questions about public trust in a different way. If public ends may be pursued through the creation of markets, and if privatization is therefore a way to govern, which things should be kept in the public domain? This conflict is not between private rights and (opposed) public interests, but rather among a variety of ways to attain public ends. From the perspective of modern environmental law, the appropriate distribution and allocation of natural resources is a public end, and markets are a good way to achieve that end. Markets require private property. Therefore the environmental assets in question ought to be privatized and distributed by a market. Like the public trust doctrine, markets can be justified as in the public interest. Conceivably, the nation's public lands would be better used if they were all distributed to the private market.²⁰⁶ Without more, it is unclear which things should be considered in the public trust, and which should be handled through some other method of public choice. More generally, a mature doctrine of public trust will have to organize central relationships among government, individuals, and things, and will therefore have to confront the liberal values entrenched in American law and institutions. The doctrine of public trust thus begins by imposing a substantive responsibility to

²⁰⁴ "Perhaps agent" is a nod to Ackerman's theory of dualist democracy. Ackerman expresses the modest hope that ordinary democracy exists some of the time, while the rest of the time authorities rule using authority legitimated by our last act of public will, our last constitutional moment. See ACKERMAN, *supra* note 62, at 3-33.

²⁰⁵ This would not have been a difficult problem for Emperor Justinian, but it is a bit more difficult if the legitimacy of government rests on the consent of the people.

²⁰⁶ Such questions are becoming familiar in sectors other than the environment. If the telephone services should be distributed by private markets, why should the postal service be run by the government?

respect certain environmental values, and ends by reformulating core questions of liberal governance.²⁰⁷

The doctrine of public nuisance similarly positions the state as guarantor of certain widely held rights. A public nuisance is “a condition dangerous to health, offensive to community moral standards, or unlawfully obstructing the public in the free use of public property.”²⁰⁸ The doctrine of public nuisance covers rights that are justified in liberal terms, such as health and the enjoyment of property. In this light, public nuisance is a judicial aggregation of private harms, and essentially similar to regulation.

As with public trust, public nuisance contains more than the liberal framework can easily defend. “[Public nuisance] is one affecting rights enjoyed by citizens as part of the public and must affect a considerable number of people or an entire community or neighborhood.”²⁰⁹ Even though the doctrine of public nuisance may create a private right of action, a public nuisance complaint is based on a right enjoyed by citizens as members of the public and not as private citizens. “In typical public nuisance actions, public prosecutors bring lawsuits seeking injunctions to force cessation of nuisances (often preferring the tort approach even where statutory remedies apply).”²¹⁰ Procedurally, this tends to relieve plaintiffs, whether private individuals or public prosecutors, of the obligation to show monetary damages to their estate, and thus makes the court’s traditional remedy of ordering abatement of the activity more available.²¹¹ Theoretically, the harm is approached as a public matter, not as the resolution of a conflict between neighbors.

In this light, public nuisance is similar to criminal law. Both crimes and public nuisances constitute a violation of the public order itself, regardless of any monetary injury done to the victim.²¹²

²⁰⁷ See Sax, *The Public Trust Doctrine in Natural Resource Law*, *supra* note 191; *Liberating the Public Trust Doctrine from Its Historical Shackles*, *supra* note 191.

²⁰⁸ BLACK’S LAW DICTIONARY 1230 (6th ed. 1990).

²⁰⁹ *Id.* (citing *Spur Indus. v. Del E. Webb Dev. Co.*, 494 P.2d 700, 705 (Ariz. 1972)).

²¹⁰ PLATER ET AL., *supra* note 9, at 122; *see also* *New York v. Schenectady Chemicals, Inc.*, 459 N.Y.S.2d 971 (1983) (upholding state nuisance cause of action but not statutory cause of action).

²¹¹ The economically-minded liberal may ask why injunctive rather than monetary relief is appropriate. As noted, *supra* note 175, injunctive relief can serve as a hybrid, a regulatory action taken by an adjudicative institution.

²¹² The association is historical as well as conceptual. “Public nuisance, quite unlike private nuisance, is descended from criminal offenses against the public peace. Over time public nuisance became a civil action as well,

Like criminal law, public nuisance adjudication resolves conflicts between the order of civil society, represented by the state, and one who has transgressed that order, and only incidentally resolves conflict among actors within civil society.

This would pose no problem for liberal theory if the harms treated under public nuisance could be easily characterized as harms to the individual, as with criminal law. But the gravamen of a public nuisance complaint often cannot be so characterized, and therefore may not be justifiable within liberalism. For example, public nuisances that are violations of "community moral standards" presuppose the existence of substantive community moral standards, such as those regarding prostitution or pornography. These goods may not be justified on liberal grounds at all, but are instead collective goods held by the community. The classic public nuisance case, *Spur Industries*, rested in part on the uncontroversial, but nonetheless illiberal, public reprobation toward swarms of flies.²¹³

Such consensus is the exception rather than the rule. The nearly sacrosanct quality of private property is deeply embedded in American legal culture. Particularly when the government has not advanced a commercial justification for its actions, that is, has not argued that the law is justified in the market terms that underwrite the ideal history of environmental law, legal protection of values in nature are continually vulnerable to challenge as unjustifiable within the liberal framework. Most dramatically, the Takings Clause of the Fifth Amendment to the Constitution limits the extent to which collective value may trump the property rights guaranteed by the liberal order. Even regulation justified by market failure, such as RCRA, may be so intrusive in application as to constitute a regulatory or even a physical taking.²¹⁴ The emergence of illiberal values, such as a substantive value in nature, within the context of liberal law is thus incessantly problematic.²¹⁵

providing remedies for violations of public rights." PLATER ET AL., *supra* note 9, at 122.

²¹³ *Spur Indus.*, 494 P.2d at 705.

²¹⁴ See *Hendler v. United States*, 952 F.2d 1364 (Fed. Cir. 1991).

²¹⁵ Most contemporary environmental law textbooks now provide a fairly substantial discussion of takings doctrine. See generally cases cited *supra* note 183.

C. Intergenerational Equity

The argument known as intergenerational equity is the leading attempt to render substantive values in nature defensible within the framework of the liberal political order. The core of the argument is contained in the proverb: "We have not inherited the earth from our parents; we have borrowed it from our children." Because each generation is only one generation among many, this argument holds that the obligations of each generation to humanity extend across generations. Consequently, political decisions made in the present generation must consider the well-being of future generations. Because humanity depends on the environment, all current decisions should be made with a view to the long-term impact on the environment.

To define intergenerational equity, it is useful to view the human community as a partnership among all generations. In describing a state as a partnership, Edmund Burke observed that "as the ends of such a partnership cannot be obtained in many generations, it becomes a partnership not only between those who are living but between those who are living, those who are dead, and those who are to be born." The purpose of human society must be to realize and protect the welfare and well-being of every generation. This requires sustaining the life-support systems of the planet, the ecological processes and the environmental conditions necessary for a healthy and decent human environment.

In this partnership, no generation knows beforehand when it will be the living generation, how many members it will have, or even how many generations there will ultimately be. It is useful, then, to take the perspective of a generation that is placed somewhere along the spectrum of time, but does not know in advance where it will be located. Such a generation would want to inherit the earth in at least as good condition as it has been in for any previous generation and to have as good access to it as previous generations. This requires each generation to pass the planet on in no worse condition than it received it in and to provide equitable access to its resources and benefits. Each generation is thus both a trustee for the planet with obligations to care for it and a beneficiary with rights to use it. . . .²¹⁶

Intergenerational equity appears to fit squarely within liberalism. At its heart, intergenerational equity is a theory of process failure. When the interests of future generations are not considered, the policy of the present generation will be skewed toward the short-term interests of the living. The living will be prejudiced against

²¹⁶ Edith B. Weiss, *Our Rights and Obligations to Future Generations for the Environment*, 84 AM. J. INT'L L. 198, 200 (1990).

the unborn. The current generation will be illiberally inclined to undervalue the interests of other morally equal beings in future generations, in favor of their own interests. To correct this injustice, the liberally-principled actor should draw on Rawls' imagery of the original position and act as if he could not know when he would be born.²¹⁷ Environmental decisions made through this lens will avoid prejudice. Under the theory of intergenerational equity, future generations will be virtually represented by the moral concern of the current generation. Remedying the process failure inherent in history requires a conceptual grant of the franchise to unborn generations.²¹⁸ Here, the true liberal polity treats all autonomous beings equally, whether or not they have yet been born, and therefore must consider the interests of unborn generations as if they could vote or buy.²¹⁹

Closer examination of this argument reveals many problems and some successes. Kant's categorical imperative, reflected in Rawls' metaphor of the original position, relies on a distinction between

²¹⁷ See RAWLS, *supra* note 117, at 288. Rawls himself discusses intergenerational equity in terms of savings.

Since no one knows to which generation he belongs, the question is viewed from the standpoint of each and a fair accommodation is expressed by the principle adopted. All generations are virtually represented in the original position, since the same principle would always be chosen. An ideally democratic decision will result, one that is fairly adjusted to the claims of each generation and therefore satisfying the precept that what touches all concerns all. Moreover, it is immediately obvious that every generation, except possibly the first, gains when a reasonable rate of savings is maintained. The process of accumulation, once it is begun and carried through, is to the good of all subsequent generations. Each passes on to the next a fair equivalent in real capital as defined by a just savings principle. (It should be kept in mind here that capital is not only factories and machines, and so on, but also the knowledge and culture, as well as the techniques and skills, that make possible just institutions and the fair value of liberty.)

Id.

²¹⁸ This is hardly unproblematic. If we assume the normal rule of representation, one autonomous individual one vote, the number of proxy votes, those of the unborn individuals, far outstrips the actual participants in any given election. How, then, will conflicts be decided? On a winner take all basis, with the future inevitably winning?

²¹⁹ Because so many environmental decisions are made through markets, rather than legislatures, the relative weight of these future interests arises. Future value is usually discounted, a problem discussed in some detail below.

right and circumstance. Without undue simplification, the distinction here is familiar to lawyers as the difference between civil rights and social rights. Civil rights can be deduced from the categorical imperative. These claims are grounded in individual autonomy irrespective of its physical circumstances.²²⁰ Social rights, and most environmental claims, are grounded in physical circumstances. The relationship between autonomous individuals and physical circumstances is not one of right, but one of value.²²¹

The first problem with the intergenerational equity argument is that many of the "equities" the argument protects cannot be justified as rights.²²² A principled decisionmaker could distribute goods in an equitable manner, but which environmental amenities are recognized as goods? If values change, to what extent does an environmental element need to be protected? To what extent can we impose our present values on future generations? How do we weigh future environmental amenities against current needs, or future needs, for example for food, against current amenities? Should we preserve land, so that it can be plowed under later? Or develop it now, thereby increasing present welfare, and leaving future generations with a greater capital stock with which to confront hunger? How are we to decide among the "machines," "culture," and "techniques," that Rawls argues constitute a civilization's capital, a list to which we might add clear water and rare and beautiful animals? How can a present government official begin to determine, much less decide on, the preferences of a future generation?

These questions are not simply difficult, but are unanswerable within the abstract framework of the categorical imperative. To answer these questions, one must know more about the situation at hand. Rawls plugs the holes in his argument with sympathetic, but highly located, imagery.

In attempting to estimate the fair rate of saving the persons in the original position ask what is reasonable for members of adjacent generations to expect of one another at each level of advance.

²²⁰ A similar notion of rights underpins John Hart Ely's theory of judicial review for the purpose of reinforcing democratic rights. See JOHN H. ELY, *DEMOCRACY AND DISTRUST: A THEORY OF JUDICIAL REVIEW* (1980).

²²¹ See KANT, *THE METAPHYSICS OF MORALS*, *supra* note 86.

²²² Equity once meant conscience, and was to be distinguished from right, as chancery was to be distinguished from law. This distinction seems fruitful to me, but, unfortunately, I have never heard it made in discussions of intergenerational equity, which are usually based on an atemporal theory of rights.

They try to piece together a just savings schedule by balancing how much at each stage they would be willing to save for their immediate descendants against what they would feel entitled to claim of their immediate predecessors. Thus imagining themselves to be fathers, say, they are to ascertain how much they should set aside for their sons by noting what they would believe themselves entitled to claim of their fathers.²²³

The claim of sons upon fathers presumes that one is preconfigured and constrained by one's role and obligations. Fathers and sons are anything but autonomous in the sense of Rawls' original position because they are prejudiced by personal circumstance. Perhaps questions that affect posterity should be decided by reference to our experience, but these arguments can not be based on the liberal ideal of justice that Rawls espouses and develops.²²⁴

If this set of problems were to be resolved, an even more difficult set of problems would arise. The categorical imperative requires us

²²³ RAWLS, *supra* note 117, at 289.

²²⁴ I do not know why Rawls attempts to make the argument from the categorical imperative carry loads for which it was not designed. Kant himself is quite explicit about the abstracted nature of his argument, which concerns the morality to be followed by a rational will irrespective of material circumstances. (One might argue that the prescriptions reached by Kant are too specific. He often imports prejudices that cannot be deduced from the nature of rationality, but which instead reflect his opinion, religion, experience, or other personal aspect.) The direction of Kant's argument is clear: to what extent can a morality be established without reference to the particular circumstances of human life, to what I here call location? The prescriptions of such a morality are rights, or more correctly in contemporary language, basic human (civil) rights. But it seems obvious that an articulation of rights cannot hope to specify much of practical life. The project of specification—including the distribution of goods—is left largely to legal and political institutions, and simply does not flow from the theoretical argument. I do not know why Rawls begins a theoretical argument that he must know is doomed. Perhaps he felt that (i) in the late sixties and early seventies a philosophical theory of justice had practical prescriptions to offer for political life, and (ii) utilitarian thought had made questions of the just distribution of goods unavoidable, even if it had done little to answer them. Rawls has since conceded that justice as fairness is ultimately a political prescription, not a metaphysical position. John Rawls, *Justice as Fairness: Political, Not Metaphysical*, 14 J. PHIL. & PUB. AFF. 223 (1985). Unfortunately, the strength of the argument from the original position is metaphysical and most compelling in conditions of widespread disagreement on the substance of the good, when neutral process, a regime of rights, and the other formal accoutrements of a liberal regime are most needed. Even in its political guise, however, Rawlsian pluralism replicates, rather than solves, the problem of liberal environmental law.

to choose a mode of decision principled by the recognition of autonomy. We fulfill the categorical imperative by treating each rational being as an end rather than as a means to another end. In so doing, we define ourselves as autonomous—capable of constraining ourselves—and enter the kingdom of ends. In the kingdom of ends, a rational person would choose to institute regular modes of public choice, that is, liberal democratic politics and liberal markets. The Kantian argument of intergenerational equity thus returns to the conflict among different but equally legitimate modes of public choice. But as argued throughout this Article, those modes of public decision ultimately fail to capture environmental concerns.²²⁵ An intergenerational equity argument fails to escape the constraints of the liberalism on which it is premised.

The argument for intergenerational equity is also proposed as a grammar of choice between liberal modes of public decision. This argument holds that environmentally destructive short-term behavior associated with markets is unfair, and therefore legislatures, not markets, should be used to make decisions about the environment. But a post hoc economic justification exists for virtually any market-based decision.²²⁶ Assuming a well-functioning market, an

²²⁵ Kant developed the categorical imperative as a response to the problem of determining the morally or legally legitimate constraint of the will. Kant attempted to make a principled argument that what we *ought* to do is different from what we *want* to do. Typically, the categorical imperative is discussed in terms of a straightforward question: does obligation exist? The categorical imperative is thus primarily a theory of decision, not of design. The categorical imperative can be used for certain general questions of design, most notably, to determine the existence and rough outline of both the state and the laws. But it is difficult to argue that one should spend more or less money on a certain project on Kantian grounds. Future generations do not have an articulable claim to any particular policy. *See supra* note 218.

²²⁶ For example:

This does not mean that private entrepreneurs made no mistakes. The Kingston Plains offers a pointed example. Unlike most land in the Great Lakes area, which is now productive farmland, timberland, or recreational land for fisherman, hunters, and hikers, the Kingston Plains has never recovered from logging done a hundred years ago. Efforts have been made to replant the area, but the soil is too infertile and sandy. It took hundreds of years for the original forest to grow, and it will take hundreds of years for the area to recover. This does not imply, however, that cutting the trees was a bad decision. When the trees were cut, good timber stands in the Great Lakes area were selling for around \$20 per acre. In order to determine whether it would have made more sense to invest in trees by foregoing the harvest, we must consider

entrepreneurial mistake would involve activities that were of higher cost than their societal benefits, and would be quickly corrected by the market. Therefore, in a well-functioning market, sustained mistakes appear to be impossible. While few environmentalists are viscerally convinced, the Panglossian quality of economic argument makes it difficult to confront such reasoning without a theory of public choice that accounts for both intergenerational equity and the intergenerational valuation of goods. Liberal valuations of intergenerational equity do not escape the self-justifying quality of equally liberal economic arguments.²²⁷

What has the argument from intergenerational equity added to the debate? First, intergenerational equity presents a persuasive argument to liberals that the interests of future generations should be taken into account. Second, like the substantively environmental laws and doctrines considered at the beginning of this Section, and like the question of political grammar raised in the preceding Section, intergenerational equity presents the need for an expressly political organization of not only markets and legislatures, but of the various levels of centralized and decentralized decisional

the return on other investments. Had the income from selling these trees been invested in bonds or some other form of savings at the time, it would now be worth approximately \$110,000 per acre, or \$2.8 billion for the forty square miles. If the trees at Kingston Plains had been left standing, would the benefits derived over the past one hundred years from preserving land for wildlife habitat, hiking, and other environmental amenities have been worth foregoing the benefits society received from logging? The answer is highly subjective, but the tremendous benefits from exploiting the Kingston Plains cannot be ignored. Because the land in this area is not worth anything close to this, we must infer that harvesting the trees was the correct choice.

ANDERSON & LEAL, *supra* note 121, at 47.

It is not obvious how entrepreneurs could make mistakes. Upon reflection, however, this argument is hardly air-tight, even within the terms of economic debate. The major problems concern the legitimacy of comparing the present value of a sum of money, compounded over time, with the asset not traded into value. Given the appropriate discount rate and enough time, the sale of Manhattan appears sensible.

²²⁷ Counterarguments may be made within liberalism, by arguing some form of market failure, or outside liberalism, by introducing some substantive notion of the good. In practice, the first approach is difficult to maintain without a great deal of knowledge about a particular situation or some dramatic externalities. Without these, existing markets are presumed to be reasonably well-functioning. Liberalism dismisses the second approach as mere opinion.

processes that make up modern public choice. Third, and most importantly, intergenerational equity makes the inadequacies of liberal environmental jurisprudence painfully clear.

CONCLUSION: LIBERAL ENVIRONMENTAL LAW'S POTENTIAL

As we have seen, liberalism can organize the materials of environmental law. Environmental law can be understood as a series of attempts to phrase concern for the context of human life in a political philosophy grounded on individual choice. Philosophy's failure is law's gain. The antithesis between a substantive concern for nature and the core commitment to individual autonomy requires liberal environmental jurisprudence to run the gamut of liberalism's legitimating devices. Liberal environmental jurisprudence thereby gains the somewhat circular but highly defensible theoretical power of contemporary liberal theory. Environmental law is now a discipline.

Liberal environmental law raises the choices among liberally legitimate processes that are central to contemporary liberal political theory. Most fundamentally, which environmental issues should be devoted to markets, and which to legislatures? Through its insistence on the political nature of markets, liberal environmental law is far more interventionist than environmental law has been to date. Modern governance is about the construction of true markets that serve as reasonably accurate mechanisms of public choice, rather than about the management of markets imagined to be natural. If governance takes place through markets, then environmental considerations do not compete with marketplace values such as material prosperity. Material prosperity can only be assessed with a view to the costs and benefits mediated by the environment. Environmental law thus becomes a *sine qua non* of modern governance, and of behavior in the modern marketplace.

The idea of nature protected by environmental law fades over the ideal history of environmental law. Archaic environmental law renders nature peripheral by considering it only where it is accompanied by a legally cognizable infringement on individual autonomy. Classical environmental law makes nature extraneous to social organization by replacing it with an aggregation of private interests, that is, by treating nature as the common from which wealth is extracted, and into which the noxious by-products of wealth-producing activities are dumped. For modern environmental law, nature is primarily a notional presence, affiliated with recreation,

religion, and other forms of private meaning that the state should foster.

Throughout much of American history, some have called for a substantive ideal of nature. These voices have been both literary, starting with Thoreau, and political, with the founding of the Sierra Club. They have also had their moments in the law. Environmental law has reflected substantive notions of nature intermittently from the preservationist struggles of the nineteenth century to laws such as the Endangered Species Act and doctrines such as public trust and intergenerational equity. In the United States, however, where liberal political economy is the dominant political theory, these arguments are vulnerable to attacks on their political legitimacy. The preservationist impulse therefore informs environmental critique, inspires legislators, but only very rarely makes law. The established legal regime that controls the environment springs instead from a liberal ideology that does not countenance the idea of substantive value located outside the individual.

At the same time, it seems unlikely that the preservationist impulse will be extinguished altogether. Assuming that the United States remains a liberal polity, and assuming it recognizes environmental law as an expression of its deepest ideological commitments, what will environmental law look like? Will any element of nature be treated as sacrosanct, and if so, where will the polity set the bounds of human activity? Practically, these questions boil down to issues such as how clean the air will be, what species will be preserved from extinction, and the other familiar problems and priorities of environmental management. Does liberal environmental jurisprudence have anything principled to say about these processes, or are they merely matters of interest-group struggle?

Liberal polities by definition set bounds to human activity and erect cultural edifices designed to last forever. The commitment to individual autonomy, secured by a regime of rights, limits both the power of the state and provides the generations of citizens required for the perpetual survival of liberal democratic society. Institutions such as the tax code, the criminal law, and the military provide liberal polities with the means to ensure the continuity of the state, to which citizens entrust the responsibility for the indefinite maintenance of the liberal order. These commitments, however, can plausibly be drawn from the nature of the liberal order itself. The preservation of autonomy requires a state, a system of laws, and so

forth.²²⁸ The environment is different. It may be possible, in Kantian fashion, to use our common commitments to liberalism to deduce our general obligation to protect the environment for future generations to inhabit. But a fine-grained vision of nature that tells us whether or not our descendants will see spotted owls and elephants cannot be deduced from the liberal order.

For all its persuasive power and intellectual elegance, liberalism has little to say about our encounter with the world. Liberalism looks inward to the will, and not outward to the context of human activity. The soul of liberalism is a retreat from the world, a denial that humans can ever discern the truth or agree on the good amidst the chaos of life, and an attempt to build order out of consent and the satisfaction of individual wills. To speak of nature is to discuss both the purpose and the bounds of humanity; liberalism eschews teleology and cannot rationalize its bounds. Environmental law invites a more transcendent vision of politics by demanding a substantive vision of nature, and hence reverence in human conduct toward nature. Thus environmental law and liberalism treat different modes of human political experience.

The differences in these discourses is important because liberal political economy and environmental law now often discuss the same things. The relation between humans and their world that preoccupies environmental law, the imposition of technology, increasingly requires the reordering of our social arrangements. In order to survive as an ideology, liberalism must account for this restructuring of societal arrangements. Liberal society is thus increasingly forced to confront its own potential for self-transformation. Liberal society remakes the world in which choice occurs, thereby constraining the context and the substance of choice, and so vitiating its own legitimacy. Liberal environmental law is also a response to this crisis of liberalism: a series of attempts to legitimate the social transformations wrought by technology.

Environmental law forces liberal theory to ask after the future. In doing so, the liberal must confront questions of purpose and context—questions whose answers entail a conception of nature—that cannot be resolved within liberalism. In a world undergoing technological transformation, realization of both the social ideals of liberalism and the ideals that environmentalists hold dear requires a

²²⁸ This indeed is the project of Kant's *The Metaphysics of Morals*. KANT, *supra* note 86.

political discourse more comprehensive than contemporary liberalism, a discourse that can articulate the future.

That discourse remains on the horizon. To date, contemporary liberal ideology has tried to appropriate the essentially religious implications of the concept of nature as either personal preference, and hence of highly limited importance for politics, or as objective truth, certified by the new science, and hence profoundly alienated from individual experience. Liberal environmental law thus marginalizes openly environmental concerns. This awareness of marginalization, of having one's beliefs rendered irrelevant, provides the heat in environmental law classes over such apparently dry topics as cost/benefit analysis, risk assessment, preservation of endangered species, and so forth. The concerns, however, are durable, if they were not, environmental law would not be the burgeoning field it is.²²⁹ In Václav Havel's words:

To me, personally, the smokestack soiling the heavens is not just a regrettable lapse of a technology that failed to include "the ecological factor" in its calculation, one which can be corrected easily with the appropriate filter. To me it is more the symbol of an age which seeks to transcend the boundaries of the natural world and its norms and to make it into a merely private concern, a matter of subjective preference and private feeling, of the illusions, prejudices and whims of a "mere" individual. . . .

The reality, I believe, is unfortunately more serious. The chimney "soiling the heavens" is not just a technologically corrigible design error, or a tax paid for a better tomorrow, but a symbol of a civilization which has renounced the Absolute, which ignores the natural world and disdains its imperatives.²³⁰

A vision of nature adequate to inform environmental jurisprudence would have to account for the way we understand nature in our lives, and the way we understand ourselves in nature. Articulating and reaching an understanding of nature—and hence of the possibilities of humanity—would transform politics. This indeed is Havel's hope, that we "succeed in reconstituting the natural world as the true terrain of politics."²³¹ If we were to achieve this dream, if our legislation were the product of a politics in which humanity understood its location, environmental law would be substantively complete. Rendering our encounter with the world humane will

²²⁹ Perhaps if I were a true Hegelian, and believed I had seen the future, I would say "discipline" instead of "field."

²³⁰ Václav Havel, *Anti-Political Politics*, in *CIVIL SOCIETY AND THE STATE* 381, 383, 389 (John Keane ed., 1988).

²³¹ *Id.* at 392.

require this polity to decide on a dream of the beautiful, and the springs of that consensus lie beyond the liberal ken.