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THE CONTINUING IMPERATIVE (BUT ONLY FROM A NATIONAL PERSPECTIVE) FOR FEDERAL ENVIRONMENTAL PROTECTION

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‘Should I put this speck down? . . .’ Horton thought with alarm.

‘If I do, these small persons may come to great harm.

I *can’t* put it down. And I *won’t*! After all
A person’s a person. No matter how small.’**

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** DR. SEUSS, HORTON HEARS A WHO! 16 (1954) (emphasis in original)

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INTRODUCTION

For over twenty-five years the federal government has established the basic goals and controls of our nation's environmental policy.¹ These federal goals and controls have recently come under serious

1. See Robert V. Percival, *Environmental Federalism: Historical Roots and Contemporary Models*, 54 MD. L. REV. 1141, 1157-78 (1995).

attack as unnecessary, excessive, inefficient, and poorly prioritized.² Arguments over specific federal environmental policies have been recast and expanded into generic challenges to the very concept of federal regulation. These attacks are often mounted under the banner of "states' rights" or "federalism."³

Partly in response to these attacks, Congress and the President have reduced funding for federal standard setting, implementation, oversight, and enforcement.⁴ Congress and the President also have begun to repeal substantive federal environmental requirements⁵ and

2. See, e.g., *Hearings on H.R. 9 Before the Subcomm. on Commerce, Trade and Hazardous Materials and on Health and the Environment of the House Comm. on Commerce*, 104th Cong. (1995) (statement of Donald Schregardus, Director of Ohio Environmental Protection Agency), available in 1995 WL 39674, USTESTIMONY database (February 1, 1995) ("[T]here needs to be a fundamental reevaluation of how environmental decisions are made and priorities are set [An independent study] identified more effective tools to achieve the expected goals [to reduce toxic chemicals in the Great Lakes] at only 10 percent of the cost of the EPA proposal."); *Hearings on S. 290 and S. 343 Before the Subcomm. on Administrative Oversight and the Courts of the Senate Comm. on the Judiciary*, 104th Cong. (1995) (statement of Turner T. Smith, Jr., Hunton & Williams), available in 1995 WL 74642, USTESTIMONY database (February 24, 1995) ("Too often, in the field of environmental legislation at least, Congress has seen an environmental harm, and like King Canute, has simply ordered that it cease. Too seldom has it seen that the harm is only the end result of 'market failure' and sought the best way to address that failure When the real problem is understood, more subtle, but more fundamental legislative solutions may be found.").

3. See Carol M. Browner, *Partners in Protecting the Public*, WASH. POST, May 30, 1994, at A15 ("A vocal group whose impact may be to undermine federal protection of public health and natural resources . . . would confuse us into believing that the basic concept of federal-state partnership is itself to blame—rather than the imperfect implementation of that partnership or the natural difficulties of setting standards in a pluralistic society."). See generally Edward L. Rubin & Malcolm Feeley, *Federalism: Some Notes on a National Neurosis*, 41 UCLA L. REV. 903, 910-14, 948 (1994) (defining federalism as the right of a state to adopt policies contrary to federal norms and arguing that federalism claims are often an unprincipled strategy to promote particular substantive results).

4. For example, the Fiscal Year (FY) 1996 appropriations for the U.S. Environmental Protection Agency ultimately provided funds that were slightly below FY95 levels. See Omnibus Consolidated Recissions and Appropriations Act of 1996, Pub. L. No. 104-134, 110 Stat. 1321 (funding for environmental programs and management); The Balanced Budget Downpayment Act of 1996, I, Pub. L. No. 104-99, 110 Stat. 26, 37 (providing funding as indicated in H.R. 2099, 104th Cong. (1996)). Earlier, the President had vetoed a bill to fund the EPA at almost \$1 billion dollars less than the FY95 levels. Until the dispute was resolved, EPA operated under a series of continuing resolutions that provided substantially less than full FY95 level funding. See, e.g., Emergency Supplemental Appropriations For Fiscal Year Ending Sept. 30, 1995, Pub. L. No. 104-19, 109 Stat. 194. See generally *Superfund Sites Shutting Down as Congress, President Unable to Agree on Seven-Year Plan*, 26 Env't Rep. (BNA) 1591, 1592 (Jan. 5, 1996).

5. For example, Congress extended the deadline under the Clean Air Act in late 1995 for states to establish strict vehicle inspection programs. Congress also removed the requirement for large companies in severely polluted cities to organize employee car pools. EPA also reduced efforts to carry out various requirements. See Gary Lee, *Compromising on Clean Air*

have adopted barriers to enacting new federal environmental provisions that shift the costs of environmental protection to states.⁶

At the same time as the political branches are "devolving" power to the states, the Supreme Court is rediscovering limits on powers vested in the federal government by the U.S. Constitution. In 1992, the Court found that Congress lacks the power under the Interstate Commerce Clause⁷ to compel states to legislate.⁸ In 1995, the Court found limits on the private conduct that Congress may regulate by exercising Interstate Commerce Clause power.⁹ In 1996, the Court found that Congress lacks the power to authorize citizens to sue unconsenting states in federal courts when states violate federal laws enacted under the Interstate Commerce Clause.¹⁰ In 1997, the Court

Act: Under Republican Pressure, EPA Reduces Enforcement Efforts, WASH. POST, Feb. 21, 1996, at A1 (final ed.).

6. In early 1995, Congress and the President enacted the Unfunded Mandates Reform Act of 1995, Pub. L. No. 104-4, 109 Stat. 48 (codified at various sections of 2 U.S.C.) (creating procedural hurdles that make it more difficult for Congress and federal agencies to adopt new legislation and to promulgate new rules that shift the costs of implementing federal policies to states, localities, and regulated entities).

7. U.S. CONST. art. I, § 8, cl. 3; see Richard B. Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196, 1243-46 (1977) (stating that environmental legislation is typically grounded on Interstate Commerce Clause power, but could be based on liberty or property interests protected by the Due Process Clause of the Fifth Amendment, U.S. CONST. amend. V, on the Necessary and Proper Clause, U.S. CONST. art. I, § 8, cl. 18, or on the implementing power of the Fourteenth Amendment, U.S. CONST. amend. XIV, § 5).

8. See *New York v. United States*, 505 U.S. 144, 174-77 (1992). Nevertheless, Congress may direct states to legislate when Congress exercises power pursuant to other provisions of the Constitution. See *Fitzpatrick v. Bitzer*, 427 U.S. 445 (1976) (upholding directives to states to legislate under the implementing clause of the Fourteenth Amendment, U.S. CONST. amend. XIV, § 5); cf. *New York*, 505 U.S. at 155-56 (the Tenth Amendment provides a rule of construction regarding powers vested by the Constitution but does not itself impose limits on federal power); *Voting Rights Coalition v. Wilson*, 60 F.3d 1411, 1415-17 (9th Cir. 1995), cert. denied 116 S.Ct. 815 (1996) (upholding the National Voter Registration Act of 1993, 42 U.S.C. §§ 1973(gg)(1)-(10)(1994), in which Congress directed states to provide voter registration forms to driving license applicants, under power vested in Congress to regulate federal elections by U.S. CONST. art. I, section 4; refusing to reach whether that statute unconstitutionally impinged on state sovereignty to regulate state elections).

9. See *United States v. Lopez*, 115 S.Ct. 1624 (1995) (finding substantive limits on the scope of power conveyed to Congress under the Interstate Commerce Clause); cf. John P. Dwyer, *The Commerce Clause and the Limits of Congressional Authority to Regulate the Environment*, 25 *Env'tl. L. Rep.* (Env'tl. L. Inst.) 10421 (Aug. 1995) (arguing that *Lopez* is likely to have little effect on federal environmental legislation).

10. See *Seminole Tribe of Florida v. Florida*, 116 S.Ct. 1114, 1123-32 (1996) (finding that the Eleventh Amendment, U.S. CONST. amend. XI, prevents Congress from waiving state sovereign immunity from citizen suits when legislating under the Indian Commerce Clause, U.S. CONST. art. I, § 8, cl. 3). In *Seminole Tribe*, the Court found the Interstate Commerce Clause

may hold that Congress lacks the power to direct state officials to execute federal policies imposed under Interstate Commerce Clause power.¹¹

This article explains why these turbulent winds of anti-federal sentiment should not wholly uproot federal environmental regulatory policy.¹² Federal environmental laws were originally adopted and currently may be defended on numerous theoretical grounds. Federal environmental regulation may be warranted where federal regulatory power exists because: (1) it is more efficient than state regulation at achieving specified goals; (2) it regulates pollution across state borders; (3) it prevents states from reducing social welfare in response to competition for industry; (4) it more properly takes environmental interests into account than state political processes; and (5) it codifies moral rights.¹³ Although recent academic criticism has posed substantial challenges to some of these traditional rationales,¹⁴ this

and the Indian Commerce Clause indistinguishable in this regard, and overruled its earlier decision under the Interstate Commerce Clause, *Pennsylvania v. Union Gas Co.*, 491 U.S. 1 (1989). Nevertheless, the Court did not remove from Congress power to authorize the federal government to sue states and for citizens to sue state officials to prevent violations of federal laws. See *Seminole Tribe*, 116 S.Ct. at 1131 n.14, 1133 & n.17. But the court limited citizen injunctive suits against state officials when expressly precluded by the federal law or impliedly precluded by provision in the federal law of a detailed enforcement scheme. See *Seminole Tribe*, 116 S.Ct. at 1132-33.

11. See *Mack v. United States*, 66 F.3d 1025 (9th Cir. 1995) (upholding the interim provisions of the Brady Handgun Violence Protection Act, 18 U.S.C. §§ 922, 924, 925A (Supp. V 1993), which require state law enforcement officers to enforce a federally mandated background check on prospective gun purchasers, against a Tenth Amendment challenge), *cert. granted sub nom. Printz v. U.S.*, 116 S.Ct. 2521 (1996).

12. Although this article focuses on environmental policy and American federalism, the analysis applies broadly to intergovernmental relations. *But cf.* George A. Bermann, *Taking Subsidiarity Seriously: Federalism in the European Community and the United States*, 94 COLUM. L. REV. 331, 338, 339 & n. 18 (1994) (defining "subsidiarity" as the "notion that actions should be taken at the lowest level of government at which particular objectives can adequately be achieved."); *Centesimus annus* § 4, quoted in CATECHISM OF THE CATHOLIC CHURCH 460 (1994) ("[A] community of a higher order should not interfere in the internal life of a community of a lower order, depriving the latter of its functions.").

13. See Stewart, *supra* note 7, at 1211-20.

14. See, e.g., Richard L. Revesz, *Rehabilitating Interstate Competition: Rethinking the "Race-to-the-Bottom" Rationale for Federal Environmental Regulation*, 67 N.Y.U. L. REV. 1210 (1992). Professor Revesz has claimed that supporters of existing federal laws should bear the burden to prove the validity of application of the traditional rationales. *Id.* at 1212-13 (arguing that proponents of federal regulation need to prove validity of "race-to-the-bottom" claims); *id.* at 1223 (arguing that proponents need to establish "that the state political processes in fact undervalue the benefits of environmental protection, or overvalue the corresponding costs, whereas the calculus at the federal level is more accurate."). Although Professor Revesz acknowledges that federal regulation may be justified to prevent interstate externalities, he

article demonstrates that each of these bases for federal environmental regulation remains theoretically valid. The application of the theoretical rationales, however, requires the political resolution of conflicts over value.

In particular, this article responds to the common claim that federal regulation decreases social welfare by preventing states and localities from tailoring regulatory requirements to their citizens' preferences.¹⁵ This claim is normally grounded upon a particular economic conception of value — the willingness of individuals to pay for goods or services — employed by some legal analysts.¹⁶ In the real world of political action, however, broader conceptions of value are invariably employed by citizens and by the government officials they elect.¹⁷

argues that externalities alone cannot explain or justify the stringent uniform requirements of federal environmental law. *Id.* at 1224-25, 1226 & nn. 53-54:

15. See Revesz, *supra* note 14, at 1226 & n.54, 1245 (arguing that a state's regulatory and fiscal costs, reflected in lost wage income for citizens and in lost sources of tax revenue, may exceed the benefit of imposing federal controls); Lynn A. Baker & Samuel H. Dinkin, *The Senate: An Institution Whose Time Has Gone?* 14 J.L. & POL. (forthcoming 1997) (describing "welfare-reducing federal homogenizing legislation," which purportedly deprives states and localities of beneficial normative diversity by coercing or imposing regulatory controls that are not tailored to the state's determination of costs and benefits).

16. See Baker & Dinkin, *supra* note 15 (quoting JAMES M. BUCHANON & GORDON TULLOCK, *THE CALCULUS OF CONSENT: LOGICAL FOUNDATIONS OF CONSTITUTIONAL DEMOCRACY* 92 (1962) (defining social welfare "in terms of the voluntary preferences of the individuals as revealed by their behavior"); J.H. DALES, *POLLUTION, PROPERTY AND PRICES* 88-93 (1968) (discussing the economic conception of improving social welfare by increasing the diversity among locales in regard to living conditions and governmental policies). It is important to note that many economists long-ago rejected neo-classical economic conceptions and acknowledge that values must be observed through other means than market behaviors. But neoclassical conceptions exert a tenacious hold on legal theory. See Peter P. Swire, *The Race to Laxity and the Race to Undesirability: Explaining Failures in Competition Among Jurisdictions In Environmental Law*, 14 YALE J. ON REG. 67, 94-95 (1996) ("Environmental law is largely defined by the very factors that are assumed away in [neoclassical economic] models, such as interstate externalities, deep public choice problems, and intractable theoretical and practical obstacles to measuring the social utility of environmental regulations [Legal analysts] may slide too easily from conclusions within the context of . . . stylized model[s] to claims about the real world [M]odest changes in initial assumptions can make competition among jurisdictions no longer efficient.").

17. Value depends on "socially shared understanding" rather than on the revealed preferences of individuals in economic markets. Margaret Jane Radin, *Compensation and Commensurability*, 43 DUKE L.J. 56, 66 (1993); see also GUIDO CALABRESI, *THE COSTS OF ACCIDENTS* 18 (1970) ("decisions balancing lives against money or convenience cannot be purely monetary ones, so the market method is never the only one used."); Mark Sagoff, *Economic Theory and Environmental Law*, 79 MICH. L. REV. 1393, 1411-12 (1981) (public preferences for environmental quality "do not involve desires or wants [measured by willingness to pay], but opinions or beliefs.").

When national evaluative norms are employed,¹⁸ federal regulation is more likely than state or local regulation to increase social welfare.¹⁹ Tailoring requirements to local preferences will not necessarily increase social welfare, because such tailoring prevents citizens located outside a state from satisfying their preferences for in-state regulation.²⁰ Even when the evaluative norms are based exclusively on willingness-to-pay, tailoring to local preferences may reduce social welfare.²¹ Further, if federal regulation codifies moral rights, the argument that federal regulation reduces social welfare may

18. I shall refer to "evaluative norms" to describe whatever in practice provides the shared — or imposed — understanding of value that is applied to political and legal decisions. See Rubin & Feeley, *supra* note 3, at 913 n.50 (discussing the distinction between instrumental and normative justifications for federalism). National evaluative norms are the measures of value implicitly adopted when preemptive federal legislation is enacted. National evaluative norms may not necessarily be shared by a majority of the nation's citizenry. In federalism disputes, the national evaluative norms are not shared by particular states. Agreement over the measures of value may be a necessary but missing precondition to reasoned analysis of regulatory options and federalism disputes. Cf. Lester B. Lave, *Introduction, in* QUANTITATIVE RISK ASSESSMENT IN REGULATION 1, 5 (Lester B. Lave ed., 1982) [hereinafter QUANTITATIVE RISK ASSESSMENT] ("many hold the cynical view that regulation is power politics, with the winners imposing their will on the losers Whether the balancing [of the measure of benefits and costs] is implicit or explicit [absent quantitative risk estimates] regulation is reduced to guesses based on what are called prudent judgments. These guesses uncover and exacerbate value conflicts and the inherent differences in values inevitably lead to maximal conflict.").

19. See Rubin & Feeley, *supra* note 3, at 935 ("Social welfare is not greater in a federal system unless one can show that the states, operating separately, will produce a statistically higher level of good policies than the central government It becomes demonstrably wrong . . . [if] good policy [is defined] through a national decision-making process.").

20. Cf. Daniel C. Esty, *Revitalizing Environmental Federalism*, 95 MICH. L. REV. 570, 592 (1996) (tailoring policies to local needs and desires reduces abilities to protect property rights and to limit transjurisdictional pollution to an efficient level). Similarly, providing a variety of jurisdictions with differing social and regulatory conditions may not increase social welfare, because individuals are relatively immobile and cannot migrate in order to increase their satisfaction. See Susan Rose-Ackerman, *Does Federalism Matter? Political Choice in a Federal Republic*, 89 J. POL. ECON. 152, 155 (1981) (individuals' preferences, as opposed to those of firms, are more typically expressed in political processes than by moving among jurisdictions).

21. The willingness-to-pay conception assumes that there is no direct basis to compare the degree of utility that individuals derive from satisfying their preferences. Because out-of-state citizens are excluded from the state's political "market," there is no way to determine whether out-of-state citizens would pay more to satisfy their preferences for in-state regulation than in-state citizens would pay to avoid such regulation. See Baker & Dinkin, *supra* note 15 (as the proportion of the group whose approval is required for decision increases, the costs of reaching a decision increase; only unanimous decision rules assure increases in welfare because "no interpersonal utility calculations need be made"); Commission on Risk Assessment and Risk Management, *Risk Assessment and Risk Management In Regulatory Decision-Making: Draft Report For Public Review And Comment* 54 (draft of June 13, 1996) (on file with the author) [hereinafter Regulatory Decision-Making] ("Deciding how different groups should be weighted for equity in economic analysis would be highly value-laden.").

simply be irrelevant.²² Although valid arguments may be made against federal regulation, these arguments may not in any way suggest the need to return policymaking to the states.²³

Part I of this article describes the constitutional framework applicable to federalism disputes. If federal power exists to regulate private conduct, states may regulate only because the Congress has allowed them to do so. National political processes thus resolve conflicts in which the citizens of different states attempt to impose their values on each other. In these processes, federal legislators imperfectly aggregate and weigh these values. The political resolution of value conflicts is subject to continuous revision through the enactment or repeal of federal legislation.

Part II evaluates the traditional rationales for federal environmental regulation in light of the disputed values typically presented by federalism disputes. These disputed values include the relative efficiency, accountability, and risks of federal or state regulation and implementation. Resolution of the underlying value conflicts often predetermines the results of comparative analyses of the benefits and costs of federal or state regulation.²⁴ Data may be insufficient to determine the relative merit of federal or state implementation of specified policies.

Part III discusses how Congress enacted various provisions of the federal Clean Air Act²⁵ to achieve specified goals. Congress imposed

22. See Rubin & Freely, *supra* note 3, at 913 (once deontological rights are recognized, their status is independent of instrumental justifications); *but see* William K. Jones, *A Theory of Social Norms*, 1994 U. ILL. L. REV. 545, 593 (1994) ("If we follow a rights theory, we may have a world in which all rights are respected, and perhaps one in which inequality has been banished, but it may be a world in which all share equally in a society of desperation and despair."). Mainstream American legal theory does not recognize positive individual rights as primary requirements and duties of government. See RONALD DWORIN, *TAKING RIGHTS SERIOUSLY* x-xi (1977) (arguing that individual rights to protection from government "are prior to the rights created by explicit legislation").

23. See Esty, *supra* note 20, at 637 ("While we might all agree that the current structure of regulation produces undesirable results, [recent academic criticism] does next to nothing to show that the source of the problem is the *federalness* of the regulations.") (emphasis in original).

24. Cf. Daniel B. Rodriguez, *Turning Federalism Inside Out: Intrastate Aspects of Interstate Regulatory Competition*, 14 YALE J. ON REG. 149, 151-52 (1996) (federalism policy scholarship should address the wide range of differences among states that affect the efficient provision of goods and services); Edward L. Rubin, *The New Legal Process, The Synthesis of Discourse, and the Microanalysis of Institutions*, 109 HARV. L. REV. 1393, 1424-33 (1996) (academic theory is coalescing around comparative analyses of institutions as a means to evaluate the concepts of efficiency and fairness).

25. 42 U.S.C. §§ 7401-7671q (1994).

measures based upon all of the traditional rationales advanced for federal regulation.²⁶ Further, Congress adopted varying approaches to implement the federal requirements. Congress wholly preempted state regulation and relied exclusively upon the U.S. Environmental Protection Agency ("EPA") to develop and to enforce the control of emissions from mobile sources; relied presumptively upon states to develop and to implement controls to meet federal ambient standards for certain ubiquitous pollutants; and relied presumptively upon EPA to develop and to implement controls for pollutants from new stationary sources and for highly toxic air pollutants.

Part III then briefly traces the implementation history of these provisions.²⁷ The analysis demonstrates how EPA and states have repeatedly failed to achieve the goals specified by Congress.²⁸ State and local resistance to national values has shaped implementation by states and by EPA of the federal environmental laws.²⁹ The generali-

26. Significantly, many of these rationales are ignored or disparaged in the academic literature. See John P. Dwyer, *The Practice of Federalism Under the Clean Air Act*, 54 MD. L. REV. 1183, 1191 & n.32, 1220 (1995) (citing legislative history that supports additional rationales to those noted and arguing that interstate externalities were not a "significant concern" to Congress in 1970); Revesz, *supra* note 14, at 1224 n.40 ("there is no evidence that the normative component of the public choice argument played an important role in shaping the statutory scheme"); *but see* Stewart, *supra* note 7, at 1218-19 (elements of "federal pollution control legislation in the early 1970s . . . reflect the nonutilitarian moral and sacrificial aspects of environmental policy.").

27. The present analysis builds upon the prior work of, *inter alia*, Professors Richard Stewart, Peter Menell, John Dwyer, Craig Oren, and Robert Percival. See, e.g., Stewart, *supra* note 7; Dwyer, *supra* note 26; PETER S. MENELL & RICHARD B. STEWART, ENVIRONMENTAL LAW & POLICY (1994); John P. Dwyer, *The Pathology of Symbolic Legislation*, 17 ECOL. L.Q. 233 (1990); Craig N. Oren, *Prevention of Significant Deterioration: Control-Compelling Versus Site-Shifting*, 74 IOWA L. REV. 1 (1988); Percival, *supra* note 1; ROBERT V. PERCIVAL, ET AL., ENVIRONMENTAL REGULATION: LAW, SCIENCE, AND POLICY (1992). See generally *Environmental Federalism Symposium*, 54 MD. L. REV. 1141-1690 (1995).

28. Similar stories may be told regarding the failure to achieve the goals of other federal environmental regulatory statutes. See, e.g., John P.C. Fogerty, *A Short History of Federal Water Pollution Control Law*, in CLEAN WATER DESKBOOK 5-20 (Envtl. L. Inst. ed., 1991); Lawrence R. Liebsman & Elliott P. Laws, *The Water Quality Act of 1987*, in CLEAN WATER DESKBOOK 21-42 (Envtl. L. Inst. ed., 1991); Randolph L. Hill, *An Overview of RCRA: The "Mind-Numbing" Provisions of the Most Complicated Environmental Statute*, 21 ENVTL. L. REP. (Envtl. L. Inst.) 10254, 10255-63 (May 1991).

29. See Baker & Dinkin, *supra* note 15 (disproportionate blocking power in the U.S. Senate provides small-population states with greater abilities to affect any federal policies that are enacted, redistributes wealth from larger to smaller population states, and discriminates against racial minorities possessing identifiably distinct interests); Dwyer, *supra* note 26, at 1216-19, 1224 (concluding from the history of implementing the Clean Air Act that state autonomy is inevitable and that "widespread dissatisfaction — manifested in the time-honored 'go-slow' approach — will bring EPA and even Congress to the bargaining table."). State regulation or

ty of the present analysis precludes any resolution of whether presumptive reliance on federal or state regulation or implementation has been more efficient or effective. But the analysis demonstrates the high regulatory, litigation, and opportunity costs incurred when Congress fails adequately to compel states or EPA to implement federal policies. The analysis thus suggests that Congress should repeal the goals that it does not require to be attained and should more effectively compel attainment of the goals that it does not repeal.

Finally, Part IV reconsiders existing federal environmental goals in light of the theory and practice of environmental federalism. After a quarter of a century of experience, most Americans apparently prefer to retain federal environmental regulation and to impose additional, costly preemptive federal requirements.³⁰ But we lack the ability to discern whether these citizens honestly and intelligently ascribe to these professed values.³¹ Challenges to federal environmental regulation thus reflect political battles for the hearts and minds of the citizenry. The federal judiciary plays a disproportionate role in this shaping of public values. Federal judges must determine whether the requirements contained in preemptive federal legislation are real or symbolic. Because significant impediments exist to enacting or repealing legislation, the value judgments of federal judges are rarely overturned. The merits of these judgments, however, can only be assessed by resolving the underlying value conflicts. By explicitly addressing the moral bases for political decisionmaking, participants in the national political drama may finally get to the heart of the

implementation thus may be the quid pro quo for federal legislators to enact statutes that preempt state regulatory prerogatives.

30. See Greg Easterbrook, *Environmental Moderation is on the Horizon*, WASH. POST, July 17-23, 1995, at 20 (National Weekly ed.) (“78 percent [of respondents] say . . . the government should ‘do whatever it takes to protect the environment’”); Regulatory Decision-Making, *supra* note 21, at v, 11 (“Public-opinion polls have consistently shown strong support throughout the United States for effective environmental stewardship . . . 80% of Americans . . . do not want government to do less about risks to health and the environment than it does currently . . .”); Percival, *supra* note 1, at 1144 & n.14 (citing polling data demonstrating greater public support for federal than for state environmental regulation).

31. The polling data does not identify the level of public comprehension of federal environmental goals or the costs and benefits associated with federal statutes. The data also fail to indicate whether a majority of voters in a majority of states support federal environmental regulation. Nevertheless, the data strongly and consistently indicate that a “supermajority” of the national voting public continues to support preserving and even expanding the traditional federal role in protecting the environment.

matter and thus may conduct more reasoned — or at least more civil — debate.³²

I. NATIONAL POLITICAL PROCESSES RESOLVE VALUE CONFLICTS AMONG THE CITIZENS OF DIFFERENT STATES

A. *The Constitutional Framework*

Citizens of a particular state lack a constitutional entitlement (states' rights) to impose within state borders their preferences for standards of environmental quality.³³ In the Revolutionary War, the citizens of American states rejected the British concept of Parliamentary sovereignty, which denied states the legal right to be free from central control. But by adopting the Constitution, the citizens of individual states relinquished state sovereignty that had been created under the Articles of Confederation and replaced it with the sovereignty of a "unitary" nation.³⁴ The Constitution thus contains the Supremacy Clause and does not require the consent of all states for its amendment.³⁵

Under the Supremacy Clause, Congress may entirely preempt state regulation of private conduct affecting the environment.³⁶

32. See Robert F. Nagel, *The Term Limits Dissent: What Nerve*, 38 ARIZ. L. REV. 843, 845-47, 855 (1996) (deploring the exaggerated rhetoric in federalism disputes; rejecting claims made by Professors Rubin & Feeley regarding a unitary public and national decisionmaking because no preemptive federal legislation may exist and because the Supreme Court is often willing to overturn legislative decisions).

33. In theory, preferences for regulation reflected in federal laws are likely to have been held by a majority of federal citizens. See Baker & Dinkin, *supra* note 15 (legislators formally representing as little as 11 percent of the population may prevent a vote on legislation). If a majority of citizens in *each* state originally supported the federal quality standards, and if it were appropriate to limit regulation to the preferences of citizens of particular states, there would have been little need for federal legislation. Because of the substantial blocking power of minority states, however, one cannot infer from the existence of federal legislation that a majority of the nation's citizens *continue* to support federal goals. Similarly, one cannot infer from existing state laws that a majority of state citizens support those laws or oppose federal laws.

34. This conception was reflected in the requirement for ratification of the Constitution by "metalegal" conventions of the people. See U.S. CONST. art. VII; Akhil R. Amar, *Of Sovereignty and Federalism*, 96 YALE L.J. 1425, 1435, 1445-47, 1455-61, 1462 & nn.161-63 (1987).

35. See U.S. CONST. art. V; U.S. CONST. art. VI, cl. 2; Amar, *supra* note 34, at 1455-62.

36. See U.S. CONST. art. VI, cl. 2; *New York v. United States*, 505 U.S. 144, 174 (1992) ("[w]here federal regulation of private activity is within the scope of the Commerce Clause, we have recognized the ability of Congress to offer states the choice of regulating that activity according to federal standards or having state law pre-empted by federal regulation."). Supremacy clause preemption may be expressed in or implied by legislation or may result from

Alternately, Congress may preserve state regulation from some forms of preemption.³⁷ The only current limits on the power of Congress to regulate private conduct are that the Constitution must have vested power in Congress to address the conduct³⁸ and that the policies imposed by Congress must be reasonable means to accomplish legitimate ends.³⁹ In addition, Congress cannot order states to

particular conflicts of state laws with the application of federal law. See, e.g., 42 U.S.C. § 7416 (1994); *Hines v. Davidovitz*, 312 U.S. 52, 62-69 (1941). Federal spending conditions also may induce states to regulate or to refrain therefrom. The federal spending power is broader than federal regulatory power. See *South Dakota v. Dole*, 483 U.S. 203, 207-08 (1987); Lynn A. Baker, *Conditional Federal Spending After Lopez*, 95 COLUM. L. REV. 1191, 1931 & nn. 98-100, 1962 & nn. 244-246 (1995) (conditional funding provided under the Spending Clause, U.S. CONST. art. I, § 8, cl. 1, may induce states to adopt policies that are otherwise beyond federal power to impose; the Supreme Court has failed to provide content to its doctrine that federal spending conditions cannot be "unduly coercive"); cf. *Virginia v. Browner*, 80 F.3d 869, 881-82 (4th Cir. 1996) (denying federal highway funds for state failures to submit approvable plans to implement federal permit programs does not rise to the level of "outright coercion").

37. Federal and state courts may find state regulatory activities that discriminate against or unduly burden interstate commerce to be preempted. See U.S. CONST. art. I, § 8, cl. 3; *Philadelphia v. New Jersey*, 437 U.S. 617 (1978) (discriminatory state regulation); *Pike v. Bruce Church Inc.*, 397 U.S. 137 (1970) (burdensome state regulation). Congress may legislate to authorize such preempted state measures. See *White v. Mass. Council of Construction Employers*, 460 U.S. 204 (1983). See generally Kirsten Engel, *Reconsidering the National Market in Solid Waste: Trade-Offs in Equity, Efficiency, Environmental Protection, and State Autonomy*, 73 N.C. L. REV. 1481, 1546-60 (1995) (analyzing competing policies to address nonhazardous wastes and recommending that Congress cure such preemption by pre-approving compacts under the Compacts Clause, U.S. CONST. art. I, § 10, cl. 3).

38. See *supra* notes 7, 9 and accompanying text. Because state law is the source of entitlements for citizens to engage in activities that affect the environment, the Fourteenth Amendment implementing power might provide a basis for federal laws that protect environmental "rights" that are beyond Interstate Commerce Clause power. See David Schoenbrod, *The Delegation Doctrine: Could the Court Give It Substance?*, 83 MICH. L. REV. 1223, 1265 (1985). See generally Guido Calabresi & Bernard Melamed, *Property Rules, Liability Rules, and Inalienability: One View of the Cathedral*, 85 HARV. L. REV. 1089 (1972) (discussing the nature of legal entitlements).

39. See *Hodel v. Virginia Surface Mining and Reclamation Ass'n*, 452 U.S. 264, 276 (1981) (holding that Congress possesses power to regulate private conduct to protect the environment if any rational basis may be imputed for finding that the conduct affects interstate commerce and if the means is reasonably adapted to that end); *Williamson v. Lee Optical*, 348 U.S. 483 (1955) (federal legislative classifications and measures regarding economic activities are subject only to rational basis review under the Due Process Clause, U.S. CONST. amend. V, which incorporates equal protection concepts); but cf. *United States v. Carolene Products Co.*, 304 U.S. 144, 152 n.4 (1938) (systematic victimization by majority interests that effectively prevents equal representation of minority individuals may infringe justiciable rights). The swing votes in *United States v. Lopez*, 115 S.Ct. 1624 (1995), claimed that their concurrence did not repeal prior case law. See *id.* at 1637 (Kennedy, J., concurring) (the Court's past decisions "are within the fair ambit of the Court's practical conception of commercial regulation and are not called in question by our decision today."); cf. *id.* at 1650 & n.8 (Thomas, J., concurring) ("many believe that it is too late in the day to undertake a fundamental reexamination of the past").

legislate (and possibly to administer) some federal policies and Congress may not authorize citizens to sue unconsenting states for violations of those policies.⁴⁰

States cannot avoid the preemptive effects of federal legislation by unilateral secession.⁴¹ Because their forebears signed onto the Constitution, state citizens must live with their national citizenship.⁴² In contrast to states, Indian tribes may not have ceded sovereignty to the federal government when entering into treaties or may have imposed through treaties special obligations on the federal government.⁴³ As a result, tribes and their members may have stronger claims to maintaining diverse social and governmental policies than states and their citizens do.⁴⁴

Within the domain of regulatory power vested in Congress by the Constitution, the idea of "states' rights" is thus a popular illusion. Like their citizens, states must participate in national political processes to influence the regulatory requirements that will apply

40. See *supra* notes 8, 10, 11, and accompanying text; *Garcia v. San Antonio Metropolitan Transit Authority*, 469 U.S. 528 (1985) (overruling and rejecting as not justiciable the standard adopted in *National League of Cities v. Usery*, 426 U.S. 833, 845, 852, 854 (1976), that federal legislation is invalid only if it regulates the "States as States," addresses matters that are indisputably "attributes of state sovereignty," and impairs the States' ability "to structure integral operations in areas of traditional functions"); *New York*, 505 U.S. at 183-86 (rejecting challenges brought under the Guarantee Clause, U.S. CONST. art. IV, § 4, to conditional federal spending and backup federal regulation; simultaneously refusing to hold that disputes under the Guarantee Clause are justiciable).

41. International law provides the rights of self-determination (secession) only to "peoples." LOUIS HENKIN, ET AL. *INTERNATIONAL LAW: CASES AND MATERIALS* 302-08 (3d ed. 1993). To qualify as a "people," it is normally thought a necessary but not sufficient condition for individuals with a distinctive cultural identity to live within a distinct geographic territory. See *id.* Notwithstanding substantial regional differences, the American population does not comprise distinct peoples. See Rubin & Feeley, *supra* note 3, at 944, 947 (any historically unique state cultures have given way to a national culture).

42. See Baker & Dinkin, *supra* note 15 (discussing the supermajoritarian enactment requirements for amendments specified in U.S. CONST. art. V; discussing other barriers to amending the Constitution by various means, including popular revolt). See generally ALBERT O. HIRSCHMAN, *EXIT, VOICE, AND LOYALTY: RESPONSES TO DECLINE IN FIRMS, ORGANIZATIONS, AND STATES* (1970).

43. See Vine Deloria, Jr., *Reserving To Themselves: Treaties and the Powers Of Indian Tribes*, 38 ARIZ. L. REV. 963, 966-76 (1996); Robert Williams, *The People of the States Where They Are Found Are Often Their Deadliest Enemies: The Indian Side of the Story of Indian Rights and Federalism*, 38 ARIZ. L. REV. 981, 984-97 (1996).

44. This is particularly true to the extent that imposition of values threatens tribal culture. See Rebecca Tsosie, *Tribal Environmental Policy in an Era of Self-Determination: The Role of Ethics, Economics, and Traditional Ecological Knowledge* 94 (1996) (unpublished manuscript, on file with the author) (describing the ability of tribes to establish their systems of governance as depending on preservation of cultural integrity).

within their jurisdiction.⁴⁵ Historically, the Supreme Court exercised power under Article III of the Constitution to protect the states and their citizens from the harms caused by the regulatory policies adopted by citizens of other states.⁴⁶ But Congress has largely preempted the judicial role in regard to transboundary environmental disputes.⁴⁷

Congress inconsistently has prevented citizens of particular states from imposing their values on the citizens of other states⁴⁸ and has authorized federal officials to impose the values of citizens of particular states on other states.⁴⁹ The question posed for environmental federalism disputes is whether Congress should preempt state diversity and impose the values of the citizens of particular states on the citizens of other states or should allow the citizens of different states to impose their values on each other. In making this decision, Congress must consider the competing "interests" of the citizens of the different states.⁵⁰ For purposes of further analysis, I assume that

45. States as "juridical" entities participate in national legislative processes because Senate representation is proportioned on statehood and because states may specify which citizens can vote and may establish voting districts and regulations, subject to federal legislative supervision. See U.S. CONST. art. I, § 2, art. I, § 3 (as amended by amend. XVII); U.S. CONST. art. I, § 4, cl. 1.

46. See *Georgia v. Tennessee Copper Co. & Ducktown Sulphur, Copper & Iron Co.*, 206 U.S. 230, 231-37 (1907) (the Supreme Court possesses original jurisdiction to determine equitable rules for transboundary pollution; states have a constitutional entitlement to an injunction to protect their territorial environments based on their "quasi-sovereign" interests and as the quid pro quo for abandoning warfare when entering the Union); cf. *id.* at 239 (Harlan, J., concurring) ("Georgia is entitled to the relief sought, not because it is a state, but because it is a party which has established its right to such relief by proof.").

47. See *Milwaukee v. Illinois*, 451 U.S. 304, 317-32 (1981) (the Federal Water Pollution Control Act, 33 U.S.C. §§ 125-1387 (1994) [hereinafter FWPCA] preempts the constitutional common law of interstate water pollution).

48. See *International Paper Co. v. Oulette*, 479 U.S. 481, 490-96 (1987) (FWPCA preempts state common law nuisance suits to impose liability on sources in upstream states for transboundary water pollution).

49. See *Arkansas v. Oklahoma*, 503 U.S. 91, 104 (1992) (holding that Congress authorized EPA to impose downstream state water quality requirements in federal water pollution control permits issued in upstream states, without resolving whether Congress had required EPA to do so); 40 C.F.R. §122.4(d) (1997) (EPA regulations prohibit issuance of permits by EPA when "impos[ed] conditions cannot ensure compliance with the applicable water quality requirements of all affected States.").

50. It is common in academia to identify values with particular groups that believe or espouse them and which compete for legislative recognition of their interests. See generally Cass R. Sunstein, *Interest Groups in American Public Law*, 38 STAN. L. REV. 29 (1985) (describing the competition through interest groups—or factions—to establish in law and to impose particular values on society); Richard B. Stewart, *Madison's Nightmare*, 57 U. CHI. L. REV. 335 (1990) (same).

federal legislators are concerned with determining "good" policy, even though public-choice analyses may refute this assumption.⁵¹

B. *Competing Conceptions Of Value And Of Social Welfare Are Resolved Through National Political Processes*

1. *Economic Versus Political Conceptions Of Value.* Competing conceptions of value lie at the heart of federalism disputes. Good policy is often defined by reference to cost-benefit analysis, or neoclassical economics, which in turn is based on liberal political theory. Pursuant to the "Kaldor-Hicks" efficiency criterion, a policy increases social welfare if the benefits are sufficient in theory to compensate for the costs.⁵² Such economic analysis assumes that we cannot directly compare the "utility functions" of different individuals, i.e., the degree of benefit individuals derive by satisfying their preferences. Value is therefore revealed, for neoclassical economics, by the willingness of individuals to pay for goods and services in economic markets.⁵³

Because economic markets do not normally exist to reveal the strength of citizen preferences for regulatory policies, social welfare cannot be assessed by measuring individuals' willingness to pay for policy.⁵⁴ Instead, social welfare is assessed by predicting the results of regulatory policies and by extrapolating the costs and benefits from market values for the goods and services achieved by the policies.

51. See William S. Eskridge, Jr., *Politics Without Romance: Implications of Public Choice Theory for Statutory Interpretation*, 74 VA. L. REV. 275, 283-95 (1988) (describing as a "Madisonian Nightmare" the politics and results of interest group competition for legislation); cf. Frank Rich, *It Takes Courage to Go After "Big Tobacco,"* ARIZ. DAILY STAR, Dec. 12, 1995, at A13 (discussing the likely future failure of federal legislators to address serious health risks from tobacco use, because influenced by large and pervasive campaign contributions of the tobacco industry).

52. See Baker, *supra* note 36, at 1971 & n.281.

53. See *supra* note 16; MENELL & STEWART, *supra* note 27, at 44-45; but see Tsosie, *supra* note 44, at 58 ("Although the Western positivist tradition considers science to be 'objective' and free from bias, and economists assert that free markets enhance the common good without state coercion, both intellectual trends in fact inculcate values of human supremacy over the natural world, profit maximization, and measure efficiency using short-term, individualist norms."). See generally JOHN STUART MILL, *UTILITARIANISM* (1971); JEREMY BENTHAM, *PRINCIPLES OF MORALS AND LEGISLATION* (1988).

54. Political markets exist to measure preferences for regulation. But bribery of government officials is illegal. It should also be obvious: (1) that the *ability* to spend wealth to influence policy does not provide an objective measure of value; and (2) that policies adopted in response to campaign contributions do not necessarily increase social welfare.

But even assuming accurate predictions of physical and human responses to policy, economic markets may not exist for the relevant goods and services⁵⁵ and market prices may not properly reflect individuals' valuations due to market failures.⁵⁶ Substantial disputes thus exist over how to value non-market preferences for regulation.⁵⁷

Even if cost-benefit analysis based on willingness-to-pay is accepted as a good means to assess the welfare effects of policy, cost-benefit analysis is rarely the basis on which preemptive federal legislation is enacted.⁵⁸ Instead, federal legislators may informally

55. For example, markets do not normally exist in which people routinely buy or sell environmental quality or bodily integrity. Although prices may be set for the enjoyment of public amenities, such "public goods" are often unique and the prices set may therefore undervalue or overvalue the preferences of various citizens for these amenities. See MENELL & STEWART, *supra* note 27, at 67, 68 & n.28, 69-70 (discussing different options for government regulation of "collective goods"); *id.* at 84-85 (discussing direct policy and project costs, commercial impacts, health effects, recreational, ecosystem, and aesthetic impacts, and option and existence values that must be specified in order to determine the costs and benefits of policies); *cf.* KEN KOLLMAN, ET AL., A COMPARISON OF POLITICAL INSTITUTIONS IN A TIEBOUT MODEL 4-5 (1995) ("The system of policy choices by government and jurisdictional choices by citizens [regarding public goods] can be viewed as a complex adaptive system in which movements and policies are determined by the *preference of citizens and the political institution*. Some institutions may create complex systems which settle into equilibria while others may create systems which never equilibrate.") (emphasis added).

56. See STEPHEN BREYER, REGULATION AND ITS REFORM 15-35 (1982) (discussing monopoly power, externalities, and other market imperfections that affect prices); KOLLMAN, ET AL., *supra* note 55, at 3 ("[T]he Tiebout hypothesis does not hold . . . More troubling is [the] result that [it] can be expected to hold only when the number of jurisdictions is at least as large as the number of citizens—a rather unlikely situation.").

57. See Regulatory Decision-Making, *supra* note 21, at 56 ("quantitative estimates of value . . . can be highly variable and often controversial. Cost estimates are also highly variable and imprecise, and they can vary according to the bias of the organizations affected."); *id.* at 55 ("Like health risk assessment, economic analysis involves multiple assumptions and produces uncertain results."); Esty, *supra* note 20, at 631 ("environmental regulation operates in a realm where quantitative welfare comparisons are difficult."); N. William Hines, *Nor Any Drop To Drink: Public Regulation of Water Quality*, 52 IOWA L. REV. 186, 196-201 (1966) (noting difficulties of valuing health and environmental risks); Thomas O. McGarity, *Media Quality, Technology and Cost-Benefit Balancing Strategies for Health and Environmental Regulation*, 46(3) LAW & CONTEMP. PROBS. 159, 173-179 (1983) (same). See generally Richard B. Stewart, *Regulation in a Liberal State: The Role of Non-Commodity Values*, 92 YALE L.J. 1537 (1983). Cost-effectiveness analysis does not avoid these problems, but reduces the number of assumptions by eliminating estimates of benefits.

58. See BREYER, *supra* note 56, at 34 ("paternalism based on mistrust of consumer rationality . . . plays an important role in many governmental decisions."); *cf.* KOLLMAN, ET AL., *supra* note 55, at 19 ("Democratic referenda, which performed best in the one jurisdiction model . . . yields the lowest aggregate utility [as the numbers of jurisdictions increase] and proportional representation . . . performs second best."). Nor is it always the basis upon which Congress directs federal agencies to regulate, even if the President may require cost-benefit analysis to assure that the most Kaldor-Hicks efficient option is adopted among statutorily

“aggregate” the competing political interests of their constituents and weigh those interests with numerous other considerations, including their own reelection prospects.⁵⁹ The informal aggregation of interests is invariably required because of uncertainties in the measures used to predict consequences or to assess market prices.⁶⁰ The evaluative norms suggested by such aggregation will often determine the resultant characterization of the welfare effects of regulatory policies.⁶¹

permitted policies. See Exec. Order No. 12,866 § 1(a), 58 Fed. Reg. 51,735 (1993) (“agencies should select those approaches that maximize net benefits . . . unless a statute requires another regulatory approach”); cf. *supra* note 6.

59. See Jonathan R. Macey, *Federal Deference to Local Regulators and the Economic Theory of Regulation: Toward a Public-Choice Explanation of Federalism*, 76 VA. L. REV. 265, 274-90 (1990) (describing how federal legislators enact legislation based on personal incentives — particularly for reelection — rather than on the expressed political preferences of their constituents); Swire, *supra* note 16, at 96 (“[M]agically, the [economic] model assumes that regulators know the preferences of the citizens in the state.”).

60. See NATIONAL RESEARCH COUNCIL, SCIENCE AND JUDGMENT IN RISK ASSESSMENT 7 (1994) (risk assessment requires the specification of “default options,” i.e., assumptions for bridging the inevitable gaps in information); Kevin L. Fast, *Treating Uncertainty as Risk: The Next Step in the Evolution of Environmental Regulation*, 26 ENVTL. L. REP. (Envtl. L. Inst.) 10627, 10643 (Dec. 1996) (“uncertainty displaces evidence as the driving force for regulatory action. The ultimate consequence is a shift in the burden of proof”).

61. For example, the EPA estimated that the benefits of implementing the Clean Air Act from 1970 to 1990 exceeded the costs by a factor of seventy, resulting in net benefits ranging from \$10.5-40.6 trillion, with a “central estimate” of \$22.5 trillion. The benefits measured were limited to the value of avoiding premature death (\$4.8 million per life saved) and specific diseases, as well as to the avoided costs of hospital admissions. See *Air Pollution: Revised Report Says Air Act's Benefits May Be 70 Times Higher Than Its Costs*, DAILY ENVIR. REPT. (BNA), Nov. 13, 1996, at 3. In the case of premature death, the value of life was derived from studies demonstrating how people trade workplace risks for higher wages, without regard to the statistical likelihood that they would have soon died anyway or already suffered from chronic conditions and without discounting for the fact that the deaths would occur after 1990. Even assuming the dubious premise that wages reflect accurate perceptions and valuations of personal health risks, these considerations alone would reduce the estimates by at least a factor ranging from 4.4 to 9.6. See Coalition for Clean Air Implementation, Comments on EPA's Draft Clean Air Act Section 812 Retrospective Study entitled “The Benefits and Costs of the Clean Air Act, 1970 to 1990” 2, Attachment 2-7 (1996) (unpublished letter, on file with the author). EPA's analysis excluded numerous but unmeasured or unmeasurable costs, such as paperwork burdens, transaction costs of complying with regulations, transition costs of moving or altering production based on competitiveness effects, and research and development opportunity costs. See *id.* at 7. Conversely, EPA's calculations may not properly allocate costs of technological controls to efficient production rather than to environmental protection. See Robert W. Crandall, et al., *Clearing the Air: EPA's Self-Assessment of Clean Air Policy*, 19 REG. 35, 36 (1996). EPA's calculation of benefits may have overpredicted: (1) the “baseline” of emissions that would have occurred absent federal regulatory controls; (2) the extent to which emissions affected air quality; and (3) the degree to which reduced emissions improved health. See *id.* at 37-44. Conversely, EPA's calculations excluded benefits to individuals other than the persons whose lives were saved, because such individuals do not normally participate in the decisions to trade higher wages for increased risk of disease. Markets do not normally exist to price these values,

2. *State-Level Values Versus National Values.* In order to informally aggregate citizens' values, federal legislators should ask whose preferences for regulation count and how to weigh those preferences in order to determine the evaluative norms for social welfare analyses. I shall refer to informal aggregations based on the preferences of a particular state's citizens as "state-level values." In contrast, I shall refer to aggregations based on the preferences of all federal citizens as "national values," even if many of those citizens' preferences in practice are given little or no weight.⁶²

State-level values are often employed to assess the social welfare effects of policy. The consequences of a policy for individuals located outside a jurisdiction are ignored, unless the policy clearly and substantially imposes external physical harms.⁶³ This limitation cannot be justified by liberal political theory.⁶⁴ Nor can the limitation be

which in the aggregate could provide a small or a substantial contribution to net benefits. More realistic upper-bound and lower-bound estimates representing a high level of confidence thus would likely have ranged from huge net benefits to huge net costs. Such analyses are not helpful for policymakers or political debate, particularly because they do not discuss the *marginal* benefits and costs of existing policies. *See id.* at 37, 46.

62. Many federal "citizens" do not vote for federal legislators, either because they are thought unable to form intelligent preferences that are entitled to recognition or because they do not reside in states and thus are structurally excluded from representation. *See, e.g., Richardson v. Ramirez*, 418 U.S. 24 (1974) (felons may be denied the right to vote); *Heald v. District of Columbia*, 259 U.S. 114 (1922) (federal citizens may be taxed by the federal government without representation in Congress). Amendments to the Constitution and the Equal Protection Clause protect individuals from being deprived of the right to vote based solely on hostility, thereby assuring political aggregation of their preferences. *See* U.S. CONST. amends. XV, XIX, XIV, XXVI; *Romer v. Evans*, 116 S.Ct. 1620, 1625-28 (1996). Federal legislators are not forced to aggregate the interests of children, who do not vote but are affected by an extremely broad range of policies. Federal legislators routinely take children's interests into account, even if some do so only because their constituents care. Similarly, they may take the interests of citizens who do not reside in states into account because their constituents care about relatives, friends, acquaintances, or strangers.

63. *See Esty, supra* note 20, at 594, 595 & n. 73-74, 596 (economic analyses of extrajurisdictional effects may improperly be limited to physical harm to identified property rights; such analyses fail to consider national welfare effects and exclude consideration of individuals' preferences based on fear of over-reporting or "moral hazard"). Although the fear of over-reporting is justified, the wholesale exclusion of external preferences is not. *Cf.* Letter from Thomas Jefferson to William Charles Jarvis (Sept. 28, 1820), reprinted in JOHN BARTLETT, FAMILIAR QUOTATIONS 375 (13th ed. 1955) ("I know no safe depository . . . but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion.").

64. *See Romer*, 116 S.Ct. at 1628 ("Central both to the idea of the rule of law and to our own Constitution's guarantee of equal protection is the principle that government and each of its parts remains open on impartial terms to all those who seek its assistance."); David Golove, *Democracy Among States* 26-27, 67 n.74 (1996) (unpublished manuscript, on file with the author) (discussing the commitment of liberal political theory to value pluralism, which requires

justified on any purely factual basis.⁶⁵ When states refuse to provide political recognition to the interests of out-of-state citizens, moreover, they may reduce social welfare by preventing reciprocal bargaining to establish "efficient" prices for legal entitlements.⁶⁶

Some legal analysts further argue that federal regulation will increase social welfare only if states would hypothetically contract — based on state-level values — for the federal legislation. In many cases, federal legislation will coerce states to impose policies for which they would not accept the transfer payments offered by other states.⁶⁷ But this contractarian approach assumes the appropriateness

equal consideration of individuals' preferences by government; noting that the imposition of the status quo legal order is not value-neutral because it is biased against change and thus does not treat individuals' preferences equally); *cf.* Reynolds v. Sims, 377 U.S. 533, 575 (1964); Baker & Dinkin, *supra* note 15 (noting that the Equal Protection Clause prevents states from adopting forms of government similar to the Senate); Mark Tushnet, *What Then Is The American?*, 38 ARIZ. L. REV. 873, 878 (1996) (liberal political theory is not committed to a universal ordering of values that would preclude value pluralism); *supra* note 58; *but see* Stewart, *supra* note 7, at 1216 n.77 ("a congressional power to regulate a person's activity because it is distasteful to others (an 'external preference') might be opposed as constituting a potential threat to individual self-development and diversity, and inconsistent with the premises of a liberal society, in which government limits its concerns to the allocation of material goods and advantages.")

65. Absent sufficient countervailing benefits, social welfare is clearly reduced by psychological (moral) harm. *See* Esty, *supra* note 20, at 595 (psychological externalities are real; the relevant question is "whether those suffering the harm have a legitimate interest in the policy decision made elsewhere . . . [*i.e.*], have a right to have their feelings factored into the policy calculus."). Even purely psychological harms may have physical manifestations. *But cf.* Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 766, 775 (1983) (rejecting a challenge to the restart of the Three Mile Island nuclear power reactor; holding that the Nuclear Regulatory Commission was not required to consider the damage to health caused by fear of the risk of physical harm). Whether conduct is harmful or merely distasteful is thus a political dispute over value, as are most federalism disputes. The cause or magnitude of the harm is less often in dispute than the legitimacy of the claims to protection. *But cf.* Esty, *supra* note 20, at 575 n.14, 586 & n.49, 587 & n.50 (serious regulatory failures and nonoptimal policies are explained more by the failure to comprehend causal connections and other factual errors than by political disputes over value).

66. *See* Ian Ayres & J.M. Balkin, *Legal Entitlements as Auctions: Property Rules, Liability Rules, and Beyond*, 106 YALE L.J. 703, 706-08, 709 & nn.18-20, 710 & n.22 (1996) (property rules may inefficiently prevent "successive and reciprocal taking options" that would provide "a more or less orderly indication of the parties' comparative valuations of the entitlement"). Out-of-state citizens will not vote (directly or indirectly) for the state judges, legislators, or administrators who establish state law property rights and thus are unlikely to receive entitlements with which they can bargain. Similarly, out-of-state citizens will not be able to exert political pressure to establish their option priorities. Thus, political exclusion will not generate an "orderly indication" of comparative value.

67. *See* Baker & Dinkin, *supra* note 15 (preemptive federal legislation is "intuitively" likely to decrease welfare because it will impose conditions that in most cases would not result from voluntary transfers among states); Wallace E. Oates, *Federalism and Government Finance*, in MODERN PUBLIC FINANCE 144 (John M. Quigley & Eugene Smolensky, eds. 1994) (The benefits

of excluding external preferences from the measure of in-state social welfare. When national values are applied, federal legislation may convey net benefits even in states that view such legislation as imposing net burdens.⁶⁸ The contractarian approach also improperly suggests that the federal redistribution of wealth is a harm from which state citizens should possess the right to be protected.⁶⁹

The state-level values approach, moreover, is intelligible only if political decision-making should be based on "efficiency" and then only in regard to federal Senators. Senators are elected by all of a state's citizens and thus may be obligated to consider the preferences of all of their constituents.⁷⁰ At least such analysis is consistent with liberal political theory.⁷¹ In contrast, members of the House of

and costs of many pollutants "are regional or local in character"; a "first-best outcome" thus involves "jurisdiction-by-jurisdiction" standard setting).

68. *But cf.* Baker, *supra* note 36, at 1935-47 (describing the redistribution of wealth that results from federal taxation that depletes potential sources of state revenue).

69. *See* Esty, *supra* note 20, at 611-12 (such arguments narrowly define political communities and improperly reject legitimate claims of right). Because Congress may legally adopt policies that discriminate territorially, redistribution poses principally moral rather than legal concerns. *See* Gerald N. Neuman, *Territorial Discrimination, Equal Protection, and Self-Determination*, 135 U. PA. L. REV. 261, 267-331 (1987); Akhil R. Amar, *A Neo-Federalist View of Article III: Separating the Two Tiers of Federal Jurisdiction*, 65 B.U. L. REV. 205, 220 & n.59 ("Uniformity [of federal law] need not be viewed as constitutional requirement, but can instead be seen as a constitutional option committed to the discretion of Congress."); *cf.* Golove, *supra* note 64, at 58 (describing the self-interest of nonliberal states — such as theocracies — as requiring protection of their values from central dictation, rendering such governments unwilling to cede sovereignty); PRINCE BISMARCK, *REMINISCENCES OF THE KING OF ROUMANIA* 170 (Sidney Whitman ed. 1899) ("The peculiarities of each separate country forming the empire will always be respected and interference with their internal affairs must be avoided . . ."). Redistribution poses serious moral concern and may create legal claims when it is based on unequal political representation. *See* Baker & Dinkin, *supra* note 15 (existing representation in the Senate provides citizens with unequal power to influence the redistribution of wealth and dilutes the voting power of distinctive minority groups). *See generally* Cass R. Sunstein, *Naked Preferences and the Constitution*, 84 COLUM. L. REV. 1689, 1718 (1984) (discussing problems of substantive due process review of legislation in regard to political power and wealth transfers).

70. It is arguable, however, that Senators should identify more with the level of government in which they participate than with the constituents electing them. *But cf.* Nagel, *supra* note 32, at 851 (criticizing the Supreme Court for claiming that elected federal legislators owe their allegiance to the nation and not to the states). Further, Senators may support federal regulation because they believe: (1) that they are better able to assess state-level values than state legislators representing particular localities; or (2) that the federal government will better effectuate their constituents' interests by imposing state-level values on other states or will better protect those interests by preventing other states from directly imposing values on their constituents.

71. If states were to possess interests identifiably distinct from the preferences of their citizens, Senators might need to determine whether their loyalty is owed to the state or to their constituents. *Cf.* Golove, *supra* note 64, at 26-30, 31 & n.44 (discussing the inability to identify

Representatives should not employ state-level values to assess the social welfare effects of federal legislation, but should apply "district-level values." By effectuating the preferences of all of the citizens of a state, Representatives may prejudice the interests of their constituents.⁷²

But even Senators who are concerned about efficiency should not always apply state-level values. Senators will not increase social welfare by effectuating the irrational or immoral preferences of their constituents.⁷³ Whatever the theoretical merit of refusing to compare utility functions, all societies routinely reject individual preferences as the ultimate measure of value.⁷⁴ The Constitution itself established republicanism rather than direct democracy and provided for judicial review of legislation in order to assure paternalistic restraints on an arbitrary, capricious, and abusive popular will.⁷⁵

The state-level values approach to social welfare is thus theoretically incoherent. To preserve willingness-to-pay as the basis for assessing value, interpersonal utility comparisons cannot be made. Because jurisdictional lines are historically arbitrary, the preferences

distinct interests of "juridical" international states by deriving a list of the basic goods that all states would desire). See generally JOHN RAWLS, A THEORY OF JUSTICE (1971).

72. Representatives may often believe that the interests of their constituents will be advanced by promoting state regulatory prerogatives. But they may just as often believe otherwise. Substantial normative diversity exists within many states. See Rubin & Feeley, *supra* note 3, at 916, 919-20 (given substantial local variation, the political interests and values of particular localities may often receive greater support or protection from the federal government than from states); Rodriguez, *supra* note 24, at 158 (heterogenous states "face relentless issues of intrastate governmental variety and conflict"; conflicts internal to states may impede effective state competition and prevent useful state collaboration).

73. See Revesz, *supra* note 14, at 1235 n.81, 1243 & n.114, 1244 & nn.115-16 (states may irrationally "overvalue" environmental protection benefits in a land use context and "undervalue" such benefits in a regulatory context); cf. Rubin & Feeley, *supra* note 3, at 921-23 (state officials may not act rationally even if they properly aggregate the values of their citizens). See generally DANIEL KAHNEMANN, ET AL., JUDGMENT UNDER UNCERTAINTY: HEURISTICS AND BIASES *passim* (1982) (discussing psychological reasons why people may misperceive reality or their self-interest). Because they reject interpersonal comparisons of utility, however, economic analysts may believe that individuals irrationally value benefits and costs only if willingness-to-pay behavior is inconsistent.

74. See CALABRESI, *supra* note 17, at 18 ("[E]xternal social costs and benefits . . . are not self-defining and are in fact as narrow or as broad as any society cares to make them."); cf. Esty, *supra* note 20, at 576 (property rights are defined by reference to "normative assumptions about what constitutes an environmental harm or an externality"); *id.* at 583 (the historic touchstone of property rights is an undefined conception of "reasonableness").

75. See Peter L. Strauss, *The Place of Agencies in Government: Separation of Powers and the Fourth Branch*, 84 COLUM. L. REV. 573, 603 (1984); Carlos E. Gonzales, *Reinterpreting Statutory Interpretation*, 74 N.C. L. REV. 585, 647-52 (1996).

of individuals residing outside the jurisdiction should be considered in the calculus of value.⁷⁶ Conversely, to preserve jurisdictional boundary lines as the basis for assessing value, political norms must be imposed that are not based upon willingness-to-pay.⁷⁷ The dilemma is invariably resolved by federal legislators through political compromises that reflect neither willingness-to-pay nor jurisdictional boundaries.⁷⁸

Finally, whatever the merit of adopting a state-level values approach for individual legislators, legislators from different states will adopt different sets of state-level values. National political processes thus internalize the preferences of out-of-state citizens that state-level values exclude.⁷⁹ A different measure of value and of social welfare results depending upon which level of government regulates conduct within a state. Within the scope of federal legislative power, Congress ultimately chooses the level of government that may regulate. The applicable measures of value and of social welfare thus are the but-for results of national political processes.⁸⁰

76. Cf. Joel Yellin, *Science, Technology, and Administrative Government: Institutional Designs for Environmental Decisionmaking*, 92 YALE L.J. 1300, 1321-22 (1983) (“[I]f no special assumptions are made about the distribution of decision outcomes or social preferences, there is no logically consistent decision rule that gives uncertainties zero weight.”).

77. Cf. Esty, *supra* note 20, at 597 (“In attempting to maximize environmental social welfare, we should be careful not to conclude too hastily that we know the precise boundaries of the appropriate community and thus whose costs and benefits should ‘count.’”).

78. Political influence and political recognition do not recognize jurisdictional lines. Cf. Guy Gugliotta & Ira Chinoy, *Money Machine, The Fund-Raising Frenzy of Campaign '96: Outsiders Made Erie Ballot A National Ballot*, WASH. POST, Feb. 10, 1997, at A1 (discussing how campaigns for federal legislative office have been transformed into referenda on national political issues by competing interest groups, which provide the majority of funding for the campaigns from sources outside the jurisdiction); Esty, *supra* note 20 at 639, 641 (“[E]nvironmental interests and values are not coterminous with existing jurisdictional lines The interconnectedness of modern life is much more extensive and complex than is suggested by a simplistic focus on pollution impacts within immediately shared physical space or narrowly defined political borders.”).

79. See Swire, *supra* note 16, at 100.

80. If Congress finds that out-of-state citizens' interests warrant protection and thus adopts regulatory controls, Congress should not be able to delegate unconstrained federal regulatory powers to states. See Joshua D. Sarnoff, *Cooperative Federalism, The Delegation of Federal Power, and the Constitution*, 39 ARIZ. L. REV. 205, 243-55, 270-80 (1997). In contrast, the Constitution clearly authorizes Congress to refuse to enact legislation and thus to leave the specification of policy to states. At least when it refuses to act, Congress implies the political value judgment, made in national political processes, that out-of-state citizens' interests do not warrant protection. Except in the limited circumstances of diversity jurisdiction, pendent jurisdiction, and certain other jurisdictional grants under U.S. CONST. art. III, § 2, Congress will not place federal power behind state policies.

3. *Paternalism and Supermajoritarian Decisionmaking.* Many legal analysts often oppose "paternalistic" federal regulation on the belief that state normative diversity enhances social welfare.⁸¹ But the predominant values of a particular state are not self-evidently better than the predominant values of the nation, even for citizens who "volunteer" to live within that state.⁸² Similarly, protecting normative diversity does not self-evidently enhance social welfare.⁸³

81. See Stewart, *supra* note 7, at 1231 ("Centralized dictation may represent at best paternalism, at worst a usurpation of local self-determination in order to advance the interests or tastes of a social elite."); Lynn A. Baker, "They the People": A Comment On *U.S. Term Limits, Inc. v. Thornton*, 38 ARIZ. L. REV. 859, 865 (1996) (the structure of representation in Congress allows federal legislation to be enacted with the support of as little as thirty-one percent of the national electorate; "In short, in the realm of federal lawmaking, We the People of this nation do not exist in any meaningful way. . . . For strong nationalists, the states are so frightening . . . because the states give us, the People, too much of a voice."). These concerns are particularly severe when the government intentionally shapes the preferences of individuals, because the values indoctrinated will reflect back on future policymaking through politics. Cf. *United States v. Lopez*, 115 S.Ct. 1624, 1633 (1995) ("[I]f Congress can, pursuant to its Commerce Clause power, regulate activities that adversely affect the learning environment, then, *a fortiori*, it also can regulate the educational process directly.").

82. Cf. Letter from James Madison to Thomas Jefferson (Dec. 10, 1783), in THE WRITINGS OF JAMES MADISON at 27 (G. Hunt ed. 1901) ("[T]he evils issuing from [state governmental] sources contributed more to . . . the [Constitutional] Convention . . . than . . . the inadequacy of the Confederation."). A better argument against federal paternalism is that we are risk-averse. Because federal law will shape more preferences than a particular state's laws, the costs of federal value errors are substantial. Cf. Yellin, *supra* note 76, at 1310-11 ("How should one specify the sizes of the environmental mistakes that society is willing to tolerate?"); but cf. Rubin & Feeley, *supra* note 3, at 919 n.67 (criticizing arguments that federalism limits value mistakes; the purported mistakes occurred in local jurisdictions and thus protection against the mistakes had nothing to do with states' rights). But the benefits of federal correction to state value errors are also substantial. See Rubin & Feeley, *supra* note 3, at 934 n.107 (excluding the federal government from moral supervision "may well permit divergent actions that 'we,' as a polity, would regard as seriously mistaken."). Whether risk aversion is "rational" thus may ultimately depend on the merits of the normative disputes.

83. For only one example, most people would now agree that the Supreme Court's decision that the Fourteenth Amendment's Equal Protection Clause prevents racial discrimination in public schools enhanced social welfare or was otherwise morally justified, even though the decision reduced normative diversity. See *Brown v. Board of Education of Topeka, Kansas*, 347 U.S. 483 (1954). Further, the Supremacy Clause preempts state normative diversity once federal rights are found to exist within the Constitution or in federal legislation even if the existence of such rights is not self-evident. See *Cooper v. Aaron*, 358 U.S. 1, 18-20 (1958) (the Supreme Court's decisions are the supreme law of the land binding on the states); Evan H. Caminker, *State Sovereignty and Subordination: May Congress Commandeer State Officers to Implement Federal Law?*, 95 COLUM. L. REV. 1001, 1028 & n.102, 1029 & n.108, 1030 (1995) (the Supremacy Clause makes federal law "supreme in-state law" that state officials must recognize and effectuate; federal law does not merely supersede state law or impose federal requirements). The point made here is not that federal values invariably warrant preempting normative diversity but rather that the merits of normative diversity *cannot be assessed* without resolving the underlying disputes over value. But see Baker & Dinkin, *supra* note 15 (federal laws that

Nevertheless, the U.S. Constitution provides substantial protection for state-level normative diversity. The structure and voting rules of the Senate assure that federal legislation normally is enacted only by the representatives of a "supermajority" of the population.⁸⁴ Supermajority enactment requirements assure that a higher level of consensus over values will exist before normative diversity will be preempted. But supermajority enactment requirements do not assure that the normative diversity thereby obtained will increase social welfare.⁸⁵

Further, supermajoritarian enactment requirements are inconsistent with the premises of liberal theory upon which neoclassical economics and the state-level values approach are based.⁸⁶ Again, the fear of federal paternalism generates support for supermajoritarian enactment requirements.⁸⁷ Supermajoritarian enactment requirements also may provide stability against legal change, but the benefits of stability and the values of the past do not self-evidently outweigh the benefits of change and the values of the present or future.⁸⁸

do not protect constitutional rights are "the most likely candidates" to reduce social welfare by preempting normative diversity; "These areas of substantial moral disagreement within our society are precisely the ones in which inter-state diversity is most valuable and federal homogenizing legislation will therefore most probably and most greatly reduce aggregate social welfare.").

84. See Baker & Dinkin, *supra* note 15 (also noting how such supermajoritarian enactment requirements reduce the power of large population states to block legislation).

85. Supermajoritarian enactment requirements impose costs of foregone, beneficial preemptive legislation due to increased demands on time for coalition building. See Baker & Dinkin, *supra* note 15. But the question posed is not whether the costs of fewer federal welfare-enhancing enactments due to coalition building are outweighed by the benefits of fewer welfare-reducing enactments due to supermajoritarian enactment requirements. See *id.* The question is whether the supermajoritarian enactment requirement or the coalition building time constraint prevents enactment of more legislation that would be welfare-enhancing than would be welfare-reducing.

86. See Baker & Dinkin, *supra* note 15, at 40 n.124 (citing numerous historic and contemporary sources for the commitment to majority rule). That commitment is based on the entitlement of citizens to equal recognition of their interests by the government. See *supra* note 64.

87. Cf. Baker & Dinkin, *supra* note 16 (supermajority enactment requirements are equivalent to minority rule only if inaction is considered the equivalent of action; "the power to impose costs on others is importantly different from the power to prevent costs from being imposed on one's self."); *id.* (the Constitution imposes supermajoritarian enactment requirements in a wide range of contexts). But the power to impose costs on others is different from the power to prevent costs only in regard to who determines what constitutes a cost and not a benefit. Further, the inability to impose "costs" on others may protect the others' abilities to impose "costs" on one's self. See *supra* notes 61-65 and accompanying text.

88. See Swire, *supra* note 16, at 99-100 (discussing "inter-temporal externalities"); Jill E. Fisch, *Retroactivity and Legal Change: An Equilibrium Approach*, 110 HARV. L. REV.

In sum, national values may not be self-evidently correct, but national political processes impose the applicable evaluative norms for regulatory policy through supermajoritarian enactment requirements. *Opponents* of existing federal environmental laws thus face a substantial normative burden to demonstrate that federal law is no longer warranted.⁸⁹ They must convince the representatives of a supermajority of the public that federal legislation imposes values that are not now shared by most of their constituents or that are objectively bad.⁹⁰ If normative consensus can be obtained, however, opponents need only convince such representatives that federal regulatory controls and federal bureaucratic implementation are less efficient than the state alternatives.⁹¹

(forthcoming 1997) (there is no obvious way to balance efficiency and fairness concerns that attend legal change; a fundamental premise of economic analysis of law is that legal change generates improved laws; if legal rules achieve a stable equilibrium, subsequent changes pose greater fairness concerns and higher transition costs); *cf. id.* (distinguishing legal changes that prevent harm or redistribute wealth from those that impose social or moral stigma); Carol M. Rose, *Takings, Federalism, Norms*, 105 YALE L.J. 1121, 1146-47 (1996) (reviewing WILLIAM A. FISCHEL, *REGULATORY TAKINGS: LAW, ECONOMICS, AND POLITICS* (1995)) (“[T]he larger the relevant ‘community,’ the more a purportedly norm-driven takings test clashes with Tiebout’s thesis about citizens sorting themselves into their own chosen localities [A]nother question . . . is the most basic of all: whether takings jurisprudence really is just about fairness, or whether this branch of jurisprudence is also aimed at accommodating regulatory change.”). Further, once federal legislation is enacted, supermajoritarian enactment requirements discourage the repeal or amendment of preemptive federal requirements in order to restore normative diversity or to achieve greater efficiency. But whether the values of the past should govern the present also must inevitably be resolved by national political and legal processes. *See* Bruce Ackerman & David Golove, *Is NAFTA Constitutional?*, 108 HARV. L. REV. 799, 910-11 (1995) (the point of interpretative arguments to change seminal constitutional doctrines was to “convince legalists that the constitutional tradition[s] applauded the collective effort to correct the anachronistic formalisms of the past when modern Americans were demanding fundamental change.”); Thomas B. McAfee, *A Critical Guide To The Ninth Amendment*, 69 TEMP. L. REV. 61, 91-92 (1996) (Ninth Amendment debates not only address the possibility of justifying rights-limitations on the government but how to define the foundations of our constitutional order, citing *Calder v. Bull*, 3 U.S. 386 (1798)); *cf.* Letter from Thomas Jefferson to James Madison (Jan. 30, 1787), in JOHN BARTLETT, *FAMILIAR QUOTATIONS* 388 (13th ed. 1955) (“a little rebellion, now and then, is a good thing, and as necessary in the political world as storms in the physical.”).

89. *Cf.* 5 U.S.C. § 556(d) (1994) (proponent of a change to a rule bears the burden of proof); *but cf. supra* note 14.

90. Even if federal legislation never imposed supermajoritarian values but was enacted due to historic defects in national political processes, a supermajority of citizens may not support repeal. Similarly, a supermajority of states is required to amend the Constitution.

91. *See* Rubin & Feeley, *supra* note 3, at 913-14 (“The notion that an admittedly valid national policy is best implemented by decentralizing its administration cannot support either the rhetoric of federalism or the remedy of judicial intervention.”).

II. FEDERALISM CONCERNS IN ENVIRONMENTAL REGULATION

Federal regulation may be justified on numerous theoretical grounds. The application of these rationales, however, depends upon contested measures of value in the absence of adequate empirical information. Although federal regulation may seem excessive or inefficient to some citizens of some states, it may seem necessary or justified when assessed by the values of some citizens of those or other states. These federalism disputes over value are resolved in national political processes that implicitly weigh the benefits of normative diversity against its perceived costs. Further, analyses of comparative institutional competence are also plagued by lack of data, the inability to conduct control experiments, and disputes over value. The presumptive implementation strategies adopted to achieve preemptive federal goals are often based on citizen hostility to federal bureaucracies rather than the "efficient" implementation of policy.

A. Regulatory "Efficiency" Rationales

1. *Economies of Scale.* Federal environmental regulation may be justified on instrumental grounds as achieving specified environmental goals more efficiently than could be achieved by states. Federal regulation may provide economies of scale relative to state-by-state regulation. Economies of scale are resource savings resulting from lower "per unit" costs of implementing a specified regulatory measure or goal.

Economies of scale may (but will not always) be obtained by centralizing research, standard setting, control-measure selection, implementation, or enforcement. The federal government can absorb these costs so that states do not have to repetitively perform these functions.⁹² Federal regulation also may provide economies of scale if the federal government is better than states at recognizing and duplicating successful regulatory strategies.⁹³ Further, federal regulation may assure that efficient policies will be imposed, because

92. See Stewart, *supra* note 7, at 1212; Esty, *supra* note 20, at 614-15.

93. See Esty, *supra* note 20, at 614 (centralized regulatory bodies may more or less readily identify particular problems); *cf. id.* at 616 & n.169 (environmental groups and regulated entities may transfer information more readily than governmental entities).

state and local governments may lack the resources or political will to undertake such regulatory activities.⁹⁴

Additional economies of scale may be obtained if the federal government adopts uniform standards, thereby avoiding the costs of tailoring requirements to local conditions or activities.⁹⁵ Federal uniform requirements that preempt the field and thus exclude state and local regulation may protect interstate commerce from burdensome and diverse controls, may avoid the costs of regulatory confusion, and may achieve additional benefits.⁹⁶ Regulated entities, particularly those producing goods for national markets, may support enactment of field preemptive uniform federal standards to avoid the costs of "balkanized" state and local regulatory controls.⁹⁷ Converse-

94. See Esty, *supra* note 20, at 615 & n.165 (noting fiscal limitations on states and the consequent lack of technical competence). It is important to distinguish between efficiency and effectiveness and thus between two meanings of efficiency. First, there is the instrumental question of the most efficient means to achieve a specified policy. Second, there is the normative question of whether achieving the policy through any means is efficient. See *supra* note 18. I presented a preliminary analysis of how to make cooperative federalism statutes more instrumentally efficient and effective at a conference on "Major Issues in Federalism," held at the University of Arizona College of Law, Mar. 20-21, 1996.

95. See Esty, *supra* note 20, at 618 n.174 ("[T]he tailoring of regulations to smaller and smaller subgroups achieves welfare gains by matching policies with local values, but this comes at the cost of increased administrative burdens. The economies of scale in *analytic methods* argue for having the metaquestion of optimal scale answered *nationally*." (emphasis added)); James E. Krier, *On the Topology of Uniform Environmental Standards in a Federal System—And Why It Matters*, 54 MD. L. REV. 1226, 1230-41 (1995) (discussing how political arguments based on economies of scale and on the equal treatment of states encourage Congress to adopt preemptive uniform standards); cf. Hill, *supra* note 28, at 10255 (describing the complexity and confusion costs that result from tailoring requirements in the context of hazardous waste regulation). See generally Colin S. Diver, *The Optimal Precision of Administrative Rules*, 93 YALE L.J. 65 (1983). Even analysts who are careful to distinguish the forms of tailoring, however, assume without adequate justification that tailoring to local values (without considering tailoring costs) enhances social welfare.

96. See Dwyer, *supra* note 26, at 1195-96 n.61 (listing Congressional statements regarding the inefficiency of multiple standards for industrial products); Esty, *supra* note 19, at 618-19 (noting that multiple standard setting also may be inefficient for production processes; "following common approaches to a common problem may be particularly welfare enhancing if 'network' effects are significant."); Fred C. Zacharias, *Federalizing Legal Ethics*, 73 TEX. L. REV. 335, 352-55, 370, 371-71 (1994) (proposing uniform federal rules for attorney conduct; noting existing conflicts of laws that result in confusion between jurisdictions and burdens on legal practice; and arguing that local rules fail to protect federal interests); cf. *id.* at 371 & n.165 (describing economies of scale in standard setting and enforcement that would be achieved by such uniformity).

97. See Percival, *supra* note 1, at 1172 & n.149; Stewart, *supra* note 7, at 1215 ("Industry may seek preemptive uniform national standards or controls to escape more restrictive state controls."). Curiously, regulated entities have not historically argued for federal preemption of state regulation of production processes. In theory, regulated entities should support complete

ly, the failure to provide field preemptive uniform standards and markets may discourage capital investment in environmental technologies and services that can reduce costs over time.⁹⁸

Notwithstanding the potential benefits of centralization, it is commonly argued that federal regulation — particularly uniform requirements — leads to diseconomies of scale.⁹⁹ Federal administrative agencies initially may lack financial resources and expertise relative to their state counterparts who historically have addressed particular problems or industries.¹⁰⁰ State agencies may be more efficient at establishing controls because they are more familiar with regulated activities or entities. They may also better coordinate the target policies with other regulatory activities, such as zoning and planning.¹⁰¹

Although these claims are sometimes valid, relying upon state bureaucracies, expertise, and resources may often be *less* efficient initially and in the long run. Traditional federal regulatory approaches may be more responsible for the activities requiring regulation.

federal preemption over the status quo, in which only less stringent state standards or controls are preempted. See 33 U.S.C. § 1370 (1994); 42 U.S.C. §§ 6929, 7616 (1994); Jerome M. Organ, *Limitations on State Agency Authority to Adopt Environmental Standards More Stringent Than Federal Standards: Policy Considerations and Interpretive Problems*, 54 MD. L. REV. 1373, 1392-93 (1995). Regulated entities thus may believe that repeal of burdensome federal requirements is more likely to be achieved if state regulation is preserved as a “backstop.” Cf. Swire, *supra* note 16, at 86 n.77 (discussing how coalitions might not exist to achieve more strict state regulatory standards if federal minimum standards already exist; characterizing such scenarios as “unlikely to occur”; and noting that the uniform federal standard may still be justified if the absence of federal standards allows some states to impose no regulations). Alternately, regulated entities may believe that the benefits of influencing state implementation of federal policies on average exceed the additional costs of dual regulation. If the federal policy is imposed over state-level values, state implementation provides greater opportunities to avoid compliance. Out-of-state citizens, upon whose values the federal policies are based, cannot hold state officials to account for their failures to implement federal policies when translating discretionary standards into control measures or when deciding to enforce requirements. At least (relatively mobile) firms should prefer to reduce the political influence of out-of-state citizens more than of citizens of their own state.

98. See Esty, *supra* note 20, at 619-20.

99. See Stewart, *supra* note 7, at 1219-20 (noting “unnecessary or excessive” costs imposed by uniform federal standards that are not tailored to local conditions); James E. Krier, *The Irrational National Ambient Air Quality Standards: Macro- and Micro-Mistakes*, 22 UCLA L. REV. 323, 324-35 (1974) (describing how uniform standards may be inefficient, by imposing excessive costs in some areas and depleting resources needed to impose controls in other areas).

100. Cf. Stewart, *supra* note 7, at 1201; Dwyer, *supra* note 26, at 1192-93; Engel, *supra* note 37, at 1523-24 & nn.174-177; Caminker, *supra* note 83, at 1006, 1014-15 (federal directives requiring states to regulate and to implement federal policies may be more effective and efficient than federal regulation and implementation).

101. See Dwyer, *supra* note 26, at 1198-1208.

Consequently, federal bureaucracies may be more able than states or localities to transfer relevant experience or may be more able to provide resources for efficient regulatory strategies.¹⁰² Federal bureaucracies also may be more able than states to develop or to retain expertise over time.¹⁰³ Federal bureaucracies also are less likely to oppose the goals specified by federal legislation and thus may achieve those goals at lower costs.¹⁰⁴

Further, uniform federal regulations may be efficient if the costs of tailoring requirements to local factual conditions outweigh the benefits.¹⁰⁵ Evaluating the costs and benefits of tailoring, however,

102. For example, federal subsidies and tax policies may be much more responsible than state or local regulation for housing and transportation patterns that cause air pollution. See Alan T. Durning, *Department of Sprawl*, SEATTLE WEEKLY, June 5, 1996, at 7-9. Altering federal taxing and spending policies may achieve reductions in air pollution more efficiently than traditionally local regulatory strategies such as transportation controls. See generally Louise Weinberg, *Federal Common Law*, 83 NW. U. L. REV. 805, 818-19 (1989) ("Arguably, most of our 'primary' arrangements are 'interstitial' to our federal tax planning . . . [such as] elementary purity [laws] . . . basic civil and political rights . . . [social] services, welfare payments, and education . . . Much of this pervasive federal governance is in the form of case law, notwithstanding the typical kernel of statutory or constitutional text that may lie at the core of the jurisprudence. If state governance remains 'primary' in some sense, that is a circumstance of diminishing real impact on our lives.").

103. See Stewart, *supra* note 7, at 1214 & nn.73, 74 (scale economies of national decisionmaking and fiscal commons problems for states result in larger, better funded, and better staffed agencies at the federal level); *id.* at 1217 n.83, 1219-22 (the broader sharing of burdens and the greater fiscal and administrative resources of the federal government provide insulation from backsliding when social costs are imposed and political opposition results). Similarly, federal agencies may be headquartered in desirable locations and federal jobs may be viewed as conveying higher social status, improving relative abilities to recruit and retain expertise. *Cf.* Esty, *supra* note 20, at 616 n.168 ("as a general rule, federal officials are better trained, work longer and harder, and have higher productivity than their state counterparts.").

104. States that oppose the federal goals are likely to increase the costs of compliance through bureaucratic resistance and increased federal oversight costs. Conversely, federal bureaucrats are more accountable to out-of-state citizens' interests and thus are more likely to identify with the federal goals. As a result, federal bureaucrats are likely to exhibit higher morale when implementing the goals, further increasing their productivity and reducing implementation costs. See Ellen Nakashima, *Virginia Reverses Position on Federal Tobacco Rules; State Will Enforce ID Checks, Allen Says*, WASH. POST, Feb. 28, 1997, at A1 ("They're federal laws . . . States don't enforce federal laws," quoting comments of a spokesman for the Attorney General that were immediately repudiated by the Governor); David Schoenbrod, *Why States, Not EPA, Should Set Pollution Standards*, REG. 18, 20-21 (1996) ("The belief that it took the federal government to make the states act comes from federal officials who claim credit for what state officials had already been accomplishing Given the palpable unfairness of this condescending partnership, elected state officials often resist federal environmental mandates States and localities, if left to their own devices, would not adopt such a compulsive style for making environmental policy.").

105. Such tailoring may entail either adjustment to technological and physical conditions or allocation of control measures among regulated entities. Allocation among regulated entities

may depend less upon empirical analysis than upon resolving disputes over the evaluative norms.¹⁰⁶ Further, even if the benefits of tailoring

normally involves disputes over value and political conflicts rather than solely factual determinations. Federal statutes often fail to allocate the costs of achieving ambient standards among regulated entities. See David Schoenbrod, *Goals Statutes or Rules Statutes: The Case of the Clean Air Act*, 30 U.C.L.A. L. REV. 740, 743, 769-76 (1983) ("the [Clean Air] Act fails to allocate among sources the burden of cleaning the air or even to decide, in meaningful terms, how clean the air should be."). Executive Order No. 12,866 requires federal bureaucrats to adopt regulations that maximize net benefits. Exec. Order No. 12,866, 58 Fed. Reg. 51,735 (1993). Federal agency allocation thus may be more efficient than state allocation to the extent that the former may be based on marginal control costs and benefits and the latter may be based on political power. (Of course, federal agencies in practice are highly responsive to political power, particularly when evaluating costs and benefits). In contrast, it is much harder to evaluate the degree to which federal or state bureaucracies will trigger costly lobbying disputes and litigation when allocating controls or when tailoring requirements to factual conditions. State and federal statutes and judicial doctrines will affect the degree of deference provided to bureaucrats making such decisions. A comparative analysis of the relative federal or state institutional competence in such tailoring is far beyond the present scope. Cf. Rodriguez, *supra* note 24, at 162-75 (initiating comparative analysis of state "legislative" institutions). State allocation or tailoring, however, is likely to be less efficient if state decisions can be revisited and litigated in federal oversight decisions. Cf. *Union Electric Co. v. EPA*, 427 U.S. 246, 260, 261 n.7, 262 n.9 (1976) (rejecting challenges to EPA approval of state implementation plans that contained requirements more stringent than necessary to achieve federal goals, thereby avoiding the need for EPA to determine whether state allocations imposed economically or technically infeasible controls; holding that Congress did not require states and EPA "to expend considerable time and energy determining whether a state plan was precisely tailored to meet the federal standards").

106. See Rubin & Feeley, *supra* note 3, at 910 n.40 (citing MANFRED KOCHEN & KARL W. MORRIS, *DECENTRALIZATION IN MANAGEMENT SYSTEMS 2* (1968) for a description of "conditions under which decentralization is more cost-effective than centralization" which self-consciously assumes externally-imposed norms). For example, uniform technology standards may impose controls that are not needed to achieve a specified level of ambient quality. Such standards may prevent regulated entities from exploiting their comparative advantages and thus from benefiting the public through lower prices. But tailoring technology standards to ambient conditions also creates "unfair" competition by imposing unequal regulatory burdens on regulated entities. The value dispute over the entitlement to exploit comparative advantages renders largely irrelevant any factual comparison of avoided regulatory costs with data-collection, modeling, and personnel costs. Similarly, tailoring emission controls based on marginal costs of control technologies may fail to prevent "excessive" pollution by entities that "can and should" bear the costs of additional controls. Protection of privately owned resources, however, is less likely to engender these ideologic conflicts than protection of public resources, because private ownership may be perceived as "committing" the resources to exploitation. Cf. Telephone interview with J.T. Smith II, Partner, Covington & Burling (Dec. 12, 1995) (noting that variances are provided from minimum technology standards for hazardous wastes required to be pretreated before disposal, primarily at privately owned facilities, upon demonstration that the wastes will not migrate when disposed, see 42 U.S.C. § 6924(d)(1)(C)(1994); in contrast, few ambient quality variances exist from minimum technology standards for discharges of effluent to publicly owned waterways, see 33 U.S.C. § 1311(b)(1)&(2)(1994); 33 U.S.C. § 1311(g)(1994)).

clearly exceed the costs according to consensus evaluative norms,¹⁰⁷ federal regulatory agencies may be more efficient than state bureaucracies at tailoring legal requirements to local conditions.¹⁰⁸

Significantly, empirical data rarely exist to resolve whether greater economies of scale will be realized by federal regulation or by state regulation. It may not be possible (or may be prohibitively expensive) to conduct control experiments in order to determine relative efficiency initially or over time. Further, the measures of bureaucratic costs and of regulatory success are subject to substantial dispute. In the absence of data and agreed-upon norms, Congress inevitably aggregates unreflective citizen preferences for the level of government at which to regulate.

Given supermajoritarian enactment requirements for federal legislation, citizen hostility to national values normally prevents the creation of or preferential reliance on federal regulatory bureaucracies.¹⁰⁹ Citizen hostility to federal implementation may also lead to inaccurate descriptions of modern federal and state legal roles¹¹⁰ and

107. From my experience representing regulated entities, I believe that the costs of expending additional governmental resources to tailor regulatory standards to factual conditions will normally be less than the additional costs of complying with uniform standards. But this does not mean that the net benefits of such tailoring outweigh the systemic costs of increased regulatory complexity. Empirical studies of system costs are unlikely to be conducted, given the substantial problems of gathering data from all individuals, firms, and governmental institutions that interpret regulations and of assessing how they are affected by regulatory complexity. If tailoring generates net benefits, however, increased regulatory resources will be needed. Reducing the federal environmental regulatory budget may be counterproductive to efficiency.

108. In order to develop regulatory standards and control measures, federal agencies must understand the activities of regulated entities and often must make "tailoring" distinctions to categorize or subcategorize regulated entities. See, e.g., 42 U.S.C. § 7411(b) (1994). As a result, federal tailoring expertise and efficiency may be relatively high compared to state or local counterparts. *But cf.* Esty, *supra* note 20, at 617 & n.170 (where environmental problems are geographically heterogeneous, tailoring to local knowledge and *normative diversity* are of central importance; "Smaller jurisdictions can tailor their regulatory solutions according to the exact, location-specific parameters Decentralized information gathering, analysis, and *decision-making* . . . almost certainly would improve the technical content of the regulatory process.") (emphasis added). At a minimum, state tailoring will duplicate the expertise developed by federal agencies when states tailor federal regulatory standards to local conditions.

109. See Stewart, *supra* note 7, at 1240-41 (state citizens may perceive federal regulations to be more intrusive and less politically acceptable than state regulations); cf. Caminker, *supra* note 82, at 1044 (requiring state revenue collectors to execute federal taxes "would not only 'avoid any occasions of disgust to the State governments and to the people' but also would 'save expense in the collection,'" quoting THE FEDERALIST NO. 36, at 221-22 (Alexander Hamilton) (Clinton Rossiter ed., 1961) (emphasis omitted)).

110. Although federal regulatory controls and federal bureaucratic regulation largely determine environmental policy, federal laws continue to claim that the primary responsibility for environmental policy lies with states. Compare Percival, *supra* note 1, at 1146-71 (discussing

to atavistic efforts to restore traditional state regulatory prerogatives.¹¹¹ Finally, citizen hostility may assure that state implementation is the quid pro quo for federal legislators to enact preemptive environmental legislation.¹¹²

2. *Political Accountability.* Arguments that federal regulation or implementation is less efficient are supported with political claims regarding accountability. Federal regulation is claimed to be less accountable to state and local citizens because it provides fewer opportunities for public participation.¹¹³ Dual federal and state regulation is claimed to hide the level of government responsible for

the history of increasingly pervasive federal regulatory controls) and Stewart, *supra* note 7, at 1196-97 (same) with An Act to Provide Research and Technical Assistance Relating to Air Pollution Control, Pub. L. No. 84-159, ch. 360, 69 Stat. 322 (adopting a federal policy "to preserve and protect the primary responsibilities and rights of the States and local governments in controlling air pollution."), as amended by An Act to Improve, Strengthen, and Accelerate Programs for the Prevention and Abatement of Air Pollution, Pub. L. No. 88-206, § 1, 77 Stat. 392 (adding "that the prevention and control of air pollution at its source is the primary responsibility of States and local governments."), as amended and renumbered Clean Air Act Amendments of 1965, Pub. L. No. 89-272, title I, § 101(3), 79 Stat. 992, as amended by Clean Air Amendments of 1990, Pub. L. No. 101-549, Title I, § 108(k), 104 Stat. 2468, Nov. 15, 1990, currently codified at 42 U.S.C. § 7401(a)(3)(1994) and 33 U.S.C. § 1251(b)(1994) (similar language regarding water quality); cf. 42 U.S.C. § 6902(a)(7)(1994) (objectives for hazardous waste regulation include "establishing a viable Federal-State partnership to carry out the purposes of this chapter and . . . giv[ing] a high priority to assisting and cooperating with States in obtaining full authorization of State programs . . .").

111. Cf. Rubin & Feeley, *supra* note 3, at 950 ("[F]ederalism is a neurosis, a dysfunctional belief to which we cling despite its irrelevance to present circumstances.").

112. By adopting the rhetoric of federalism and by providing for state implementation, federal legislators may improve their reelection prospects with constituents who are hostile to federal regulation and may increase their ability to build coalitions with legislators whose constituents are more strongly opposed to federal regulation. The emotional and political needs of hostile citizens and legislators will be better satisfied. But the rhetoric may come at a substantial cost. See Edward L. Rubin, *The Structure of Modern Government* 11 (1995) (unpublished manuscript, on file with the author) ("Unless we explore the metaphorical structure of our thought processes, we are likely to fall back into familiar patterns, ignore or misinterpret phenomena that lie outside those patterns, and devise solutions that replicate the problems that they were designed to solve.").

113. See Schoenbrod, *supra* note 104, at 21 (federal regulation is less accountable because: (1) Congress delegates policymaking to unelected EPA officials; (2) voters cannot effectively hold national officials to account for their resolution of local disputes; and (3) federal officials may take credit for the benefits of federal regulation but may shift the blame for costs to state and local officials). All of these rationales assume the debatable premise that officials should effectuate the preferences of their constituents and thus that lack of accountability is a vice rather than a virtue.

policy.¹¹⁴ To avoid political accountability for raising taxes, moreover, Congress may inefficiently transfer to states and localities through conditional spending the costs of implementing federal policies.¹¹⁵

But a state's political and judicial processes may be more hostile and less responsive to the state's citizens than federal political and judicial processes.¹¹⁶ State officials may be no more accountable to citizens than are federal officials.¹¹⁷ Although dual regulation may

114. See Stewart, *supra* note 7, at 1241; Dwyer, *supra* note 26, at 1185 & n.10; Bermann, *supra* note 12, at 340-43; cf. *New York v. United States*, 505 U.S. 144, 168 (1992) (“[W]here the Federal Government compels states to regulate, the accountability of both state and federal officials is diminished.”).

115. See Baker, *supra* note 36, at 1935-39 (describing how federal taxation depletes state and local sources of revenue and how conditional federal spending returns the same revenues to states “with strings attached”); cf. Stewart, *supra* note 7, at 1261, 1262 & n.225 (discussing fiscal commons problems and noting that the price of foregoing conditional federal funds is “far more potent than would be the case if the only price for nonparticipation in the federal program were withdrawal of funds for that program alone”).

116. See Harold J. Krent, *Fragmenting the Unitary Executive: Congressional Delegations of Administrative Authority Outside the Federal Government*, 85 NW. U. L. REV. 62, 74-78 (1990) (states may lack institutional mechanisms to assure accountability, such as bicameralism and presentment; states may lack effective monitoring and regulatory controls similar to those over federal officers, making state policy decisions less transparent); *Virginia v. Browner*, 80 F.3d 869, 876-80 (4th Cir. 1996) (EPA had refused to approve of Virginia's operating permit program for major sources of air pollutants because, inter alia, Virginia did not provide judicial standing to review issued permits to persons who would have standing to challenge federally issued permits in federal courts pursuant to Article III of the U.S. Constitution; upholding EPA's interpretation of 42 U.S.C. § 7661a(b)(6) (1994) and EPA's finding that the state's standing provisions were insufficient); cf. EPA, *Memorandum, Statement of Principles, Effect of State-Audit Immunity/Privilege Laws on Enforcement Authority for Federal Programs*, INSIDE EPA'S AIR PERMIT REPORT, Feb. 28, 1997, at 2 (“Some state audit immunity/privilege laws place restrictions on the ability of states to obtain penalties and injunctive relief for violations of federal program requirements, or to obtain information that may be needed to determine compliance status.”). Federal regulation also may increase the accountability of state political processes, by providing political “cover” to state officials who would otherwise decline to adopt policies desired by a majority of their constituents.

117. States may be more hostile than the federal government to assuring participation in local politics, where citizens have the greatest ability to hold officials accountable for policy choices. See Rubin & Feeley, *supra* note 3, at 915. Further, some citizens may vote on the basis of single issues of importance to them. This will reduce the importance of any difference in accountability based on the smaller number of issues that state officials may address. Cf. *id.* at 916 (the argument that states will more likely foster local participation because they are “closer to the people” than the federal government” lacks empirical support). Nevertheless, state officials may be more accountable than federal officials who deal with a greater number of issues. The question remains, to whom should officials be accountable? Cf. *id.* at 946 n.158 (rejecting the argument that the federal government will not be accountable for redistributing costs to states that own public resources because citizens will not be directly affected and thus will not provide protection for state interests; this concern is only valid to the extent that states are political communities entitled to be free from federal redistribution; in any event, there are

reduce public accountability of both levels of government, it is most likely to do so when states voluntarily participate in federal regulatory programs. In contrast, threats to accountability decrease as federal regulation more fully preempts or coerces states to regulate.¹¹⁸ Congress also is less likely to shift costs to states as it becomes clear that federal implementation is more efficient.¹¹⁹

3. *Experimentation.* Arguments that federal regulation is less efficient typically are supported by claims that states serve as experimental "laboratories" for the development of regulatory policies. Consequently, states may develop more efficient and effective regulatory strategies than would a single, centralized regulatory agency.¹²⁰

But states may be unable or unwilling to expend the resources needed to conduct meaningful experiments.¹²¹ States may be risk-averse and may not experiment unless the benefits clearly outweigh the costs.¹²² Many states thus incorporate federal requirements by reference or adopt federal requirements without alteration.¹²³ If

many reasons why federal regulation is less accountable than it should be, but we routinely tolerate those failures); *supra* note 58.

118. See Caminker, *supra* note 83, at 1060-67 (rejecting claims that directives to states reduce the accountability of federal or state officials beyond the Constitution's limits and arguing that concerns about "blame misallocation," "liability shifting," and "cost shifting" are overstated); Sarnoff, *supra* note 80, at 208-10 (delegation of federal power to states intentionally lifts structural constraints designed to protect accountability and raises more serious concerns regarding blame misallocation and decreased transparency of decisionmaking).

119. Nevertheless, federal legislators may inefficiently shift costs to states, particularly by failing to preempt state regulation when it is efficient to do so. The appropriate remedy, however, may lie less with limiting federal power than with improving federal legislative policymaking by amending the Constitution to reduce state power and to assure greater accountability to citizens in national political processes.

120. See *New State Ice Co. v. Liebmann*, 285 U.S. 262, 311 (1932) (Brandeis, J., dissenting); Dwyer, *supra* note 26, at 1185 & n.10; Percival, *supra* note 1, at 1175; Bermann, *supra* note 12, at 341-42; Esty, *supra* note 20, at 615-16.

121. See Esty, *supra* note 20, at 616 & n.167 (tailoring to local preferences is irrelevant to technical adequacy to experiment). States also may be unwilling to deploy their resources to address specific problems and may not experiment unless they perceive substantial benefits therefrom and coordinate with other states to achieve shared goals.

122. See Rubin & Feeley, *supra* note 3, at 923-26; cf. Susan Rose-Ackerman, *Risk Taking and Relection: Does Federalism Promote Innovation?*, 9 J. LEGAL STUD. 593, 605-06, 610-11 (1980) (so long as experimentation has competitive risks, states will free-ride on the innovations of others).

123. This may suggest that states: (1) perceive the benefits of experimentation to be less than the perceived costs of tailoring regulatory approaches, including the incremental costs of seeking federal approval for tailored regulations; or (2) are unwilling to risk losing authority to

states already view federal minimum standards as excessive, they are even less likely to experiment. Many states have adopted laws limiting the ability of their regulatory agencies to adopt controls more stringent than federal requirements.¹²⁴

Further, states may not effectively coordinate to reduce the risks of experimentation without federal compulsion.¹²⁵ Coordinated state decisionmaking will normally require binding compacts. Such compacts must limit members from voluntarily exiting the compact if they are to constrain any individual states activities. But such restrictions are difficult to enforce, even when backed by the threat of federal compulsion.¹²⁶

Even if states possess the technical ability and willingness to conduct experiments, however, the success of experiments must be measured by national evaluative norms.¹²⁷ The costs of failed experiments may exceed the benefits obtained. Experimentation itself may be an inefficient regulatory strategy. We are unlikely to know in advance of the choice of state or federal regulation whether experimentation will occur and will provide the net benefits desired.¹²⁸

implement federal regulatory programs.

124. See Organ, *supra* note 97, at 1387-90; cf. *SIPs Seen Weakened if OTAG States Pass Bill Like Colorado Law*, INSIDE EPA'S AIR PERMIT REPORT, Feb. 28, 1997, at 13 ("[B]oth the Colorado law and the model legislation restrict the ability of state regulatory agencies to develop state implementation plans (SIPs) that are more stringent than the 1990 Clean Air Act Amendments. . . . The Colorado law, according to one Colorado Senator, is intended to keep EPA from deciding environmental standards for the state.").

125. Cf. Esty, *supra* note 20, at 591 & n.60, 592 (cooperation depends on the existence of common environmental norms and roughly equivalent flows of environmental harms).

126. See *Virginia v. Tennessee*, 148 U.S. 503, 518 (1893) (compacts affecting the sovereignty of federal power must be approved by Congress and the integrity of such compacts ultimately is backed by the Supremacy Clause of the U.S. Constitution); Ronald Smothers, *Waste Site Becomes a Toxic Battlefield*, N.Y. TIMES, Oct. 9, 1995, at A-6 (noting the recent failure of North Carolina to site a replacement facility for low-level radioactive waste and for the Southeast Compact to expel North Carolina; this led South Carolina to withdraw from the Southeast Compact and to reopen the Barnwell disposal site to all comers except North Carolina; South Carolina's action in turn removed pressure on states to site facilities or to join compacts providing jointly sited facilities, nullifying fifteen years of cooperative effort).

127. See Rubin & Feeley, *supra* note 3, at 926.

128. The relative benefits of experimentation may increase or decrease over time. Initial federal approaches are least likely to be efficient because of the lack of bureaucratic expertise and of technical information regarding the environmental problem and regulatory options. But federal technical and value errors may occur in both directions of regulatory stringency. See William F. Pederson, Jr., *Why the Clean Air Act Works Badly*, 129 U. PA. L. REV. 1059, 1073 & n.44 (1981) (discussing EPA changes to initial ambient air quality standards). Although scientific knowledge and implementation experience will likely improve the efficiency of federal

4. *Cooperative Federalism.* Finally, federal regulation may duplicate traditional state regulatory roles and may impose substantial costs through "dual regulation." These costs include state and federal administrative expenditures to coordinate "separate" regulatory activities and private expenditures to understand and to comply with two levels of regulatory controls.¹²⁹ State implementation of federal policy, or "cooperative federalism," may reduce the costs of dual regulation when federal regulation is imposed.¹³⁰ Cooperative

policies over time, we have no way to know if the initial experiments by states are likely to deviate from federal inefficiencies in appropriate or inappropriate directions more or less than for subsequent experiments. Further, such judgments can only be made in hindsight, which can only occur by presuming net benefits and thus allowing for experimentation. Again, the appropriate question is whether risk-aversion to diversity is justified based on the applicable, national values and thus whether experimentation should be avoided. See John H. Cushman, Jr., *EPA Withdraws Plan to Empower States: Concerns that a plan would save money but would not help the environment*, N.Y. TIMES, Mar. 2, 1997, at A22 (EPA withdrew a plan to give states more flexibility because "states had been asked only to help develop a mechanism for speeding the correction of minor inefficiencies in regulation . . . [T]he proposal could have been used to circumvent any regulation or statute."); *infra* notes 198-205 and accompanying text.

129. See *Second EPA Guidance for Development of Clean Air Act Part 70 Applications, Issued March 5, 1996: White Paper Number 2 for Improved Implementation of the Part 70 Operating Permits Program*, 26 ENV'T. REP. (BNA) 2156, 2156 (Mar. 15, 1996) [hereinafter *EPA White Paper No.2*] (dual regulation "can result in some of the requirements being redundant and unnecessary as a practical matter, even though the requirements still legally apply to the source. In cases where compliance with a single set of requirements effectively assures compliance with all requirements, compliance with all elements of each of the overlapping requirements may be unnecessary and could needlessly consume resources."); Approval of State Programs and Delegations of Federal Authorities, 58 Fed. Reg. 62,262, 62,263 (1993) (dual regulation "may burden regulated sources and permitting and enforcement agencies for several reasons [D]ual regulation makes [permits] necessarily longer and more expensive to develop and approve due to the need to specify separate sets of operating conditions derived from both Federal and State regulations [C]ompliance and enforcement costs may be greater because of two sets of conditions that must be enforced [D]ual regulation may not always be complimentary and may even be fundamentally inconsistent in instances where the Federal and State programs may require measures that are technically incompatible."); Approval and Promulgation of State and Federal Implementation Plans; California—Sacramento and Ventura Ozone; South Coast Ozone and Carbon Monoxide; Sacramento Ozone Area Redesignation; Notice of Proposed Rulemaking, 59 Fed. Reg. 23,264, 23,269 (1994) (simultaneously approving a state implementation plan and issuing a federal implementation plan to attain ambient air quality in Los Angeles, noting "at the very least, these parallel planning processes are likely to create confusion for the public and regulated community."); cf. Caminker, *supra* note 83, at 1043 (Hamilton and Madison "recognized that the new federal system might engender diseconomies to the extent that federal law enforcement efforts would substantially duplicate or overlap with existing state operations").

130. See *New York v. United States*, 505 U.S. 144, 167 (1992) (applying the term "cooperative federalism" to federal statutes that provide for state regulation or implementation, with federal bureaucratic backup, to achieve federal goals; Esty, *supra* note 20, at 623 ("implementation and enforcement of environmental policy is done best on a relatively decentralized basis to ensure that the regulating entity is aware of local circumstances and is

federalism also may reduce the costs of dual regulation by providing scale economies at different points in the regulatory process.¹³¹

By authorizing states to implement federal regulatory programs, Congress may integrate federal and state regulatory approaches. But by "yok[ing] the two [levels of government] in an uneasy partnership in pursuit of a common goal," cooperative federalism approaches may generate greater costs than benefits.¹³² These costs include: increased governmental and private resource expenditures to supervise the intergovernmental relations; opportunity costs of delaying desirable changes to regulatory measures; and even greater confusion costs for regulated entities and the public.¹³³

These costs are likely to vary in direct proportion to disputes over value.¹³⁴ The degree to which particular states oppose or exceed the minimum standards imposed by federal policy will largely determine the need for federal oversight and consequent increased "friction" costs of litigation and the differences between state and federal regulatory strategies and consequent increased regulatory

accessible to the regulated community."). To the extent that states adopt more stringent regulatory controls, states may as a practical matter impose only their own requirements on regulated entities, limiting dual regulation. Cf. Swire, *supra* note 16, at 86-87 (treating as beneficial the preservation of state abilities to impose more stringent requirements, because it allows for experimentation and jurisdictional competition).

131. See Percival, *supra* note 1, at 1174; Esty, *supra* note 20, at 618 (federal technical standard setting may achieve scale economies and state implementation may optimize the scale of institutions).

132. Pederson, *supra* note 128, at 1069.

133. See Pederson, *supra* note 128 at 1079, 1083, 1088-1109 (governmental staff and industry time are expended, regulatory change to scientific information is less predictable, and legal conflict and resistance lead to "intricate" interjurisdictional relations); EPA White Paper No. 2, *supra* note 129, at 2156 ("Historically, long periods of time have been required to review and approve (or disapprove) [state implementation plan] revisions . . . This situation can cause confusion and uncertainty because some sources are effectively subject to two different versions of the same rules."); David P. Novello, *The New Clean Air Act Operating Permit Program: EPA's Final Rules*, 23 ENVTL. L. REP. (Envtl. L. Inst.) 10080 (1993) (describing increased costs and complexities caused by adding federal permit programs to the existing complex regulatory structure); Timothy L. Williamson, *Fitting Title V Into the Clean Air Act: Implementing The New Operating Permit Program*, 21 ENVT. L. 2085 (1991) (same).

134. See Daniel P. Selmi, *Conformity, Cooperation, and Clean Air: Implementation Theory and Its Lessons for Air Quality Regulation*, 1990 ANN. SURV. AM. L. 149, 165, 166 & n.85, 173, 183 (describing costly intergovernmental bargaining that undermines achievement of federal goals, noting that the nature of statutory commands is the most significant factor for assuring attainment of those goals, and recommending various measures to improve shared implementation of federal policy).

review and regulated entity and citizen confusion costs.¹³⁵ The increased complexity of intergovernmental relations also reduces the accountability of officials in both levels of government.¹³⁶

Although the costs of cooperative federalism statutes are recognized to be significant,¹³⁷ the question is rarely posed whether the

135. For one example, in order to avoid the unintended costs of delayed federal approval of state rules, EPA recently authorized:

permitting authorities and their sources to base permit applications on State and local rules that have been submitted for [plan] approval, rather than on the potentially obsolete approved [plan] provisions that they would replace. Such reliance on pending state and local rules is proper when the *permitting authority* has concluded that the pending rule will probably be approved, or when the *source* believes it can show that the pending rule is more stringent than the rule it would replace [T]he permitting authority may allow that application completeness [be determined based on] locally adopted rules including those which would relax current (i.e. federally approved) [plan] requirements, provided that (1) the local rule has been submitted to EPA as a [plan] revision, and (2) the permitting authority *reasonably* believes that the local rule (not the current [plan] rule) will be the basis for the . . . permit Where the local rule submitted to EPA as a [plan] revision represents a relaxation of the current [plan] requirement . . . a permit based on the local rule could not be issued prior to EPA approval of the rule.

EPA White Paper No.2, supra note 129, at 2157, 2162-63 (emphasis added). This effort to reduce the regulatory burdens, opportunity costs, and confusion is limited to the context of initial completeness determinations when revised state requirements are less stringent. Further, it may be inapplicable when serious disputes exist regarding the adequacy or relative stringency of the revised state requirements. The policy transfers these judgments regarding adequacy or relative stringency from federal bureaucrats to states (when they are the permitting authority) and regulated entities. But the question remains whether the benefits of avoiding delay and duplicative permit reviews outweigh the costs of predictive and valuation errors. *Cf. Sarnoff, supra* note 80, at 261 & n.273, 269 & n.324, 270 & n.327 (cases decided under the FWPCA and the Safe Drinking Water Act have held that EPA possesses substantial discretion not to initiate withdrawal of approval of state authority or primacy and not to veto state permits and that individual state permit errors may not justify the transition costs of program withdrawal).

136. *See Sarnoff, supra* note 80, at 255-80.

137. When EPA recently proposed to reduce the ambient air quality standards for ground-level ozone and particulate matter, it took the unprecedented step of simultaneously issuing a separate interim implementation policy and advance notice of proposed rulemaking to address the complex implementation issues and to develop public input on options to reduce the implementation costs. *See Interim Implementation Policy on New or Revised Ozone and Particulate Matter (PM) National Ambient Air Quality Standards (NAAQS); Notice of Proposed Policy*, 61 Fed. Reg. 65,752, 65,754-762 (1996) (describing as an interim policy how EPA will apply numerous requirements for rulemaking to approve revised state implementation plans and to apply various statutory provisions to such plans, including attainment dates; "rather than expending significant effort during this interim period to evaluate whether to retain or eliminate the various existing and required control measures . . . States and stakeholders should focus their planning efforts on moving forward to attain the new NAAQS . . ."); *Interim Implementation Policy on New or Revised Ozone and Particulate Matter (PM) National Ambient Air Quality Standards (NAAQS); Advance Notice of Proposed Rulemaking*, 61 Fed.

federal preemption of — or federal withdrawal from — the entire field of regulation would be more efficient than cooperative federalism. Reliable analyses of the net benefits of cooperative federalism to fully federal — or fully state — regulatory strategies will rarely be made. Data will be extremely sparse and costly to obtain. Comparisons of the data that exist will exacerbate the jurisdictional disputes over appropriate values.¹³⁸ Similarly, reliable analysis of comparative costs are unlikely to occur when federal regulation does not wholly preempt state regulation and implementation is kept separate (but unequal).¹³⁹

Even if it will normally allow states to implement federal policies, Congress may sometimes choose federal agencies to initially establish, allocate, and enforce control measures.¹⁴⁰ But even in those cases, Congress may provide numerous incentives and opportunities for

Reg. 65764, 65,754-77 (1996)(describing in an advance note of proposed rulemaking the related scientific and policy questions and implementation options without regard to legal concerns).

138. In addition to the lack of empirical data regarding the governmental and private resource and confusion costs, *see supra* note 107, such comparative analysis requires resolution of the normative benefits of foregone state or federal regulation. The citizens of different states, however, will likely compromise their values in order to protect them; they will prefer splitting the baby to risking its loss. *Cf.* Neuman, *supra* note 69, at 346 (federal legislation may provide exemptions to its preemptive effects upon the showing of compelling state interests). *See generally* Ian Ayres & Eric Talley, *Solomonic Bargaining: Dividing a Legal Entitlement To Facilitate Cosean Trade*, 104 *YALE L.J.* 1027 (1995). The result is another structural incentive for Congress to provide for state implementation of federal regulatory programs, without considering whether centralized implementation or decentralized standard setting would be more efficient.

139. Implementation is unequal because federal environmental laws typically preempt less stringent state regulatory requirements and because federal courts must resolve when conflicts exist between federal laws and more stringent state laws. *See* 33 U.S.C. § 1370 (1994); 42 U.S.C. § 7416 (1994); *ENSCO, Inc. v. Dumas*, 807 F.2d 743, 745 (8th Cir. 1986) (preempting under the Supremacy Clause a state ban on treatment and disposal of acutely hazardous waste, notwithstanding express savings provision of the federal Resource Conservation and Recovery Act, 42 U.S.C. § 6929 (1994)). *Cf. supra* note 36.

140. Congress has historically selected three different generic approaches. Congress may require federal agencies to adopt and to implement controls and allow or require them to delegate implementation to states upon approval of equivalent state programs. *See, e.g.*, 42 U.S.C. §§ 7411(c), 7412(l) (1994). Congress also may require federal agencies to adopt and to implement standards and controls and require them to suspend federal regulatory programs upon approval of equivalent state programs. *See, e.g.*, 33 U.S.C. § 1342(b), (c) (1994); 42 U.S.C. § 6926(b), (c) (1994). But Congress also may encourage states initially to adopt specific standards and programs subject to federal agency approval and in some cases may require federal agencies to adopt the requisite standards and programs absent such approval. *See, e.g.*, 33 U.S.C. §§ 1313(a)-(d) (1994); 42 U.S.C. §§ 6947(a), 7410(a) (1994). Incentives for states to adopt, impose, and enforce the desired standards are provided by the carrot of conditional federal funds and the stick of backup federal regulation. *See, e.g.*, 33 U.S.C. §§ 1313(a)(3)(C)-(d)(2) (1994); 42 U.S.C. §§ 6947(b), 7410(c) (1994).

states to take over implementation, avoiding resort to federal bureaucracies.¹⁴¹ The presumption of initial federal or state implementation will rarely reflect well-considered comparative analyses of relative institutional competence or efficiency, particularly because Congress does not distinguish among states when establishing its presumptions.¹⁴²

Further, Congress normally requires federal agencies to perform some comparative analysis, but the evaluations may be limited to statutory criteria designed to assure minimal state competence to implement federal requirements.¹⁴³ Thus, Congress may require federal agencies to approve state programs and to delegate federal authorities even after federal agencies have developed substantial bureaucratic expertise and even when Federal agencies believe that states will less efficiently or less effectively implement the requirements.¹⁴⁴ This pervasive resort to state implementation when federal bureaucracies are more efficient inevitably reduces social welfare. It may also be unconstitutional.¹⁴⁵

141. See, e.g., 42 U.S.C. § 6926(c) (1994) (providing for interim authorization of state permit programs to implement federal regulation of hazardous wastes); 42 U.S.C. § 7412(l)(3)&(4) (1994) (providing a free technical clearinghouse and grants to states to assist development of programs to implement federal regulation of hazardous air pollutants); cf. 42 U.S.C. § 7661a(b), (d) (1994) (requiring EPA to issue regulations defining an approvable state program for issuing operating permits for sources to comply with federal regulation of air pollution; requiring states to submit programs for approval within three years of EPA's regulations and subjecting states to discretionary and mandatory sanctions for failure to submit an approvable program; and requiring EPA to impose a federal operating permit program within another two years following the state's failure, providing additional time to states to cure their failure).

142. Cf. Rodriguez, *supra* note 24, at 175 (“[W]hat should we expect from the national legislature in creating and implementing regulatory policy, in light of the impact of these national decisions on the processes of decisionmaking in state and local governments?”).

143. See, e.g., 33 U.S.C. § 1342(b)(1)&(c)(3) (1994); 42 U.S.C. § 6926(b)&(e) (1994); 42 U.S.C. § 7410(a)&(c) (1994); 42 U.S.C. § 7412(l)(5)&(6) (1994).

144. See, e.g., 42 U.S.C. § 7410(c)(1) (1994) (directing EPA to promulgate a plan to achieve federal ambient standards for certain air pollutants only if EPA finds that the state's plan does not meet specified statutory criteria, which do not address the relative efficiency or competence of federal and state implementation); 42 U.S.C. § 7411(c)(1)(1994) (requiring delegation to states of federal authority to implement controls on new and modified major stationary sources of air pollutants if states submit an adequate procedure to implement and enforce the standards).

145. See Sarnoff, *supra* note 80, at 255-56, 257 & n.255 (“unitary executive” concerns exist when states implement federal law, because the President cannot achieve formal compliance with the Opinions-in-Writing Clause, the Appointments Clause, and the Faithful Execution Clause of Article II, section 2 of the Constitution; functional compliance with these clauses is achieved when the President possesses unconstrained discretion to subdelegate federal administrative power to states and to withdraw the subdelegated power).

In summary, the determination of whether federal or state regulation is more efficient is normally a political judgment regarding the appropriate measures of value made in the absence of empirical data. If state regulation is "inefficient" because it provides inadequate protection or because federal standard-setting achieves economies of scale, federal regulation will normally be justified.¹⁴⁶ If federal regulation is justified, state implementation will normally result. Although it may specify a presumptive choice of federal implementation, Congress may inefficiently demand that federal bureaucracies relinquish their regulatory prerogatives. Conversely, the costs of the cooperative federalism approaches adopted by Congress may undermine the relative efficiency of federal regulation in the first instance.

B. *Interjurisdictional Spillover Issues*

1. *Interjurisdictional Spillovers Impose Welfare Losses When National Values Are Applied.* Another reason to enact federal environmental regulation is to minimize transboundary pollution and to promote in-state pollution control. Transboundary pollution may impose negative externalities, or spillovers. In-state pollution control may impose positive externalities or spillovers.¹⁴⁷ The existence of

146. Federal regulation may be unwarranted only when the benefits of federal policy are alternatively outweighed by the costs of dual regulation, cooperative federalism, and the loss of state experiments and normative diversity. It is unlikely that all three conditions will be fulfilled. Conversely, the net benefits of state to federal implementation may often be outweighed by the oversight and dual regulatory costs. But this does not in any way suggest that existing federal regulation cannot be made more efficient. See Schoenbrod, *supra* note 105, at 789-819 (Congress could improve implementation of the goals of the Clean Air Act by specifying concrete rules for private conduct that allocate the costs of attaining the goals among regulated entities, largely eliminating state abilities to tailor controls to local preferences).

147. See S. REP. NO. 97-284, at 16 (1981) ("Externalities' of the free market are the most common justifications for health, safety, and environmental regulation, [often] called 'social' regulation"; defining negative externalities as costs not borne directly by producers and positive externalities as benefits enjoyed by persons other than the direct consumers). Even if defined by reference to costs and benefits, externalities necessarily encompass preferences or ideology, not just physical harm. In theory, there may be pollution or regulatory masochists and thus pollution or taxation would be a benefit not a burden. But it is precisely because they are unwilling to recognize such preferences as rational that neoclassical economists can limit their focus to physical harm. See Revesz, *supra* note 14, at 1223 n.34 (distinguishing technological externalities from pecuniary externalities and noting that pollution is a technological externality that imposes social welfare losses; arguing that pollution standard setting that induces industrial migration is a pecuniary externality and that pecuniary externalities will not decrease social welfare because competition will reallocate prices to achieve efficient production levels); cf. Esty, *supra* note 20, at 594 (rejecting Professor Revesz' argument that affecting the financial

negative spillovers and the failure to promote positive spillovers results from a philosophy of individualism that is "a completely logical and powerful tendency in individual human behavior."¹⁴⁸ States, which are the collectivity of the citizens of the jurisdiction, thus lack political incentives to avoid polluting beyond their borders or to preserve their environment for the ideologic and economic benefit of others.¹⁴⁹ Conversely, if neighboring states are economically interdependent, economic losses may also result from imposing stringent environmental standards.¹⁵⁰

Significantly, whether interjurisdictional externalities are beneficial depends upon which side of the border the evaluation is made. The inability of neighboring states to tax positive spillovers may cause states to adopt suboptimal environmental quality standards when viewed according to national values.¹⁵¹ Similarly, the failure of states to control or to promote spillovers may impose social welfare losses through resource misallocation among jurisdictions.¹⁵² Such failure may also violate distributive moral obligations among citizens of the nation.¹⁵³

circumstances of out-of-state citizens leads to resource misallocation; the exclusion of out-of-state citizens from the state regulatory market precludes determinations that the market prices established for the goods produced by regulation are efficient; the market thus may enhance in-state social welfare but may reduce national welfare through inefficient subsidies).

148. Zygmunt J.B. Plater, *Facing a Time of Counter-Revolution — The Kepone Incident and A Review of First Principles*, 29 U. RICH. L. REV. 657, 660 (1995); cf. *supra* note 51. I dispute that the philosophy of individualism is "logical." However, the tendency indisputably is pervasive and powerful.

149. See Stewart, *supra* note 7, at 1215-16 ("Environmental degradation in pristine areas often imposes substantial welfare losses on individuals in other states who value the option of visiting such areas or who take ideological satisfaction from their preservation. A state that encourages economic development at the expense of environmental quality [also] may inflict economic loss (in the form of industrial migration or decreased economic growth) on other states that prefer a higher level of environmental quality. Bargaining among states to minimize the losses occasioned by such spillovers is costly.").

150. See *id.* at 1216 n. 78.

151. See *id.* at 1215 n.77. Opportunities to attract and tax ecotourism industries and customers may partially compensate for the failure to tax external option values, but will not address existence values.

152. See Esty, *supra* note 20, at 626 (physical externalities lead to "a tragedy-of-the-commons dynamic that promises market failure, allocative inefficiency, welfare loss, and infringements on property rights" in the absence of interjurisdictional cooperation or central regulation); Percival, *supra* note 1, at 1178 (discussing states that do not bear the regulatory costs of limiting trans-boundary pollution). See generally Garrett Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968); Carl J. Dahlman, *The Problem of Externality*, 22 J.L. & ECON. 141 (1979).

153. Serious disputes exist regarding whether jurisdictions possessing abundant natural resources and high levels of environmental quality are subject to moral duties to preserve and

Federal regulation thus may be justified to limit negative externalities and to promote positive externalities. If a majority of citizens within each state were motivated by a non-individualist philosophy, federal regulation might be unnecessary. Although hope springs eternal, rampant altruism has yet to materialize.¹⁵⁴

Significantly, state citizens cannot know (under a veil of ignorance) whether they will be harmed more than they will be helped by negative externalities and by the failure to create positive externalities. For this reason, risk-averse state citizens in theory should prefer to place regulatory policy in a federal (indeed a universal) government. This will assure that their interests will be considered in regulatory policy formation.¹⁵⁵ Because federal regulators can be held accountable by the (indirect) voting behavior of those harmed by interstate externalities, federal regulators are more likely than their state counterparts to force regulated entities

to share their "wealth" for the benefit of humanity or the less fortunate in other jurisdictions. See Stewart, *supra* note 7, at 1217 ("public concern with environmental quality . . . partially reflects the sacrifice of preference satisfaction in order to fulfill duties to others, or to transform existing preference structures in the direction of lessened dependence upon consumption of material goods and greater harmony with the natural environment."); cf. MENELL & STEWART, *supra* note 27, at 1048-66 (discussing public trust doctrines that limit development to preserve environmental quality for the public at large); but see Krier, *supra* note 95, at 1234 (rejecting distributive concerns as a prudent basis for establishing environmental policy). These disputes extend over time as well as through space. See Swire, *supra* note 16, at 100 & n.120 (considering the interests of future generations will require national and international responses); cf. MENELL & STEWART, *supra* note 27, at 1066-79 (discussing various federal laws controlling the use of public and private lands to preserve resources and species for existing and future benefit of different social groups). See generally Symposium, *Agora: What Obligation Does Our Generation Owe to the Next? An Approach to Global Environmental Responsibility*, 84 AM. J. INT'L L. 190 (1990).

154. "Self-interest" or even "spite" may be more common than "altruism" or recognition of moral duties, thereby inducing states to promote negative spillovers and to avoid positive spillovers. See generally WILLIAM BAXTER, *PEOPLE OR PENGUINS: THE CASE FOR OPTIMAL POLLUTION* (1974) (rejecting altruism as a basis for environmental policy); Organ, *supra* note 97, at 1387-90 (state legislatures may restrict state agency abilities to adopt more stringent requirements for numerous reasons, including a desire to promote spillovers of negative externalities rather than internalize control costs); but cf. Rose, *supra* note 88, at 1033-35 (rejecting arguments that exit and voice do not provide better answers to local problems than the lack of exit and voice at larger jurisdictional levels).

155. See Golove, *supra* note 64, at 2 ("As the need for global cooperation across a range of issue areas grows, so too will the normative and pragmatic arguments for a more effective system of global accountability."); cf. *id.* at 22 (John Rawls' commitment to value pluralism required recognition of non-liberal values and thus Rawls altered the locus of the "original position" in the context of international relations from citizens to governments, citing John Rawls, *The Law of Peoples*, in *ON HUMAN RIGHTS: THE OXFORD AMNESTY LECTURES* 48 (Stephen Shute and Susan Hurley eds., 1993)).

and state citizens to pay costs to avoid harm and to generate benefits for other states. This better assures that *national* social welfare will be maximized.

But state citizens will invariably have actual knowledge of their jurisdictional location and of the consequent distribution of resources and amenities. International "state" citizens thus may be unwilling to forsake their values and to cede sovereignty, thereby providing citizens of other states with an equal voice in regulatory policy.¹⁵⁶ Given the existence of a federal government and of the Supremacy Clause of the Constitution, however, substantial tensions exist between American citizens' universalist aspirations and their situated interests.¹⁵⁷ Federalism thus reflects the ambivalent commitment of American citizens to the level of government that protects their values in particular disputes.¹⁵⁸

2. *The Significance Threshold For Federal Regulation of Interjurisdictional Spillovers.* Few legal analysts challenge the theoretical legitimacy of physical externality rationales. The morality of individualism underlying interstate externalities is fully consistent with neoclassical economics and liberal political theory. Instead, some legal analysts argue that interstate externalities are insufficient to justify the *degree* of federal regulation of in-state conduct.¹⁵⁹ This argument is reflected in beliefs that federal judicial protection should be limited to *significant* transboundary harms.¹⁶⁰

156. See *supra* note 69.

157. See Tushnet, *supra* note 64, at 878-81 (federalism requires citizens: (1) to be "loyal" to both levels of government; (2) not to place their primary allegiance in only one of the levels; and (3) to respect both the "universalist" moral principles to which our nation is committed and the "value-pluralism" necessary to respect the integrity of states as political entities).

158. See Rubin & Feeley, *supra* note 3, at 948 ("claims of federalism are often nothing more than strategies to advance substantive positions or, alternatively, that people declare themselves federalists when they oppose national policy, and abandon that commitment when they favor it.").

159. See Revesz, *supra* note 14, at 1224-25, 1226 & n.53 & 54; Richard L. Revesz, *Federalism and Interstate Environmental Externalities*, 144 U. PA. L. REV. 2341, 2344, 2346 (1996) (the "core provisions [of the Clean Air Act] cannot be justified by the need to control interstate externalities. Similarly, the relatively minor provisions directed at controlling interstate externalities have been wholly ineffective, largely as a result of the failure of [EPA] and the federal courts to define a coherent and logical body of law . . . [T]he downwind states have always been unsuccessful at constraining upwind pollution . . . [Nevertheless], the rationale for federal regulation premised on the problem of interstate externalities is analytically unimpeachable").

160. Stewart, *supra* note 7, at 1227 ("a state should not be entitled to invoke the principle of local self-determination against federal controls where that state generates significant

Limiting federal intervention to significant harms protects normative diversity.¹⁶¹ Similarly, imposing a significance threshold reduces concerns that citizens will overstate their preferences for in-state regulation.¹⁶² Further, the significance threshold allows these legal analysts to admit that normative diversity may sometimes decrease social welfare, without undermining the claim that normative diversity generally increases social welfare.¹⁶³

The limitation of the protection of out-of-state citizens to significant (and normally physical) harms has tremendous significance for federalism. It may ground the debate over Constitutional limits

spillovers which impair the corresponding ability of sister states to determine the environmental quality they shall enjoy.”); *id.* at 1229 (federal regulation to prevent spillovers should require a threshold of substantial harm higher than that required to justify Commerce Clause regulation against private individuals, because prevention of spillovers is justified on grounds of protecting the Union rather than economic efficiency); *cf. Revesz, supra* note 159, at 2344 n.8 (“existence . . . values placed on natural resources by out-of-state citizens . . . provide a powerful justification for federal control over *exceptional* natural resources such as national parks.”) (emphasis added).

161. See Stewart, *supra* note 7, at 1265 (“Three conditions should be met in order to justify use of the commerce power to coerce state implementation of national moral goals. First, the goals should be among those that could persuasively be regarded as basic in a reflective ideal of the good society. Second, the goals should be of a sort that are unlikely, because of structural defects, to be realized under a regime of noncentralized decisionmaking. Third, federal intervention should promise a substantial contribution to the realization of the goals.”); *cf. id.* at 1230 & n. 131 (courts should not attempt to invalidate application of uniform laws based on spillovers by weighing the competing values to affected states, because it would interfere with legislative coalition building for such laws).

162. See *supra* note 63. Conversely, when positive externalities are significant, federal regulation will normally be recognized as justified. Preservation of the Grand Canyon is commonly cited as an example of a resource for which positive externalities are significant and thus where external preferences should be recognized. See Esty, *supra* note 20, at 595, 639. As a result, the Grand Canyon has taken on tremendous symbolic importance in federalism debates. The closing of the Grand Canyon in 1995 when the federal government was shut down as a result of disputes over the federal budget may be principally responsible for halting the political momentum of devolution in the 104th Congress.

163. See Revesz, *supra* note 159, at 2409 (discussing, in the context of significant physical harms, different tests developed by the Supreme Court to protect out-of-state citizens’ interests under the “Dormant” Interstate Commerce Clause of U.S. CONST. art. I, § 8, cl. 3; these are: (1) direct interest-balancing among jurisdictions that maximizes social welfare; (2) presumptive protection from interstate harm unless protection imposes costs disproportionate to the benefits; (3) freedom from discriminatorily imposed harms without regard to cost; and (4) freedom from any externally imposed harm; citing various cases). Significantly, the Supreme Court has in some cases been willing to protect out-of-state citizens from redistributive economic harms. See *West v. Kansas Natural Gas Co.*, 221 U.S. 229 (1911) (states may not hoard or exclude other jurisdictions from their natural resources because the natural wealth of states is to be shared by the nation).

to federal legislative power.¹⁶⁴ Further, when federal legislative power is found to exist, Congress may wholly eliminate state normative diversity by enacting preemptive requirements.¹⁶⁵ The significance threshold thus limits the exercise of federal legislative power.¹⁶⁶

Further, it may not be possible to know whether Congress or the Supreme Court will adopt a higher or lower significance threshold for protecting against external harms and thus which institution will be more solicitous of normative diversity for particular substantive

164. Compare *United States v. Lopez*, 115 S.Ct. 1624, 1626 (1995) ("The Constitution creates a Federal Government of enumerated powers.") with *Hodel v. Virginia Surface Mining and Reclamation Ass'n, Inc.*, 452 U.S. 264, 280 (1981) ("inadequacies in existing state laws and the need for uniform minimum nationwide standards made federal regulations imperative."). See also Ann Althouse, *Enforcing Federalism After United States v. Lopez*, 38 ARIZ. L. REV. 793, 816-22 (1996) (limits on Interstate Commerce Clause power should be found when national solutions are not needed to address the problem); Weinberg, *supra* note 102, at 817 (nothing important to federalism turns on whether statutory law is more "legitimate" than case law; federalism arguments based on deference to state prerogatives "disregard the inevitability of judicial federalization when inchoate national policy requires it . . . [P]olicy rather than law is 'supreme' under article VI.").

165. See Revesz, *supra* note 159, at 2394, 2396 ("[T]he presence of federal regulation in the environmental area makes the Dormant Commerce Clause formally inapplicable; there are simply no constitutional constraints on how the federal government allocates among the states the burdens of meeting the federal ambient standards."). Of course, Congress need not adopt uniform standards. Congress may adopt nonuniform standards based on national values or may restore the operation of state laws that would otherwise be preempted under the Dormant Commerce Clause to effectuate state-level values. See *supra* notes 37, 69; *In re Rahrer*, 140 U.S. 545, 550-64 (1892).

166. If legislative power is exercised, Congress will likely preempt the judicial role in protecting against interstate externalities. Congress will thereby substitute the collective values of a supermajority of public representatives (or by delegation the values of the President and subsidiary federal officials) for the values of five Justices of the Supreme Court. Cf. Revesz, *supra* note 159, at 2367 (the Carter Administration was more willing than the Reagan Administration to interpret federal provisions limiting interstate externalities under the Clean Air Act in order to protect more stringent state regulatory standards from interference). Which collectivity will make fewer value errors? The academic claim that federal protection should be limited by a significance threshold is a politically honed moral argument. It is an appeal for citizens to adopt a liberal philosophy and thereby dismiss the nonliberal moral harms that they experience. At least in regard to adopting legislation, the Constitution imposes no requirement of philosophic liberalism. Cf. Toni Massaro, *Gay Rights, Thick and Thin*, 49 STAN. L. REV. 45, 89, 90 & n.209 (1996) ("Liberalism most distinctively defines itself as a public commitment to toleration of contested points of view about 'the good life.' . . . Yet there is a crucial distinction, at least within a liberal scheme, between government policy that touches on the private individual sphere — where contested discourse points to judicial activism to prohibit governmental interference — and government policy that deals primarily with the public sphere — where contested discourse points toward judicial restraint.").

concerns.¹⁶⁷ But when the Court protects out-of-state citizens against interstate externalities, it will not impose uniform standards throughout the nation. The Court will thus leave states generally free to establish diverse regulatory policies.¹⁶⁸

167. The Supreme Court may sometimes be more willing than Congress to protect state regulatory prerogatives. The Court may be less able or less willing to recognize the existence of new forms of harm and thus will normally adopt a higher significance threshold than Congress before it will act. *Cf. Esty, supra* note 20, at 575-81 (discussing the need for regulation that results from the difficulty of defining property rights that can be protected by courts, particularly in the face of changing scientific and technical information regarding harms). Similarly, the Court may be more willing to resolve in favor of in-state regulatory diversity the normative conflict between the values of localism and of free markets. Most legal analysts agree that some deference to original intentions is helpful for interpreting ambiguous provisions of the Constitution. See Sanford Levinson, *The Limited Relevance of Originalism in the Actual Performance of Legal Roles*, 19 HARV. J.L. & PUB. POL'Y 495, 495-96 (1996). The perceived benefits of a common market informed the Framers' desire to adopt a new Constitution. See CHARLES WARREN, *THE MAKING OF THE CONSTITUTION* 567 (1937); *Gibbons v. Ogden*, 22 U.S. 1, 153 (1824). But the Framers also believed in relatively rigid distinctions between matters of interstate and of state concern. See *Gibbons*, 22 U.S. at 157 (discussing commerce "among" states as distinct from commerce among individuals within a state); Herbert Hövenkamp, *Federalism Revisited*, 34 HASTINGS L.J. 201, 205-09 (1982) (arguing that the Rules of Decision Act, currently codified at 28 U.S.C. §1652 (1994), was intended to apply state law in federal courts only for purely local matters). The ambivalence between normative diversity and free markets results from tensions deep at the heart of liberal theory and thus of economics. Given the inability to compare interpersonal utilities, economists may be risk averse either to: (1) over-reporting of external ideological preferences (such as option values), requiring adoption of a significance threshold before interfering in interjurisdictional disputes; or (2) over-protecting of internal ideological preferences (including economic discrimination), requiring rejection of jurisdictional prerogatives to overcome bargaining subject to strategic or holdout behaviors. The consequence is theoretical ambivalence regarding relative risks of value errors. See Richard B. Stewart, *Environmental Regulation and International Competitiveness*, 102 YALE L.J. 2039, 2041 (1993) ("The appropriate response to competitiveness concerns is not autarchy. . . . [T]he solution is a combination of domestic policy changes to eliminate unnecessary regulatory and liability burdens, and international efforts to move toward partial harmonization of national environmental measures."). What is missing from the free trade versus environment analysis, however, is the measure of the *ideological* benefits of "protectionism," which can only be assessed by a national or international legislature. See *id.* at 2041, 2051, 2053, 2056 ("Some differences in national measures are desirable and will in any event persist. . . . The normative questions include such issues as the extent to which differences in circumstances might appropriately justify variances in standards, or the criteria for determining whether a government is responsive to the welfare and values of its citizens."). Significantly, in the *international* context, legal analysts do not assume that such tailoring to local preferences is necessarily beneficial.

168. Although the Supreme Court may, under Dormant Commerce Clause doctrines, protect state diversity at the cost of social welfare, the value-errors will be limited to the particular dispute before it. The Court's decision will not directly affect other policies of the same state or the policies of other states. But the case-by-case approach may also be highly inefficient, by allowing most states to impose welfare-reducing external harms unless and until individual cases are brought to the Court's attention.

Similar concerns over a significance threshold for externalities exist at the international level. But political and legal institutions do not exist to establish legislative or judicial protection from interstate externalities or to resolve the value disputes.¹⁶⁹ Lacking a world government with an international Supremacy Clause, international environmental disputes regarding interjurisdictional externalities are resolved through transfer payments, diplomacy and force.¹⁷⁰

3. *Marketable Permits Versus Uniform Regulatory Standards as a Remedy for Interjurisdictional Spillovers.* Given their commitment to normative diversity, to a significance threshold for externalities, and to limits on federal regulation, some legal analysts contend that uniform federal ambient and technology standards based on interstate externalities are inefficient. This is because uniform federal standards are not adequately tailored to the degree of (physical) externalities transferred among particular states.¹⁷¹ Although these analysts

169. For example, the members of the World Trade Organization (WTO) do not cede authority for the WTO to impose within national borders the political resolution of free market and environmental protection norms. At most, the WTO authorizes other members to retaliate against the norm violator. See SENATE COMM. ON THE JUDICIARY, URUGUAY ROUND TRADE AGREEMENTS: TEXT OF AGREEMENTS, IMPLEMENTING BILL, STATEMENT OF ADMINISTRATIVE ACTION, AND REQUIRED SUPPORTING STATEMENTS, H.R. DOC. NO. 103-316, at 1008 (1994) (discussing the Understanding on Rules and Procedures Governing the Settlement of Disputes: "It is important to note that the new WTO dispute settlement system does not give panels any power to order the United States or other countries to change their laws. If a panel finds that a country has not lived up to its commitments, all a panel may do is recommend that the country begin observing its obligations. It is then up to the disputing countries to decide how they will settle their differences.").

170. See *supra* note 125; Geoffrey Palmer, *New Ways to Make International Environmental Law*, 86 AM. J. INT'L. L. 259, 266 (1992) ("even on the most optimistic view, customary international law can hardly be said to have sufficient scope or content to prevent damage and provide sufficient sanctions to be directed against the perpetrators of the damage when it occurs."); *Developments in the Law — International Environmental Law*, 104 HARV. L. REV. 1484, 1505 (1991) ("rules of customary international law rarely specify required behavior Many developing nations, moreover, refuse to consider themselves bound by rules of customary international law"). Existing "soft law" also does not provide enforceable norms. See *id.* at 1508 (discussing Principle 21 of the *Stockholm Declaration on the Human Environment* at 4-7, U.N. Doc. A/Conf. 48/14 (1972)). Treaties are binding only by consent. See Vienna Convention on the Law of Treaties, May 23, 1969, 1155 U.N.T.S. 331, reprinted in INT. LEG. MATS. 679 (1969). Nations may be able to isolate their economies from the rest of the world or may be willing to visit privations on their citizens. They may therefore effectively resist trade sanctions. Conversely, they may believe that externalizing physical harms or imposing sacrifices will benefit their citizens more than the lower prices their citizens would otherwise pay. Nevertheless, nations cannot be wholly isolated from physical and ideological externalities.

171. See Revesz, *supra* note 159, at 2350 (uniform technology standards do not regulate the cumulative impacts of sources within a jurisdiction and uniform ambient standards "are both

recognize that such standards could in theory be an efficient "second-best" regulatory strategy for externalities, they contend that the failure to address other factors that affect the magnitude of external harms prevents uniform standards from being efficient in practice.¹⁷²

Serious complexity attends federal regulation that would attempt to efficiently allocate controls in regard to externalities that affect uniform ambient standards.¹⁷³ For this reason, these analysts recommend adoption of marketable permit schemes (the best of which provide tradeable rights to degrade ambient quality within states rather than to emit pollution). In this way, the value of the external harms can be revealed through purchasing behavior, federal ambient standards will be efficiently achieved, and social welfare will be maximized.¹⁷⁴

But marketable permit systems do not avoid the need for resort to political markets to specify the applicable measures of value, efficiency, and social welfare. At the macro level, marketable permit systems will maximize social welfare only by assuming the efficiency

overinclusive and underinclusive [A]mbient standards are overinclusive because they require a state to restrict pollution that has only in-state consequences Conversely, the federal ambient air-quality standards are underinclusive . . . because a state could meet the applicable emission standards but nonetheless export a great deal of pollution to downwind states.").

172. See Revesz, *supra* note 159, at 2351 ("The federal ambient and emissions standards could perhaps be justified as a second-best means by which to reduce the problem of uncontrolled interstate externalities. . . . Such a view, however, is incorrect as a matter of both theory and empirical observation. The amount of aggregate emissions is not the only variable that affects the level of interstate externalities; . . . Second, the level of interstate externalities is affected by the location of the sources."). See generally R.G. Lipsey & R.K. Lancaster, *The General Theory of Second Best*, 24 REV. ECON. STUD. 11 (1956-57).

173. See Revesz, *supra* note 159, at 2375, 2381, 2386, 2387-94 (explaining different efficiency calculations for different conditions relative to federal minimum standards). Further, welfare will be maximized in regard to more stringent state standards by performing similar calculations, but only if the benefits of effectuating citizen preferences in the downwind jurisdiction for such standards exceed the costs imposed in upwind states. See Revesz, *supra* note 159, at 2393. But unlike national ambient standards, no political "market" will exist to aggregate these interjurisdictional preferences in order to assess the costs and benefits. Similarly, no economic market will exist to price the benefits of increased regulatory stringency in the downwind jurisdiction and the costs imposed in the upwind jurisdiction will vary depending upon the allocation of legal rights to pollute beyond its borders.

174. See Revesz, *supra* note 159, at 2410-13 (by adopting marketable permit schemes, states and firms can purchase margins for growth measured in units of environmental degradation; the number of such permits will be determined by reference to the ambient standards that need to be met; trading will assure that the desired ratio of marginal costs and marginal benefits is realized, or additional trades will occur; nonmarket mechanisms of central planning to allocate the rights "would be exceedingly cumbersome."); MENELL & STEWART, *supra* note 27, at 384-85.

and morality of the allocation of entitlements specified by *Congress*.¹⁷⁵ At the micro level, marketable permit systems collapse the size of the "regulatory jurisdiction" performing the cost-benefit calculus (here, the prices that will be paid for the permits and the degree to which pollution will occur).¹⁷⁶ As a result, external preferences are excluded from consideration in decisions regarding the efficiency of particular levels of production and pollution. Marketable permit systems addressed to interstate externalities should properly be

175. See Mark Kelman, *On Democracy-Bashing: A Skeptical Look at the Theoretical and "Empirical" Practice of the Public Choice Movement*, 74 VA. L. REV. 199, 203 (1988) (markets may efficiently allocate resources and production given a particular set of governmental entitlements, but normative conflict may exist over the ex-ante choice of entitlements and over the ex-post valuation of the conduct resulting from market interactions). Significantly, marketable permit systems are only a means of allocating entitlements among claimants and over time. Even if the permit system will "efficiently" allocate the *pollution reduction burdens* among sources over the time frame relative to a regulatory allocation of control measures, the overall allocation and timing of *entitlements to pollute* may be inefficient. If the overall costs of pollution currently exceed the benefits (including the political and social costs of effectuating the results of such analyses through regulatory strategies), regulatory prohibitions or more rapid limitation of pollution rights may be more efficient. (Pollution taxes redistributed to those affected may be even more efficient). For example, Congress in 1990 enacted a marketable permit scheme for sulfuric oxide pollution resulting principally from coal-fired electric utilities. Congress resolved the critical normative disputes by specifying the total amount of pollution that would be allowed initially, the allocation and initial purchase price for the rights to pollute prior to trading, the general conditions for trading, the amount of reduction that would be achieved, and the time by which desired reductions would occur. See 42 U.S.C. §§ 7651a-7651e (1990). Specifically, Congress imposed a 50 percent reduction relative to specified historic baselines to be accomplished over ten years and allocated the initial entitlements (wealth) principally to existing sources of the relevant pollutants. Subsequent cost-benefit analyses of acid rain damage have debatably suggested that the initial allocations were overly generous (without regard to timing), because additional reductions are needed to fully protect sensitive waters from acid rain. See EPA, ACID DEPOSITION STANDARD FEASIBILITY STUDY REPORT TO CONGRESS: DRAFT FOR PUBLIC COMMENT, EPA 430-R-95-001, xiv-xvii, 79-99 (1995). (Of course, the initial allocation could have been found overly stringent, if different values were applied in the cost-benefit analyses.) Further, the existence of a marketable permit system may impede political abilities to adjust entitlements to efficient levels, by suggesting that costs are efficiently allocated through the trading system. Given the uncertainties over the scientific information and political valuations, we may be risk-averse to imposing substantial costs of reducing pollution. A marketable permit system that reduces entitlements slowly over time thus may reduce the costs of scientific and valuation errors. But it will also reduce the benefits of scientifically warranted and appropriate control measures. Again, risk-aversion may not be rational.

176. See Revesz, *supra* note 159, at 2411 (noting that rights to degrade air quality would be purchased by states and by firms). Thus, the state or firm generating pollution will normally purchase permits when they are less than marginal control costs. The state or firm will also weigh the cost of permits against the benefits it will achieve from increased or decreased production. The state or firm will pollute at the level that maximizes net production *and ideological benefits for it*.

understood as a form of tailoring regulatory standards to "local" preferences that may not necessarily increase social welfare.¹⁷⁷

Further, uniform federal standards may not necessarily be inefficient if the costs of administering a regime to allocate externalities are substantial.¹⁷⁸ Federal legislation addressing interstate air pollution externalities (adopted in addition to uniform standards) was supposedly justified as a more effective means than litigation to

177. The net benefits of increased or decreased production will include the ideological preferences of the individuals within the state or the firm. See Herbert E. Striner, *Zones of Danger: Values, Decision-Making & Change* ch. 4, at 2 (1997)(unpublished manuscript, on file with the author) ("The first fundamental fallacy at the heart of classical and neo-classical economic theory is that all economic decisions are based on a single economic value. And that value is profit maximization. . . . The second fundamental fallacy . . . is that the forces that drive people in the decision-making process are mechanical and, regardless of how selfishly motivated, must lead eventually to the general good."); *id.* ch. 6, at 9 (describing how Donald E. Peterson transformed the decisionmaking processes at the Ford Motor Company based on personal beliefs and suggestions of W. Edwards Deming; "Just think! Here was a company policy putting profits behind people and products."); Interview by Herbert E. Striner with Lewis E. Platt, then Senior Vice-President of Hewlett Packard (July 15, 1986) (Striner: "Is profit maximization ever the sole factor in your overall business strategy?" Platt: "No. Never." Striner: "What other factors are seen as significant?" Platt: "Growth, market share, protection of our work force. . . . Image. Profit maximization is never the sole reason."); Interview by Herbert E. Striner with E.B. Mosier, then Vice-President for Glass Production of PPG Industries (July 24, 1986) (Striner: "How significant do you believe the following values are in their effects on business decisions? On a basis of 1-5 (highest importance). Corporate image?" Mosier: "We have some very strong values such as a very high ethical and moral standards [sic] in that context would clearly be a five . . . [E]mbarassment is a test that stands well and goes beyond the legal requirements."); *but see* Revesz, *supra* note 159, at 2352 ("[A] firm will take [the external health] effects [of emissions] into account only if required to do so by a regulator."); Swire, *supra* note 16, at 101 (equating firm rationality with profitability). The fact that permits cost less than marginal controls and that profit can be made at a given level of production does not necessarily mean that the level of pollution generated is efficient on this micro scale, precisely because the permit prices may reflect market failures due to externalized harm. See *supra* note 106. The marketable permit system, moreover, displaces the political decisionmaking of federal officials regarding the socially optimal level of production for the particular states or firms. Whose values are better: the aggregated citizens of the nation, of the state, or of the firm?

178. Cf. Oren, *supra* note 27, at 90 (arguing that the increased stringency of uniform ambient controls may ease problems of allocating interstate externalities). As noted by Professor Revesz, ambient standards are incomplete and standards are also needed to address location and the ability to transmit pollution due to stack height. See Revesz, *supra* note 159, at 2376-91. But adding these regulatory measures will be efficient only if benefits of better regulatory controls outweigh the regulatory costs. It seems intuitively likely that the costs of regulating technology such as stack height would be outweighed by the benefits. Regulating location is more problematic, particularly because of the fairness, transition cost, and allocational dispute and litigation concerns that might attend the imposition of truly efficient location patterns. See *supra* note 105. Although marketable permit systems may reduce some tailoring costs of allocation once the market is established, moreover, a substantial bureaucratic infrastructure is required which is normally layered on top of existing regulatory controls.

resolve highly contested externality disputes.¹⁷⁹ But even when Congress had resolved normative disputes over the ambient endpoint to be achieved (by adopting uniform standards), EPA failed to allocate externalities by weighing values.¹⁸⁰ Similarly, voluntary state efforts to address these externalities to date have not resolved the externality disputes, even when they were limited to achieving uniform federal minimum standards.¹⁸¹ The continuing failure to

179. See 42 U.S.C. § 7410(a)(2)(D) (1994) (requiring state air plans for "criteria" pollutants to contain provisions to limit contributions of pollutants that would interfere with other jurisdictions' abilities to attain federal ambient air quality standards or federal requirements to maintain existing quality that is better than such standards); Oren, *supra* note 27, at 84, 85 & nn.389-90, 86-88 (discussing the failure of federal judicial efforts to resolve externality disputes prior to enactment of the Clean Air Act in 1970; noting that the externality provisions have not been implemented because of the intensity of the political conflict).

180. See Revesz, *supra* note 159, at 2372 & n.111, 2373-74 (describing how the federal requirements in theory could provide for federal allocation of margins for growth by equalizing marginal control costs and criticizing the decisions of EPA to adopt inefficient allocation rules or for failing to apply its own criteria); Oren, *supra* note 27, at 89-91 (noting that the Clean Air Act's system of ambient and technology standards is not well suited to resolving conflicting state interests in allocating controls in the presence of transboundary pollution). EPA *did* allocate externalities, but it did not weigh the competing values. Because allocation is a "zero-sum game," moreover, Congress may often be unable to enact legislation that allocates entitlements among states possessing disproportionate blocking power. Given Congressional inability to resolve the normative disputes on a wholesale basis, it is unremarkable that EPA is unwilling to resolve them on a retail basis. For this reason, the marketable permit scheme to allocate externalities proposed by Professor Revesz has some merit; it will at least provide opportunities to bargain in order to reveal the strength of competing preferences among *sources* in different states.

181. For example, EPA recently indicated that it would require states to amend their implementation plans to impose additional measures to prevent interference with other states' abilities to achieve uniform ambient air quality standards for ground-level ozone. After substantial delays, EPA decided not to wait for the recommendations of a regional organization created to negotiate ozone transport issues. See Letter from Mary Nichols, Assistant Administrator for Air and Radiation, U.S. EPA, to Mary Gade, Chair of the Ozone Transportation Assessment Group ("OTAG") (Nov. 8, 1996) (on file with author); Calls for State Implementation Plan Revisions for Certain States to Reduce Regional Transport of Ozone, 62 Fed. Reg. 1420, 1421 (1997) ("Notwithstanding significant efforts, the States generally were not able to meet the November 15, 1994 deadline for the attainment demonstration [for ozone nonattainment areas] and other SIP submissions . . ."). Substantial public concern regarding fairness to states and regulated entities attended EPA's decision to force allocations before OTAG could prepare scientific and economic analyses of ozone transportation. See *Air Pollution: OTAG Seeks Assurance that EPA Proposal Will Reflect Group's Ozone Transport Work*, BNA NAT'L ENV'T DAILY, Dec. 12, 1996, at 2; *Capitol Hill Questions OTAG Process: Bilirakis Questions EPA's Upcoming Mandatory OTAG SIP Call*, INSIDE EPA'S CLEAN AIR REPORT, Dec. 12, 1996, at 2. Although EPA subsequently agreed to consider the results of OTAG's forthcoming technical assessments when it issues its rule requiring revision of state plans, it has engaged in a high-stakes game to force states (under the threat of increased regulatory burdens for sources and withdrawal of federal highway funds) to the table in order to allocate the costs of achieving the required emission reductions. See 62 Fed. Reg. at 1423.

develop consensus norms to resolve interstate pollution externality disputes suggests that uniform federal minimum standards may well be the second-best solution.¹⁸²

C. *Race-to-the-Bottom and Race-to-the-Top Rationales*

The third reason for federal environmental regulation is to prevent states and localities from engaging in a welfare reducing "race-to-the-bottom." Such a race may exist whenever jurisdictions compete to attract or to retain industry by lowering their environmental standards.¹⁸³ The race will decrease national social welfare if states raise or lower environmental standards below levels that maximize social welfare. In this context, social welfare is normally evaluated by comparing the benefits to states of increased wages and taxes with the costs of increased pollution that result from industrial relocation.¹⁸⁴

Of course, it is possible that states will compete to attract industry and development by raising environmental standards, thereby

182. Because Congress adopted provisions for EPA to allocate externalities, it expressed the national value judgment that benefits of retail tailoring of externalities should exceed their costs. But Congress largely delegated such decisionmaking to EPA without any guidance on how to resolve the value disputes. Congress thereby avoided being held to account for the results of EPA's political decisions to promote the values of citizens of particular states in particular disputes. See *supra* note 118. Like Congress, EPA has been unwilling to resolve the value disputes on an individual basis. This may suggest either: (1) that Congress improperly evaluated the costs and benefits of tailoring and that uniform standards without tailoring externalities are the second-best solution; or (2) that existing governmental representation is inadequate and citizens will have to force government officials at all levels to achieve more efficient solutions. Cf. Sarnoff, *supra* note 80, at 280-81 (political action is required to elect officials who will be more responsive to citizen preferences and will appoint federal judges who will better protect participation rights).

183. The "race-to-the-bottom" is a manifestation of the "tragedy of the commons." Stewart, *supra* note 7, at 1211 & n.65; see *supra* note 152. For excellent descriptions of the theory behind corporate charter and environmental races-to-the-bottom and races-to-the-top, see Revesz, *supra* note 14, at 1213-1221, and Swire, *supra* note 16, at 75, 80-87.

184. See Revesz, *supra* note 14, at 1215 & n.9, 1239-53 (discussing neoclassical economic models of such competition); cf. Esty, *supra* note 20, at 628 (noting additional measures of welfare that cross state jurisdictional lines, such as lost sales for state industries, reduced future investment within the state, and job displacement); Swire, *supra* note 16, at 72-80 (noting the confusion over terminology because a descriptive race-to-the-bottom results in less stringent standards, whereas a prescriptive race-to-the-bottom results in socially undesirable outcomes). See generally Charles M. Tiebout, *A Pure Theory of Local Expenditures*, 64 J. POL. ECON. 416 (1956); Wallace E. Oates & Robert M. Schwab, *Economic Competition Among Jurisdictions: Efficiency Enhancing or Distortion Inducing*, 35 J. PUB. ECON. 333 (1988).

creating a "race-to-the-top."¹⁸⁵ Such competition may decrease social welfare if environmental compliance costs are raised so that wage and tax losses outweigh the public health and environmental gains.

1. *The Validity Of Race-To-The-Bottom and Race-To-The-Top Rationales Based On Regulatory "Efficiency."* The welfare effects of interstate regulatory *competition* are normally assessed through a form of cost-benefit analysis, in which the responses of producing "firms" to regulatory policies are predicted and the consequences from the prices of goods and services in economic markets are evaluated. Very different assumptions may be adopted, however, in regard to the existence of failures in the regulatory and economic markets.¹⁸⁶ As a result, the degree of sensitivity of firm location behaviors to environmental standard-setting is hotly disputed, as is the degree to which such standard-setting reflects market prices for the tax, wage, and pollution control benefits. This is because market failures render unreliable firm location decisions and state regulatory decisions based on willingness-to-pay and revealed preferences.¹⁸⁷ Normative beliefs in the absence of empirical data regarding the relative degree of

185. See Swire, *supra* note 16, at 70 & n.8, 80-87 (state competition to raise environmental standards may be limited to regulation of mobile products rather than regulation to protect stationary resources and may occur only if consumers cannot purchase products from out-of-state producers or cannot use the goods outside the state). The benefits of ecotourism may trigger races-to-the-top in regard to production standards.

186. Compare Revesz, *supra* note 14, at 1233-35 (social welfare will not be reduced if the market for location rights is competitive and if state-level regulation properly reflects preferences revealed by market prices; analogizing efficient regulation to production) with Kirsten Engel, *State Environmental Standard-Setting: Is it a "Race" and Is It "to the Bottom?"*, 48 HASTINGS L.J. (forthcoming 1997) (distinguishing between models based on neoclassical economic assumptions of perfectly competitive markets and models based on game-theoretic approaches that assume strategic behavior and market failures) and Esty, *supra* note 20, at 629-33 (regulation differs from production because states act strategically and thus regulation does not occur in a competitive market) and Swire, *supra* note 16, at 100-04 (regulatory evaluations of the consequences of environmental policies are routinely skewed to exaggerate compliance costs and to minimize pollution control benefits; regulation itself is the product of imperfect negotiations between states and firms that routinely favor the interests of firms, due to decreased uncertainty regarding valuation mistakes).

187. See Engel, *supra* note 186 (game theory models assume the market for firm location is imperfect and crippled by strategic interactions, causing states to establish suboptimal standards); Swire *supra* note 16, at 76 (assessing competition "involves not only market failures and the lack of the 'measuring rod of money,' but also a view on difficult moral issues."); Esty, *supra* note 20, at 632 (the assumption that governmental regulators "carefully calibrat[e] the price of their location rights (that is, the stringency of their environmental controls) to get the optimal level and kind of industry seems farfetched.").

perfection of economic markets and the correspondence of regulation to economic market valuations thus largely dictate the policy conclusions.¹⁸⁸

Nevertheless, most legal analysts normally agree upon liberal political conceptions of value.¹⁸⁹ As a result, they may fail to recognize the critical distinction between state-level values and national values when used to measure social welfare.¹⁹⁰ The degree to which state regulators will maximize social welfare in response to interjurisdictional competition may be determined less by whether regulators properly match *state* citizen preferences to firm behaviors than by whether they *should* do so.¹⁹¹

In any event, the degree to which regulators will properly match citizen preferences to firm location behaviors may depend less on what firms *actually* do than on what regulators *believe* that firms do.¹⁹² The one study conducted to date of state regulators' beliefs asked state regulators, legislators, economic development agency

188. Significantly, many empirical studies exist regarding how firms relocate in regard to regulatory controls. But these studies cannot demonstrate location errors without regard to the normative evaluations of the costs and benefits to firms of relocation. See *supra* note 177. Until recently, *no* studies existed which directly evaluated regulators' perceptions of firm location behaviors and how they match actual behaviors. See Engel, *supra* note 186 (summarizing data regarding the numbers of firm and state players competing in the interjurisdictional location market and statistical analyses designed to model firm location sensitivity to regulatory standards).

189. See Engel, *supra* note 186 (game theory is a branch of economics based on liberal political theory and assumes the instrumental rationality of individuals in satisfying their preferences, which are ordered and consistent over the range of desires).

190. Neoclassical models assume that jurisdictions should act in the interest of their constituents, evaluated by reference to the preferences of the median (not mean) citizen. See Engel, *supra* note 186 (discussing neoclassical assumptions of the median voter and indistinguishable preferences); cf. Rose, *supra* note 88, at 1032 (Professor Fischel "argues that [local] governments' very efficiency — their satisfaction of their own 'median voters' — is linked to a predilection for unfairness to those who fall outside the category.").

191. In contrast, at least some legal analysts may recognize that firm values will not always be dictated by profit maximization and thus that economic models of firm sensitivity to lowered regulatory costs may often fail to predict firm behavior. See Engel, *supra* note 186 (discussing a study which concluded that variations in regulatory stringency had little bearing upon state economic prosperity as measured by correlation to construction employment; arguing that the positive correlation of high environmental standards with firm location behavior is plausibly explained by the highly skilled and well educated workers for new industries being attracted to regions offering a better quality of life).

192. See Swire, *supra* note 16, at 104-05 ("[T]he *perception* of a prisoners dilemma may well be more important than whether one actually exists . . . [A] prisoners' dilemma may exist, or the perception of one may exist, but neither is necessary to the possibility that a variety of measurement and public choice effects are pushing states toward a lower level of environmental protection than their citizens would prefer.") (emphasis in original).

officials, chamber of commerce officials, and environmental groups to rate whether and to what extent concern over industrial relocation had played a role in state regulatory, permitting, and enforcement decisions. The study concludes that state regulators' perceptions do not correspond to: economic models of how firms should respond to regulatory standards; the degree to which surveyed groups other than regulators believe that firms are influenced by regulatory standards; and the degree to which the other surveyed groups believed that states adjust their standards to induce firms to locate.¹⁹³ The study clearly shows that states raced to laxity. Taken together with empirical data showing that firms are largely insensitive to regulatory standards in location decisions, the study thus suggests that states raced to the bottom. State regulators obtained fewer wages and taxes than they *should have expected to receive* in trade for increased environmental harms.¹⁹⁴

But this analysis fails to resolve the underlying question of whether the state responses, as evaluated by *appropriate* measures and correct perceptions of firm relocation behaviors, in fact reduced social welfare. The study, for good reason, did not attempt to resolve the value disputes at issue. Thus, we do not know whether state regulators believed that: (1) citizen preferences are the proper measure of the value of expected trade-offs between wages, taxes, and environmental protection benefits; (2) state-level values or national values provide a more appropriate measure of the consequences of

193. See Engel, *supra* note 186. Although most respondents to the survey stated that they did not believe that states raced to the bottom, more than one-quarter to one-third of respondents (other than environmental groups) claimed that their state had reduced standards after learning that other jurisdictions provided less stringent requirements. A majority of state environmental agency respondents indicated their belief that regulatory stringency was very or fairly important to industrial location. A range of from 12% to 46% of such respondents believed that their agencies had altered various types of regulatory policies, such as altering regulatory standards or dropping enforcement, based on location concerns. Other respondents (particularly environmental groups) indicated differing perceptions, which generally reflected substantially higher sensitivity of state agencies to relocation concerns. See *id.*

194. The state did not survey the beliefs of firms. Curiously, however, the study also suggests that all other respondents (except environmental groups) believed that firms were *more* sensitive to regulatory standards than did state regulators. See *id.* Environmental groups may be better situated to recognize the importance of non-profit maximizing values within firms that minimize the influence of regulatory costs on firm location decisions. Cf. *supra* note 177. If the descriptions of firm and regulatory agency beliefs are accurate, states either: (1) raced to laxity but failed to lower standards *enough* to capture the location benefits that were available; or (2) unintentionally coordinated with other states (through their erroneous perceptions) to limit competition, leaving the welfare effects ambiguous because of interjurisdictional relocation market failures.

their policies; (3) competition for industry is a zero-sum game (rather than a positive or negative sum game due to international mobility of capital) and other states would also lower their standards in response to competition, so that states would not obtain corresponding firm relocation benefits from relaxing environmental standards; (4) decisions to lower regulatory standards increased or decreased social welfare if value is defined by measures other than citizen preferences; (5) intentional decisions to reduce social welfare by lowering environmental standards (if they admit to having done so) were rational, appropriate, or moral; (6) standards were lowered below preemptive federal minimum standards, suggesting that preemptive federal minimum standards are insufficient to prevent a race to the bottom; (7) or field preemptive federal regulation would have resulted in greater net increases or decreases in in-state social welfare.¹⁹⁵ These evaluative uncertainties can only be resolved through *national* political processes.

2. *The Validity Of Race-To-The-Bottom And Race-To-The-Top Rationales Based on Risk Aversion To Value Errors.* The traditional accounts of the race to the bottom assume that welfare will be reduced if state regulators do not accurately perceive the degree to which firm location decisions are influenced by regulatory standards and do not set those standards at the level that generates the greatest net benefits for *state* citizens, as best revealed in perfectly or imperfectly competitive economic markets and as best achieved in the face of perfectly or imperfectly competitive firm and state interactions.¹⁹⁶ The differences between the traditional accounts results from the *technical magnitude* of the economic and regulatory market failures. If they are too great, we cannot know that states will maximize social welfare when they tailor their regulatory standards to satisfy their citizens' preferences.¹⁹⁷

195. Cf. Stewart, *supra* note 167, at 2059 (describing in the international context whether nations find themselves "at ground zero" because "internal and external constraints" prevent them from racing). The study does suggest that there is a wide difference of opinion regarding perceptions and norms. This in turn suggests that state (and likely federal) regulators may make substantial errors in informally aggregating preferences and that empirical analyses of firm location decisions and regulator responses are unlikely to resolve disputes over race-to-the-bottom rationales.

196. See Swire *supra* note 16, at 100-04.

197. Even when applying state-level values, significant interstate strategic interactions will therefore warrant *uniform* preemptive federal regulation. If a particular states' regulators make evaluative errors of firm location or evaluative errors of citizen preferences due to public choice

A totally different account of the race-to-the-bottom results, however, if the relevant *measures of value* are specified by national political processes. The application of national evaluative norms will prevent any claim that states will necessarily maximize social welfare by tailoring their regulatory standards and levels of industry through strategic bargaining based on (and which better reveals) *state* citizens' preferences.¹⁹⁸ The application of national evaluative norms will also prevent resort to the misleading metaphor of "island" and "competitive" jurisdictions, which suggests the appropriateness of state-level valuations and the existence of states' rights to be free from external preferences.¹⁹⁹

The "efficient" response in moving from an island to a competitive jurisdiction based on state-level values may lead to suboptimally high (or suboptimally low) levels of pollution (relative to wages and taxes) when evaluated according to national evaluative norms.²⁰⁰ But there will be no way to know in advance whether interjurisdictional competition will generate greater welfare gains or welfare

or other problems that do not apply to federal regulators or other states, *nonuniform* preemptive federal regulation should be warranted. This will restore appropriate in-state decisionmaking in the context of interstate bargaining. But the fact that economic markets imperfectly reveal state citizens' preferences will not (in this context) warrant preemptive federal substantive regulation. There is no federal political market that will better evaluate state-level values.

198. See Revesz, *supra* note 14, at 1229-32, 1236-40, 1241 & n.110, 1243-44 (in the absence of federal minimum standards, states will achieve some equilibrium level that will prevent a race to the very bottom; in the presence of federal minimum standards, states will sometimes achieve more stringent equilibrium levels; if environmental benefits are undervalued or if capital is taxed suboptimally, these irrationalities should have the same effects in island and competitive jurisdictions). But the irrationalities may affect competition because of public choice problems within or external to the jurisdiction that affect bargaining behavior. Cf. MICHAEL SUK-YOUNG CHWE, *STRUCTURE AND STRATEGY IN COLLECTIVE ACTION: COMMUNICATION AND COORDINATION IN SOCIAL NETWORKS* 1 (1996) (describing through mathematic modeling how social structures — *i.e.*, communications networks — interact with individual incentives, in order to predict how and among whom collective actions emerge and grow); Revesz, *supra* note 14, at 1233 & n.73 or 1234 & n.79 (rejecting as lacking any normative demonstration the argument that preferences for environmental quality may not be comparable to preferences for the benefits of firm relocation and thus that *states* should take into account firm relocation preferences only if ethically justifiable).

199. See Revesz, *supra* note 14, at 1216-21 (reciting the traditional account of the race-to-the-bottom employing the island metaphor to set up neoclassical economic challenges to that account).

200. The valuation errors become more extreme if the transition to a competitive jurisdiction causes states to alter their *values* rather than their regulatory strategies. Resort to the island and competitive jurisdiction metaphor may alter state citizens preferences for free market values versus rights to territorial integrity. See *supra* notes 81, 154, 167.

losses.²⁰¹ Critically, if the nation is not ambivalent between the forms of welfare losses, *i.e.*, is selectively risk-averse to state-level value errors, then it will have reason to impose preemptive minimum or maximum standards that limit normative diversity, or both.²⁰²

The theoretical dispute over the existence of a race-to-the-bottom thus resembles the significance threshold for recognition of external harm. Both vary with the substantive commitments of citizens to particular values and both weigh those commitments against a generalized liberal political commitment to normative diversity.²⁰³

201. By hypothesis, the national legislature aggregates the preferences of the citizens of all states. Some states should thus establish initial pollution control levels suboptimally high when viewed from a national perspective. Other states should establish control levels suboptimally low. In practice, however, supermajoritarian enactment requirements, public choice concerns and strategic interactions may result in (1) legislation that unstably exceeds aggregated preferences within any state and (2) all states establishing suboptimally high or low standards. *See infra* note 210 and accompanying text. Assuming competition induces laxity of standards, there is no way to know whether the welfare gains from less suboptimally high regulatory levels in some states will outweigh the welfare losses from more suboptimally low regulatory levels in others. If the race is to stringency, the same normative uncertainty remains. *Cf. Esty, supra* note 20, at 634 ("Once any party moves off its 'true' optimal level of environmental regulation — to a standard that is either too high or too low — others cannot be assured, under the Theory of the Second Best, that staying with their own 'island jurisdiction' optimization strategy will continue to maximize welfare.").

202. *See supra* notes 82, 175. For example, if the nation is averse to substantially lower environmental quality levels and presumably higher employment, it should establish preemptive minimum environmental standards. Conversely, if the nation is averse to presumably higher environmental quality standards and presumably lower employment, it should establish preemptive maximum standards. And if the nation is ambivalent between the direction of value errors but is risk averse to their absolute magnitude, it should wholly preempt state regulation to limit variation in both directions. *Cf. Esty, supra* note 20, at 634 ("[T]he scope for failure in the market for environmental-policy-determined location rights is significant enough to make untenable a presumption that regulatory competition in this domain will be welfare enhancing."). Significantly, in regard to environmental protection, Congress has expressed a primary preference for floor rather than for ceiling preemption. *See* 42 U.S.C. § 7416 (1994) (preserving state diversity except in regard to emission standards and limitations on stationary sources that are less stringent than federal standards and limitations). The nation's citizens are more risk-averse to losing their lives from pollution than from starving. The direction of American risk-aversion may be highly rational, given the tremendous wealth of our country and (at least until recently) the relentless expansion of the welfare state. If we deplete our resources, our values and thus our laws may change. *Cf. Rose, supra* note 88, at 1049 ("[N]orms about resource use may respond to altered conditions of scarcity . . .")

203. *See supra* note 158; *Esty, supra* note 20, at 641 ("The extent of our interest in a distant environmental harm is also likely to be determined by the scope and severity of the harm itself and by our confidence, or lack thereof, that those on the scene are handling the problem appropriately."). Significantly, where we most fear value errors from paternalism, it is at the "jurisdictional" level of the individual citizen and by distinguishing between public and private behaviors. The Constitution (or the Supreme Court interpreting it) thus preempts both federal and state laws that would limit such normative diversity. The First Amendment protects

If most of the citizens of the states disvalue the conduct occurring in some states more than they value the freedom of others to differ, Congress will normally impose floor, ceiling, or field preemption.

The preemptive federal standards adopted to limit value errors, moreover, will normally be uniform. Comparative analyses of state and federal values and of the risks of value errors cannot be performed empirically but are generated through legislative processes in which states possess (in the Senate) equal voting rights.²⁰⁴ The existence of nonuniformly preemptive federal legislation will thus reflect either disproportionate political power of the nonpreempted states (notwithstanding Senate representation), strong and demonstrable factual differences, or more limited, nonuniform value-error risks.²⁰⁵

D. *The Normative Interest-Representation Rationale*

Another rationale for federal regulation is to remedy the public choice problem of underrepresentation of environmental interests in state legislative, executive, and judicial fora.²⁰⁶ As a descriptive matter, "diffuse" environmental interests may be more successful than

political and other public expression and religious and other private freedoms closest to the moral concerns about shaping and expressing of preferences. *See* U.S. CONST. amend. I. Similarly, rights to privacy generally or in the home apply to individuals or, at most, to families. *See* U.S. CONST. amend. IV, V. Once we recognize that significant psychic or physical harms may result from such protection, however, we are willing to preempt such normative diversity. *See infra* note 214. So that people do not mistake my point, I am not advocating the forced imposition of a uniform morality. Rather, I make the descriptive claim that the degree to which we recognize harm will determine the degree to which we will tolerate normative diversity. *Cf.* Massaro, *supra* note 166, at 97 ("[A] commitment to liberalism suggests that, if the issue is difficult, contested, and suspect, then government should not decide the issue for us, especially if it involves questions of 'morality.' . . . My point in invoking this liberal structure therefore, is not that I think it solves the riddle (or even that I wish to celebrate liberalism).") The risks of world war, genocide, torture, mass starvation, etc., from imposing a bad morality and from failing to impose a good one are both too great. Which is more likely or worse?

204. Any empirical studies of self-reported values of state citizens will be subject to serious challenge both in regard to over-reporting and in regard to how to aggregate the preferences. Any empirical studies of their values as revealed by existing state regulations will be subject to serious challenge both in regard to the existence of external harms and to public choice concerns.

205. *Cf.* 42 U.S.C. § 7543(a)&(b) (1994) (preempting state regulation of motor vehicle emissions but preserving California's ability to impose more stringent motor vehicle emissions upon receiving federal waivers).

206. *See* Caminker, *supra* note 83, at 1013 n.44 (state decisionmaking may not maximize social welfare because of disparities of political power and because local decisionmakers will not allocate resources according to majority preferences).

"concentrated" compliance interests²⁰⁷ in affecting legislative and bureaucratic policy at the federal level than at the state level. The relative degree of political success results from economies of scale and reduced transaction costs for organizing and lobbying.²⁰⁸ Further, federal governmental entities may have greater resources or desire than states to address environmental concerns.²⁰⁹ On specific issues, however, environmental interests may achieve greater representation at state or local levels than at the federal level.²¹⁰

Because Congress has enacted federal minimum standards that impose requirements more stringent than some states would voluntarily adopt, environmental interests necessarily attain greater representation at the federal level than in those states. Because national political processes define the applicable evaluative norms, the descriptive claim that some states "under-represent" environmental interests is *presumptively* a legitimate normative claim. The only way to challenge the validity of the normative claim is to demonstrate that the federal laws do not reflect the preferences of a supermajority of the nation's citizens -- in which case the normative dispute is likely to be resolved by itself through repeal of the federal law, or that the federal evaluative norms are objectively bad or wrong -- in which case the normative dispute becomes a battle to shape citizen preferenc-

207. See Stewart, *supra* note 7, at 1212-13 (noting the differences between diffuse interests for environmental protection and concentrated interests to avoid control costs); Swire, *supra* note 16, at 101-02 (the costs of compliance are highlighted by front-loading in time and being incurred in tangible ways, whereas the benefits of environmental regulation occur over longer time frames and are incurred in less tangible ways; the problems are exacerbated by public choice considerations, because political decision-makers will be affected by the greater ability of pro-development groups to mobilize to influence decisionmakers, who either may be motivated to promote public values or may be "captured" or bribed).

208. See Stewart, *supra* note 7, at 1213-15 (noting scale economies and fiscal commons effects); Richard B. Stewart, *The Development of Administrative and Quasi-Constitutional Law in Judicial Review of Environmental Decisionmaking: Lessons from the Clean Air Act*, 62 IOWA L. REV. 713, 747 (1977) (same); cf. Swire, *supra* note 16, at 101 ("[T]he outlook for passing environmental laws is much bleaker than the Olson problems, acute as they are, would suggest. Under the Olson analysis, industry is assumed to know the costs it would suffer and breathers are assumed to know their potential benefits."); cf. *supra* note 198. See generally MANCUR OLSON, *THE LOGIC OF COLLECTIVE ACTION* (1965).

209. See *supra* note 103; Stewart, *supra* note 7, at 1214-15 (noting that federal agencies are less sensitive to imposing costs and are subject to greater "cultural and media encouragement to take a 'long-run' or 'national' perspective favoring environmental concerns."). The greater degree of identification with environmental interests also results because the interests are identified with preemptive federal minimum standards rather than with environmental harm per se. See *supra* note 104.

210. See Stewart, *supra* note 7, at 1215; Organ, *supra* note 97, at 1392-93.

es.²¹¹ Again, the citizens of states (perhaps unlike Indian Tribes) lack the option to exit from this political and normative battle.²¹²

Further, Congress may not fully preempt state diversity or may not clearly specify the preemptive effects of its legislation. This will leave to “unrepresentative” federal and state trial and appellate judges, subject to varying levels of review by the U.S. Supreme Court, the normative decisions regarding whether to impose policy on the states.²¹³ In such cases, it may be much harder to claim that preemptive federal legislation justifies its existence.²¹⁴

The adoption of uniform preemptive federal standards based on political underrepresentation rationales, however, may pose even more serious risk-aversion concerns.²¹⁵ If federal standards directly address state political representation *processes*, the value corrections will affect a larger range of policies and will thus more substantially shape citizen preferences.²¹⁶ Likely for this reason, the Supreme Court has ambivalently interpreted the Constitution to provide protection of state governmental integrity from federal reorganization and to limit federal governmental power to specify policy regulating intrastate conduct.²¹⁷

211. See *supra* notes 30-31, 73-88 and accompanying text.

212. See *supra* notes 41-44 and accompanying text.

213. See *supra* note 139 and accompanying text.

214. The Supreme Court's decisions will manipulate interpretation of federal legislative or constitutional provisions, based upon the Court's identification or lack of identification with the underlying harms in the cases before it and of the consequent benefits of normative diversity when it develops interpretations that will apply to subsequent decisions. See Weinberg, *supra* note 102, at 839-40 (stating that courts adjudicating legal controversies necessarily strike a policy balance; preempting federal but not state common law is disfunctional, because we know the matter is a national policy concern; additional disfunction results from choosing state law to supply the contents of national policy); Striner, *supra* note 177, at Ch.9 (discussing how Supreme Court Justice Oliver Wendell Holmes reversed his earlier interpretation — that the First Amendment provided little protection for political opposition to war efforts — when he changed his view of the costs and benefits of political dissent). We should be more worried about the Court's than Congress' value errors, because they are harder to correct. See *supra* note 42. But again, the benefits of benevolent dictatorship are correspondingly great. See *supra* notes 82, 202-03 and accompanying text.

215. As for competition in race-to-the-bottom arguments, interest representation rationales are not susceptible to ex-ante determination of the scope of the valuation errors. See *supra* notes 201, 204 and accompanying text.

216. See *supra* notes 81, 116-19 and accompanying text.

217. See *supra* notes 8-11, 36, 39-40, 48-49, 83, 159-68 and accompanying text.

E. *Moral Rationales*

Moral rationales for federal regulation self-consciously reject state-level values, political liberalism, and the benefits of normative diversity. It is often (albeit inconclusively) argued that preemptive federal regulation establishes and fulfills moral obligations for the protection and preservation of environmental quality.²¹⁸

Imposing moral obligations at the national level shares more widely the sacrifices born by consumers and industry and thus helps to achieve agreement concerning the goals to be attained.²¹⁹ Centralizing moral decisionmaking also makes the sacrifices less visible and thereby counters "backsliding" when the costs become visible.²²⁰ Federal regulation may be inherently more "public-regarding" than state regulation because smaller geographical units will not formulate sound policy due to factional pressures.²²¹ Similarly, the ability to externalize harms beyond state boundaries suggests that national (or international) decisionmaking may result in better decisionmaking.²²² Centralized decisionmaking thus may be both a sufficient (efficient) and a necessary condition to fulfilling moral obligations, because of the need to preempt normative diversity.

Centralizing moral decisionmaking, however, does not resolve the ex-ante question of whose morality to impose, including political liberals' morality of protecting normative diversity.²²³ The question thus remains whether national morals legislation imposes beneficial policies or "unjustified [sacrifices] by those that bear them (in

218. See Stewart, *supra* note 7, at 1217-19.

219. See Stewart, *supra* note 7, at 1217 n.83.

220. See Stewart, *supra* note 7, at 1218-19 (the greater resource base of the federal fisc makes the connection between taxing and spending less transparent, and makes federal allocation decisions less susceptible to competing claims); Dwyer, *supra* note 27, at 236-45 (describing legislative reelection incentives to enact and retain morally symbolic legislation).

221. See Krent, *supra* note 86, at 104 & n.148; THE FEDERALIST NO. 10 (James Madison).

222. See *supra* notes 151-58, 167-70 and accompanying text.

223. Professor Richard Stewart thus refers to the work of Peter Berger, "decr[y]ing] the insensitive willingness of governmental elites [in less-developed countries] to impose severe sacrifices on the populace, repressing opposition to such sacrifices on the grounds that they are necessary to 'development' but will not be undertaken voluntarily, and that once development has occurred the society will look back upon the sacrifices as justified." Stewart, *supra* note 7, at 1221-22. See also PETER BERGER, PYRAMIDS OF SACRIFICE 10-11, 90-91, 128-29 (1976). The rhetoric invokes the metaphor of Egyptian and Meso-American "god-kings" who caused millions to die to erect monuments to their glory. Cf. *supra* note 71.

particular poor communities), for the sake of a national elite's vision of a better society."²²⁴

Significantly, Congress may enact "symbolic" legislation, *i.e.*, legislation that leads rather than follows citizen preferences. Symbolic legislation may be overtly paternalistic and based on moral rationales. But symbolic legislation also may contain provisions that legislators do not intend to be interpreted literally or goals that legislators do not intend or desire to be accomplished. This form of symbolic legislation is strategic, because it may allow for coalition building by legislators who can later deny responsibility for imposing costs, thereby providing reelection benefits.²²⁵ Legislation also may be symbolic when it fails to provide authority sufficient to achieve its goals.²²⁶ Even when legislators do not intend literal interpretation, however, symbolic legislation may beneficially reallocate resources, demonstrate public commitment to and thereby inculcate values, and force the investment of labor and capital to create new and efficient technologies.²²⁷

But the claim that legislation is symbolic is itself a political claim. Data will normally be insufficient to demonstrate that citizens honestly or intelligently supported the commitments at the time legislation was enacted, whether or not their preferences later

224. Stewart, *supra* note 7, at 1222; see Krier, *supra* note 95, at 1240-41 (federal sacrifices have been based on a "foolish" consistency).

225. See Dwyer, *supra* note 27, at 234, 248 n.63, 249 n.64, 250 n.68 ("The enactment of symbolic legislation reflects a breakdown of the legislative policymaking machinery," a system that all too frequently addresses real social problems in an unrealistic fashion); cf. Rose, *supra* note 88, at 1026-29 (discussing cyclical "legislative due process" resulting from coalition building; local political processes are too small in scale for such behavior and regulation tends to protect local homeowner majorities' interests in repose more than new developers' claims to equal treatment). It is important to distinguish in this context between the public choice concern that citizens values are properly assessed and the liberal theoretic solicitude for supermajoritarian enactment requirements. See *supra* notes 31, 81-88 and accompanying text.

226. The most obvious environmental example is "the national goal that the discharge of pollutants into the navigable waters be eliminated by 1985," which remains codified law more than a decade after the goal was not accomplished. 33 U.S.C. § 1251(a)(1) (1994). Congress did provide authority to prohibit discharges of pollutants without a permit, although it limited the definition of discharges to releases into navigable waters from "point sources." See 33 U.S.C. § 1362(12)&(14) (1994). But Congress limited regulatory authority regarding conditions that could be imposed in permits and thus apparently did not intend to prohibit all industrial (or personal) activity resulting in such discharges.

227. See Dwyer, *supra* note 27, at 244-48. Symbolic legislation also may not be undemocratic. Such symbolism may lead to the creation of coalitions to provide benefits that otherwise might not occur due to supermajoritarian enactment requirements.

changed.²²⁸ Similarly, legislators are unlikely to admit that they intentionally voted for laws that they did not intend to be complied with or did not believe were supported by their citizens.²²⁹ Further, federal legislators may be unable to know the costs and benefits of legislation prior to subsequent interpretation by agencies, states, and courts. It may not be possible to determine before subsequent interpretation that the controls are insufficient to accomplish the stated goals.²³⁰ Nevertheless, it may be wise to distinguish between the forms of symbolic moral commitments of the public and of legislators, in order to avoid depleting limited national moral and legislative resources.²³¹

The wise judgment regarding whether federal morals legislation is symbolic and beneficial or strategic and sacrificial must be made by federal judges interpreting legislation, written in absolute terms, that was approved by federal legislators who have every reason not to reveal what they really think. The interpretations imposed on the nation thus will impose the inadequately constrained value choices of federal judges and will rarely be overturned due to a limited legislative agenda and supermajoritarian enactment requirements.²³² But resistance to the interpretations of federal judges will be

228. See *supra* note 31.

229. Public choice concerns thus suggest serious underreporting of legislator "preferences," in contrast to the fear of over-reporting of the preferences of citizens for legislation. See *supra* note 63.

230. Compare Schoenbrod, *supra* note 105, at 791, 822 ("[T]he clean air legislation is stated in such abstract terms that if environmentalists do not take principled and therefore seemingly stiff-necked positions, it is hard to see what protection they are left with under the legislation.") with Dwyer, *supra* note 27, at 234 (environmental interest groups wrongly treat such uniform legislation as establishing rights).

231. See Rich, *supra* note 51, at A13 (noting the irony of spending resources to attack a company that manufactures tobacco products, "for sponsoring afternoon TV talk shows with commercials in its food division . . . when it is peddling the product that most threatens our children's health."); Krier, *supra* note 95, at 1231-33 (discussing opportunity costs in relation to justice).

232. See *supra* notes 29, 84-85, 214 and accompanying text; Martin H. Redish, *Federal Common Law, Political Legitimacy, and the Interpretive Process: An "Institutionalist" Perspective*, 83 NW. U. L. REV. 761, 762 & n.8, 763-68, 788-89, 790 & n.115, 793-97 (1989) (distinguishing interpretive gap-filling and delegation from federal common lawmaking; claiming that federal common lawmaking effectively usurps federal legislative power that has not been delegated); Henry P. Monaghan, *Stare Decisis and Constitutional Adjudication*, 88 COLUM. L. REV. 723, 757-62 (1988) (judicially fashioned rules or interpretations are not the equivalent of legislative acts, because stare decisis creates only a binding obligation not to change the law without good reason). See generally Gonzales, *supra* note 75.

substantial and will impose friction costs on the nation.²³³ The only way to avoid those costs is to more effectively compel implementation or to repeal the commitment. The supermajoritarian consensus regarding value needed to enact such legislation must come from the nation's citizenry.

Finally, even if moral rationales justify preemptive federal standards, federal standards need not be uniform and may be unidirectional. Different types of moralities will suggest different types of federal preemption. Federal legislation based on deontological rights²³⁴ should normally impose *uniform minimum or maximum preemptive standards*. In contrast, utilitarian morality based on political liberalism will suggest *no federal preemptive standards*, when normative diversity generates net benefits, or *uniform field preemptive standards*, when net benefits are achieved through economies of scale. Finally, moralities based on duties or obligations attach to individuals in particular factual circumstances²³⁵ and thus suggest *nonuniform minimum or maximum preemptive standards*. For precisely this reason, such moralities may present a better hope of merging our disputed claims regarding efficiency with our disputed claims of right. Because Western Europe recognizes positive rights, *i.e.*, duties of government, they may be ahead of us in regard to environmental regulation.

III. THE EXPANDED PRACTICE OF FEDERALISM UNDER THE CLEAN AIR ACT

A. *The Structure Of The Act And Congressional Motivations For That Structure*

Initial federal environmental measures were based on perceived economies of scale in research, funding, and scientific expertise. In 1955, Congress took a "model" approach, providing technical

233. See *supra* notes 29, 104, 135 and accompanying text; cf. Dwyer, *supra* note 27, at 288 ("[L]egislators and agency officials often have a continuing dialog on matters surrounding statutory interpretation and regulatory priorities.").

234. Deontological rights approaches typically treat individuals as equally deserving and as entitled to protection without regard to instrumental costs. Further, rights approaches normally provide baselines for protection. See *supra* note 22; WILLIAM K. FRANKENA, *ETHICS* 94-95 (1963). But rights may be in conflict, requiring establishment of "higher-order" rights. Cf. *supra* note 202. It thus may not be clear in which direction particular measures of protection may run.

235. See FRANKENA, *supra* note 234, at 55-62.

information to states and bolstering state capacities with federal grants, while declaring that air pollution control was the primary responsibility of states.²³⁶ By 1963, Congress had taken limited steps to address interstate air pollution spillovers.²³⁷ In 1965, Congress enacted uniform, preemptive standards and controls over motor vehicle emissions, in part to protect industry from the emerging burdens of multiple state standards.²³⁸ In 1967, Congress issued directives to states to legislate ambient standards and to adopt control measures and programs to attain the standards, subject to federal approval.²³⁹ Congress thereby implied a belief either that relying upon existing state bureaucratic expertise to address national pollution problems would be more efficient or that continued reliance on state bureaucracies was the *quid pro quo* for legislation.²⁴⁰

In 1970, Congress revised the motor vehicle requirements. It adopted "shock treatment" for the automobile industry, requiring reductions of emissions of hydrocarbons and carbon monoxide by 90 percent in 1975, and of nitrogen oxides by 90 percent in 1976.²⁴¹ The revised, field preemptive motor vehicle requirements were self-consciously adopted to force the development of technologies that did not exist in 1970.²⁴² Authority was provided to EPA to extend the

236. See MENELL & STEWART, *supra* note 27, at 242; Dwyer, *supra* note 26, at 1191 n.27; *supra* note 110.

237. See MENELL & STEWART, *supra* note 27, at 241-44; Dwyer, *supra* note 26, at 1191 n.31.

238. See Clean Air Act Amendments of 1965, Pub. L. No. 89-272, 79 Stat. 992 (1965). Following judicial interpretation that the federal standards impliedly preempted state controls to assure nationwide uniformity, Congress amended the provision in 1967 to make this explicit, but preserved California's ability to impose more stringent standards, thereby creating a "two-car" economy. See Dwyer, *supra* note 26, at 1195 & n.61; 42 U.S.C. § 7543 (1994). Such full and explicit preemption, however, is rare. See *supra* note 97.

239. See MENELL & STEWART, *supra* note 27, at 243-44; Dwyer, *supra* note 26, at 1191 n.31.

240. See *supra* notes 29, 100, 109, 129; *cf.* Approval and Promulgation of Implementation Plans, California (South Coast Air Basin); Plans for Ozone and Carbon Monoxide, 55 Fed. Reg. 36,458, 36,451 (Sept. 5, 1990) ("[M]assive federal intrusion is inherently ill-suited to strike necessary balances, and . . . a state plan has far more certain prospects of success than a federal alternative.").

241. *International Harvester Co. v. Ruckelshaus*, 478 F.2d 615, 648 (D.C. Cir. 1973); see 42 U.S.C. § 1857f-1 (1970) (current version at 42 U.S.C. § 7521 (1994)).

242. The statute provided for civil penalties of \$10,000 per violation for the sale, introduction into commerce, or import of *each* new car that failed to comply with the standards. See 42 U.S.C. § 1857f-4 (1970) (current version at 42 U.S.C. § 7524 (1994)). It is highly debatable whether the 1970 Congress desired the judiciary to interpret the statute literally and impose such draconian penalties, particularly since it was aware of the possibility that the technology would not be developed. See PERCIVAL ET AL., *supra* note 27, at 832-44; MENELL & STEWART, *supra* note 27, at 296-310. It is thus debatable whether the legislation was strategically symbolic, and if so, whether it was dysfunctional. See *supra* notes 224-31 and accompanying text.

deadlines for one year if the technology could not be developed in time.²⁴³

Congress also mandated that EPA adopt nationally uniform, preemptive minimum ambient air quality standards ("NAAQS") for certain ubiquitous ("criteria") pollutants.²⁴⁴ States were to implement the NAAQS by adopting and enforcing control measures contained in state implementation plans ("SIPs").²⁴⁵ If SIPs were not submitted or approved, the EPA was required to adopt federal implementation plans ("FIPs").²⁴⁶ Congress also provided grants to assure that limited state resources would not preclude effective state implementation.²⁴⁷

Federal regulation to achieve the NAAQS was based on numerous rationales. Some have attributed congressional motivation to race-to-the-bottom theories.²⁴⁸ But it is also clear that Congress regulated to achieve perceived economies of scale, to remedy underrepresentation of environmental interests in states that had failed to achieve desired levels of quality, and to legislate perceived deontological rights to ambient air quality.²⁴⁹ The federal standards were to protect health, without regard to cost, except when considering an "adequate margin of safety."²⁵⁰

243. See 42 U.S.C. § 1857f-1(b)(5) (1970) (current version at 42 U.S.C. § 7521(b) (1994)).

244. See 42 U.S.C. § 1857c-4 (1970) (current version at 42 U.S.C. § 7409(a) (1994)). Congress also expressly preserved state authority to impose standards more stringent than the NAAQS. 42 U.S.C. § 1857d-1 (1970) (current version at 42 U.S.C. § 7416 (1994)).

245. See 42 U.S.C. § 1857c-5 (1970) (current version at 42 U.S.C. § 7410(a) (1994)). Again, Congress continued to rely on state implementation. See Dwyer, *supra* note 26, at 1184 & n.7, 1192 & nn. 33-34, 1198 (also noting that the EPA was organized in 1970, shortly before the Act was passed).

246. See 42 U.S.C. § 1857c-5(c) (1970) (current version at 42 U.S.C. § 7410(c) (1994)). In 1990, Congress substantially changed the procedures and dates for submitting SIPs and issuing FIPs, as well as the contents thereof. See 42 U.S.C. § 7410(c),(k) (1994); Dwyer, *supra* note 26, at 1193-94.

247. See 42 U.S.C. §§ 1857c, 1857c-1, 1857f-6b (1970) (current versions at 42 U.S.C. §§ 7405, 7406, 7544 (1994) (respectively)) (federal grants for planning and implementing state air pollution control programs); Dwyer, *supra* note 26, at 1198 & n.79.

248. See Dwyer, *supra* note 26, at 1195 & n.60.

249. See *supra* note 26; H.R. REP. NO. 91-1146, at 5 (1970), *reprinted in* 1970 U.S.C.C.A.N. 5356, 5360 ("A review of achievements to date, however, make abundantly clear that the strategies which we have pursued in the war against air pollution have been inadequate in several important respects, and the methods employed in implementing those strategies often have been slow and less effective than they might have been Furthermore, unless a State desires to set stricter standards, the time that would be consumed by such States in adopting the ambient air quality standards will be saved.").

250. See MENELL & STEWART, *supra* note 27, at 257-84; *Lead Indus. Ass'n v. EPA*, 647 F.2d 1130 (D.C. Cir. 1980). Additional, "secondary" NAAQS were also required, based on

Congress also adopted in 1970 requirements for EPA to promulgate federal technology standards to regulate emissions from new or modified large sources of air pollutants ("NSPS").²⁵¹ The NSPS were more exclusively based on race-to-the-bottom rationales.²⁵² If states developed adequate programs to implement and enforce the standards, EPA was required to delegate its NSPS authority to them.²⁵³

Congress also enacted requirements for EPA to promulgate federal ambient national emission standards for hazardous air pollutants ("NESHAPs") emitted from new and existing sources.²⁵⁴ The NESHAPs, which were to protect health without regard to cost, were based on similar rationales to those supporting the NAAQS.²⁵⁵ As with the NSPS, however, Congress adopted presumptive federal

protecting public welfare, *i.e.*, preserving public benefits such as visibility and avoiding damage to ecosystems. See 42 U.S.C. § 1857c-4 (1970) (current version at 42 U.S.C. § 7409(b) (1994)).

251. See 42 U.S.C. §§ 1857c-6(a)(1)&(2) (1970) (current version at 42 U.S.C. §§ 7411(a)(1)-&(2) (1994)); MENELL & STEWART, *supra* note 27, at 284-296. The NSPS impose uniform controls within, and nonuniform controls among, categories of regulated sources.

252. See *supra* note 26; H.R. REP. NO. 91-1146, at 5-6 (1970), *reprinted in* 1970 U.S.C.C.A.N. 5356, 5360-61.

253. See 42 U.S.C. § 1857c-6(c) (1970) (current version at 42 U.S.C. § 7411(c) (1994)); *supra* note 145. The Congressional presumption of centralized implementation may be explained as achieving initial economies of scale, given that the resources required to apply the uniform national technology standards to the new sources that would occur in the future were significantly less than the resources required to adopt plans to attain ambient quality levels. See Letter from David Novello, partner, Friedman, Levy, Kroll & Simonds (Feb. 13, 1996) (on file with the author) [hereinafter Novello letter]. EPA developed in 1983 a "Good Practices Manual" describing the criteria and procedures to obtain regulatory approval for the delegated authority under § 7411 and similar delegated authority under § 7412. The delegation procedures have become substantially more complex since the Clean Air Act Amendments of 1990, due to the requirement for states to adopt operating permit programs. See John S. Seitz, Director, Office of Air Quality Planning and Standards, U.S. EPA, Straight Delegations Issues Concerning Sections 111 and 112 Requirements and Title V, Dec. 10, 1993. Under current policies, states must assure resource adequacy and authority to implement and enforce standards exactly as promulgated (although some interim flexibility may be provided if enforcement authority "substantially meets" the criteria). See *id.* at 6-7.

254. See 42 U.S.C. § 1857c-7(b) (1970) (former requirement preserved in current version at 42 U.S.C. § 7412(f) (1994)); MENELL & STEWART, *supra* note 27, at 327-35.

255. See 42 U.S.C. § 1857c-7(a)(1) (1970) (former requirement preserved in current version at 42 U.S.C. § 7412(f) (1994)) (EPA must establish emission level protecting public health, considering costs only when providing an "adequate margin of safety"); H.R. CONF. REP. NO. 91-1783, at 5 (1970), *reprinted in* 1970 U.S.C.C.A.N. at 5374, 5378 ("The Senate amendment also provided in a separate section for the publication of a list of air pollutants . . . which are hazardous to the health of persons. . . . Emission levels must provide an ample margin of safety to assure public health protection."); Dwyer, *supra* note 27, at 242-50.

implementation, allowing states to develop programs and authorizing EPA to delegate its authority.²⁵⁶

Finally, Congress in 1970 impliedly prohibited EPA from approving SIPs, unless the SIPs also assured the prevention of significant deterioration ("PSD") of air quality in areas attaining the NAAQS.²⁵⁷ In 1977, Congress made PSD requirements explicit elements of SIPs. EPA was to specify permissible "increments" of insignificant deterioration and to require states to conduct new source reviews ("NSR") and issue pre-construction permits for new and modified large facilities emitting criteria pollutants.²⁵⁸

The original rationale for the PSD requirements attributed to Congress focused on protection of public health and welfare, similar to moral rationales for the NAAQS and the NESHAPs.²⁵⁹ Additional rationales attributed to Congress when it codified the requirements

256. See 42 U.S.C. § 1857c-7 (1970) (current version at 42 U.S.C. § 7412(l) (1994)); Approval of State Programs and Delegation to Federal Authorities, 58 Fed. Reg. 62,262 (1993). The presumption of federal implementation may have been based on the erroneous belief that developing such standards would be relatively uncomplicated and that the standards would apply to few sources, thereby requiring few federal resources. Cf. Dwyer, *supra* note 27, at 251-76 (describing the complex history of EPA regulatory efforts). See generally Howard Latin, *Good Science, Bad Regulation, and Toxic Risk Assessment*, 5 YALE J. REG. 89 (1988) (discussing problems in evaluating health risks from toxic substances).

257. See 42 U.S.C. § 1857(b)(1) (1970) (current version at 42 U.S.C. § 7401(b)(1) (1994)) (congressional purpose to protect and enhance air quality to promote public health and welfare and the productive capacity of citizens); *Sierra Club v. Ruckelshaus*, 344 F. Supp. 253 (D.D.C. 1972) (interpreting §7401(b)(1)), *aff'd by an equally divided court*, 412 U.S. 541 (1973).

258. See 42 U.S.C. §§ 7470-91 (1982) (current version at 42 U.S.C. §§ 7470-92 (1994)) ("Part C"). The statutorily specified increments for certain criteria pollutants are imposed uniformly in PSD jurisdictions, but have nonuniform effects given nonuniform levels of ambient air quality. The permits, in contrast, imposed nonuniform, case-by-case technology-based controls subject to changing EPA regulatory policies. These technology controls also limited emissions of noncriteria pollutants. See MENELL & STEWART, *supra* note 27, at 343-45. See generally Oren, *supra* note 27.

259. The federal appellate court focused on the congressional statement of policy at 42 U.S.C. § 1857(b)(1) (1970) (current version at 42 U.S.C. § 7401(b)(1) (1994)), the Senate Report accompanying the bill that became the 1970 Act, and statements of administrative officials interpreting the predecessor policy under the Air Quality Act of 1967 and testifying on the 1970 Act. See *Sierra Club*, 344 F. Supp. at 255. Additional legislative history supports the court's analysis. See, e.g., H.R. REP. NO. 91-1146, at 6 (1970), *reprinted in* 1970 U.S.C.C.A.N. 5361 ("Effective pollution control requires both reduction of present pollution and prevention of new significant pollution problems."). Although the statutory policy includes enhancing existing air quality, neither the Congress nor EPA have adopted control requirements to improve air quality in regions exceeding the NAAQS. It is debatable that the Congressional codification in 1977 precluded EPA from issuing such regulations. Cf. *Tennessee Valley Ass'n. v. Hill*, 437 U.S. 153 (1978) (repeals by implication disfavored); 40 C.F.R. § 131.12 (1997) (EPA's anti-degradation policy for existing water quality, implemented through permit control requirements and based on the legislative goals).

in 1977 include: (1) protecting unique areas from pollution; (2) minimizing the potential for backsliding on the ambient NAAQS levels that deteriorating air quality might occasion; (3) minimizing interjurisdictional spillovers; (4) promoting state regulatory analyses; (5) maximizing economic growth; and (6) restricting various states' comparative advantages in competing for industry, similar to the race-to-the-bottom rationale.²⁶⁰

In summary, Congress adopted the various provisions of the Clean Air Act based on numerous rationales. Congress relied upon economy of scale and uniformity rationales for federal research and funding, for decentralized implementation of the NAAQS and PSD provisions (and possibly for centralized implementation of the NSPS and NESHAP requirements), and for the field preemptive motor vehicle emission standards. Congress justified tailored limitations tied to the PSD and NAAQS provisions with the externality rationale and may have adopted the NAAQS as a second-best approach to the externality problems. Congress primarily counted upon the race-to-the-bottom rationale for the uniform preemptive minimum technology NSPS requirements. Congress used regulatory competition and various additional rationales to justify the uniform preemptive minimum ambient PSD increments and nonuniform technology permit requirements. Finally, Congress relied upon economy of scale, negative spillover, race-to-the-bottom, normative interest representation, and moral rationales for the uniform preemptive minimum ambient NAAQS and ambient and technology-based NESHAP standards.

B. *Relevant Implementation History Of The Act*

1. *The Uniform Field Preemptive Motor Vehicle Requirements.* EPA initially rejected applications of American motor vehicle manufacturers requesting an extension of the deadlines for the required reduction of automobile emissions, but EPA's decision was invalidated on procedural and substantive grounds.²⁶¹ Although the manufacturers developed and installed the technology of catalytic

260. See Oren, *supra* note 27, at 52; MENELL & STEWART, *supra* note 26, at 341-42; Peter Pashigian, *Environmental Regulation: Whose Self-Interests Are Being Protected*, 23 ECON. INQUIRY 551 (1985). Section 165(a)(3), currently codified at 42 U.S.C. § 7475(a)(3) (1994), was premised upon spillovers and prohibited issuing permits that would contribute to another area exceeding the NAAQS.

261. See *International Harvester Co. v. Ruckelshaus*, 478 F.2d 615 (D.C. Cir. 1973).

converters in new cars in 1975, the converters did not result in the required reductions. EPA subsequently granted one-year extensions, extending the dates for compliance to 1976 and 1977.²⁶²

In 1977, Congress amended the motor vehicle provisions, requiring achievement of the original 90% reductions for hydrocarbons by 1980 and for carbon monoxide and nitrogen oxide by 1981.²⁶³ Congress also allowed other states to "piggyback" on the California emission control standards, so long as they adopted identical emission controls.²⁶⁴ The standards were achieved by 1981, but the estimates of the costs and benefits of achieving the standards predictably vary dramatically.²⁶⁵

In 1990, Congress again amended the motor vehicle provisions. It reduced further the emissions levels for all automobiles and added various new requirements that were not nationally uniform, *i.e.*, were applicable only in areas violating the NAAQS.²⁶⁶ Congress restricted the ability of other states to piggyback on California car standards, prohibiting them from taking actions that would have the effect of creating a "third" car.²⁶⁷

2. *The Decentralized NAAQS And PSD Requirements.* Attainment of the NAAQS was not achieved by numerous states in the time required.²⁶⁸ This failure resulted largely from states being unwilling

262. See PERCIVAL ET AL., *supra* note 27, at 835.

263. See 42 U.S.C. § 7521(a)(3) (1994); PERCIVAL ET AL., *supra* note 27, at 835.

264. Motor Vehicle Manufacturers Ass'n v. New York Dept. of Envtl. Conservation, 79 F.3d 1298, 1302 (2d Cir. 1996) (finding some challenges to the preemptive effects of this provision not to be ripe but upholding the district court's grant of summary judgment that state regulation of fuel quality was not preempted); see 42 U.S.C. § 7507 (1994).

265. See MENELL & STEWART, *supra* note 27, at 307 (citing differing estimates of EPA and of R. CRANDALL ET AL., REGULATING THE AUTOMOBILE (1986)).

266. See, e.g., 42 U.S.C. § 7521(b)(1)(A) & (B) (1994) (lower hydrocarbon, carbon monoxide, and nitrogen oxide emission levels); 42 U.S.C. § 7545(k) & (m) (1994) (reformulated and oxygenated fuels for use in nonattainment areas); 42 U.S.C. § 7586, 7588-90 (1994) (requiring clean fuel vehicles for serious nonattainment areas and federal agency fleets, and also providing a test program in California and allowing states to opt-in to clean fuel vehicle programs).

267. See Motor Vehicle Manufacturers Ass'n v. New York Dept. of Envtl. Conservation, 17 F.3d 521, 532-38 (2d Cir. 1994) (rejecting allegations that these provisions were violated by New York's simultaneous failure to adopt California clean fuel regulations and its imposition of quotas on the ratio of low-emission vehicle and zero-emission vehicles; finding that New York's adoption of standards before California was issued a waiver did not provide the required two-year lead time before other states could implement piggyback requirements).

268. The following discussion focuses on ground level ozone and carbon monoxide, which result largely from motor vehicle emissions. Greater success was obtained for other criteria pollutants, in large part due to the field preemptive, motor vehicle requirements. See PERCIVAL

to provide, and EPA to compel states to adopt, critical control measures.²⁶⁹ This in turn was due to initial lack of EPA expertise and administrative resources; resistance of states to paying the political and administrative costs of imposing requirements and to losing traditional prerogatives to specify standards; the perceived constitutional infirmity of subjecting states and their officials to civil penalties for failing to implement the federal policies; and backsliding support of the public and in Congress for pursuing the most controversial implementation strategies that imposed costs more directly on citizens.²⁷⁰

In 1974, Congress prohibited EPA from requiring states to adopt motor vehicle and land use controls.²⁷¹ In 1977, Congress also extended the deadlines for attaining the ambient air quality levels until 1982.²⁷² Nevertheless, Congress retained the NAAQS goals and SIP/FIP implementing structure. Further, Congress imposed significant additional measures to force attainment by the new dates.²⁷³ Congress also enacted more constitutionally sound sanctions to induce states to implement the federal policies²⁷⁴ and

ET AL., *supra* note 27, at 792-95, 810 (noting reductions in ambient lead levels from removal of lead in gasoline, but listing failures to attain by 1989 for other criteria pollutants).

269. See Dwyer, *supra* note 26, at 1199-1208 (discussing state failures to the original SIP provisions, under which EPA required land use and motor vehicle transportation controls if necessary to achieve attainment).

270. See Dwyer, *supra* note 26, at 1199-1208; *Brown v. EPA*, 431 U.S. 99 (1977) (dismissing as moot constitutional challenges to EPA authority to sanction state officials for failing to implement transportation control measures, when EPA rescinded its interpretation that the Clean Air Act authorized such sanctions); *cf. supra* note 8 and accompanying text.

271. See 42 U.S.C. §§ 7410(a)(5)(A), 7410(c)(2)(B) (1982); Dwyer, *supra* note 26, at 1206-07 & nn. 111, 112.

272. See 42 U.S.C. § 7502 (1982) (current version at §§ 7502(a)(2), 7511a (1994)). If all possible extensions were applied for and granted, states had until 1987 to attain the NAAQS for ozone and carbon monoxide. See 42 U.S.C. § 7410(e) (1982) (repealed 1990).

273. See 42 U.S.C. §§ 7501-06 (1982) (current version at §§ 7501-15 (1994) ("Part D")). These controls include requirements for nonuniform, case-by-case NSR preconstruction permits (which impose control technologies more stringent than those required in PSD regions), measures to document and assure progress toward attainment, a prohibition on federal funding for transportation projects that do not conform to specified requirements, and a construction ban in nonattainment areas failing to submit approvable SIPs.

274. See 42 U.S.C. § 7506(b) (1982) (repealed 1990) (authority to prevent transportation project grants upon finding that a state is not implementing a SIP or submitting required SIP revisions); Dwyer, *supra* note 26, at 1196-97.

provided EPA with authority to "call" for revision of inadequate SIPs.²⁷⁵

As discussed above, Congress also adopted requirements to protect states from emission externalities that would contribute to violations of the federal ambient standards. States had to adopt provisions in SIPs controlling stationary sources from emitting amounts that would "prevent attainment or maintenance" of the NAAQS or "interfere" with PSD measures in other states. States also could petition EPA to determine that major sources would cause such effects.²⁷⁶

These measures again were insufficient to achieve the NAAQS. This subsequent failure resulted from state resistance to "forced federal requirements," based on sovereignty concerns and a lesser commitment than the nation as a whole to the federal norms.²⁷⁷ EPA proved reluctant to impose sanctions on states for failing to submit revised SIPs by the dates required.²⁷⁸ EPA also attempted to conciliate disputes and imposed sanctions only when it became clear that states were not acting in good faith to implement the requirements.²⁷⁹

EPA adopted additional strategies to avoid assuming the administrative burdens and political costs of disapproving SIP revisions and of issuing FIPs. EPA "conditionally approved" SIPs that did not

275. See 42 U.S.C. § 7410(a)(2)(H) (1982) (current version at 42 U.S.C. § 7410(k)(5) (1994)).

276. See 42 U.S.C. § 7410(a)(2)(E) (1982) (current version at 42 U.S.C. § 7410(a)(2)(D) (1994)). EPA originally interpreted the petition provision to protect against interference with state standards, which was upheld in dicta as a permissible interpretation by one federal court of appeals. EPA later abandoned this interpretation. See *supra* note 166; *Connecticut v. EPA*, 656 F.2d 902, 910 (2d Cir. 1981). These provisions may be explained as: (1) shoring-up second-best regulatory strategies to interstate externalities; (2) requiring meaningful allocation of interjurisdictional externalities above a significance threshold established by federal legislation; or (3) strategic and symbolic legislation through which Congress could avoid accountability for failing to allocate externalities. See *supra* notes 159-81 and accompanying text.

277. See Dwyer, *supra* note 26, at 1209 & n.128 (quoting a report of the General Accounting Office attributing state recalcitrance to resentment over federal intrusion, disagreement over the effectiveness and efficiency of the measures, and the expectation of further congressional backsliding).

278. See *id.* at 1209-10 (describing EPA reluctance to impose sanctions). Further, EPA under Administrator Ruckelshaus withdrew efforts under Administrator Gorsuch to sanction states for failure to attain the NAAQS, which had been favored because they might provoke a public backlash leading to repeal of the legislation. See Schoenbrod, *supra* note 105, at 769 & n.166; *cf. id.* at 775 (discussing EPA's limited use of sanctions authority following the 1977 Amendments due to fear of legislative repeal).

279. See Dwyer, *supra* note 26, at 1211 & n.140. The EPA policy to defer sanctions arguably exceeded its statutory authority. See *id.* at 1209-10.

contain the required controls, but promised to adopt them within a short time.²⁸⁰ EPA then refused to make findings that the SIPs were not being carried out.²⁸¹ EPA also failed to disapprove SIPs and approved SIPs that failed to contain adequate controls. EPA reversed its earlier policies in this regard, to avoid having to write FIPs.²⁸² Even when it disapproved SIPs, EPA delayed promulgating FIPs until subject to court order and then sought and took additional time.²⁸³

Similarly, EPA adopted numerous policies to avoid making politically unpopular decisions to restrict externalities. EPA effectively nullified the provisions by rejecting long-range pollutant transport models as inaccurate, by refusing to address transformation of pollutants in the environment, by failing to issue standards that would have restricted transboundary flows of specific pollutants, and by eliminating from consideration the cumulative impacts of multiple sources in the upwind state upon the ambient quality in the downwind state.²⁸⁴

Further, EPA interpreted the externality standards: not to apply unless there was a violation of the NAAQS or PSD increments; to require a "significant" contribution to exceeding the NAAQS in

280. *See, e.g., Arizona v. Thomas*, 824 F.2d 745 (9th Cir. 1987) (upholding EPA's decision to disapprove Arizona's revised SIP submitted in 1987, following earlier EPA conditional approval of Arizona SIP revisions and subsequent failure to meet the conditions or attain by 1982 for carbon monoxide). In 1990, Congress ratified EPA's authority to conditionally approve SIPs. 42 U.S.C. § 7410(k)(4) (1994).

281. *See, e.g., American Lung Ass'n v. New Jersey*, 871 F.2d 319, 321 (3rd Cir. 1989) (after state and EPA were sued to force the state to adopt controls required by conditions of the approved SIP, EPA joined with plaintiffs to condemn the state failure).

282. *See, e.g., Delaney v. EPA*, 898 F.2d 687, 691-92 (9th Cir. 1990) (invalidating EPA's approval of Arizona's SIP revisions submitted following *Arizona v. Thomas*, 829 F.2d 834 (9th Cir. 1987) because Arizona had not met EPA's requirement to demonstrate imposition of all reasonably available control measures and "possible measures" to assure "the most expeditious [attainment] date beyond 1987."); *Abramowitz v. EPA*, 832 F.2d 1071 (9th Cir. 1987) (ordering EPA to reject the submitted control measures of the Los Angeles area SIP, which would not attain the carbon monoxide and ozone NAAQS by 1987, when EPA refused to take action; the disapproval triggered EPA's requirement to develop a FIP).

283. *See, e.g., Coalition for Clean Air v. Southern California Edison Co.*, 971 F.2d 219 (9th Cir. 1992) (following *Abramowitz*, plaintiffs sued to force EPA to issue a FIP; the parties settled in 1989; EPA sought an extension which the district court allowed; the Ninth Circuit reversed, finding that the 1990 Amendments did not relieve EPA of the preexisting obligation). EPA finally issued the required FIP in 1994, which goes out of its way to provide for replacement by state controls that may be adopted in the future. *See Approval and Promulgation of State and Federal Implementation Plans*, 59 Fed. Reg. 23,264 (1994). The FIP and SIP controls will not attain the NAAQS for many years, if at all.

284. *See Revesz, supra* note 159, at 2373-74 (citing numerous cases).

downwind jurisdictions; and to shift to upwind states the full burden of removing any "but-for" contribution to a violation and some additional amount needed to preserve margins of growth in the downwind state. EPA failed to identify how it would balance the numerous comparison criteria that it found to guide determinations of significance, and refused to find a significant contribution whenever EPA considered the question. EPA also rejected the use of models that purported to demonstrate causation.²⁸⁵

In 1990, Congress again extended the deadlines. This time, Congress distinguished between nonattaining areas based on the severity with which they exceeded the various NAAQS.²⁸⁶ For example, for each of the classes of ozone nonattainment areas, Congress provided a graduated series of additional control measures to be included in SIP revisions and specified timetables for submitting such revisions.²⁸⁷

The 1990 Amendments also created additional measures to make more efficient the long-delayed transition to the NAAQS and provided additional measures to protect the SIP controls from interjurisdictional pollution transport problems.²⁸⁸ Congress clarified the procedures for EPA review of SIPs, and provided additional time for states to attain if they failed to adopt approvable SIPs or failed to

285. See *id.* at 2372-74.

286. See 42 U.S.C. §§ 7501-7515 (1994); MENELL & STEWART, *supra* note 27, at 345-51.

287. See 42 U.S.C. §§ 7511, 7511a (1994); MENELL & STEWART, *supra* note 27, at 345-51.

288. For example, Congress enacted the tradeable permit system for various criteria pollutants that cause acid rain. See 42 U.S.C. §§ 7651-7651o (1994); *supra* note 175. The marketable permit scheme may reduce the cost of transitions to achieving the NAAQS and thus may more quickly achieve desired ambient quality levels, but does not alter the dates (well past due for many jurisdictions) for such attainment. See 42 U.S.C. § 7651b(f)(1994). Similarly, Congress established interstate commissions to assist achievement of ambient quality by improving cooperation to limit spillovers, but such authority does not impair the existing obligations of areas to attain the NAAQS. See 42 U.S.C. § 7506a (1994); *supra* note 181.

attain the NAAQS.²⁸⁹ Congress also adopted new strategies to deal with spillovers that contributed to NAAQS violations.²⁹⁰

Congress provided EPA with additional discretionary and mandatory sanctions authority.²⁹¹ It also required EPA to impose at least one of the possible sanctions within 18 months of the relevant finding, and both sanctions if the state did not act in good faith to adopt or implement the requirements.²⁹²

Although the additional controls have induced many states to improve their air quality, many other states still will not attain the NAAQS by the dates required.²⁹³ States are refusing to implement the federal directives,²⁹⁴ and EPA again is refusing to sanction

289. See 42 U.S.C. §§ 7410(a), (c), (k) (1994). For example, upon a determination by EPA that a state has not attained the NAAQS for ground-level ozone in the required time, the state automatically is reclassified into the next level of nonattainment. This requires the state to submit a revised SIP containing additional controls. See 42 U.S.C. § 7511(b) (1994). EPA's determination of nonattainment is to be made within six months of the applicable attainment date. See *id.* If the state continues to fail to attain the NAAQS, it must submit increasingly stringent revised SIPs, thereby gaining additional time. If after twenty years it still has not attained the NAAQS, the state returns to the beginning and repeats the cycle (perhaps indefinitely). See 42 U.S.C. §§ 7502(a), 7509(d)(1)&(3), 7410(k) (1994). Added deadline complexities occur if EPA does not make the required determinations of nonattainment within the six months, if states do not submit the required revisions within one year, and if EPA does not make the required completeness and approval determinations on the revisions within six months and one year, respectively. Further, EPA may conditionally approve plan revisions, in whole or in part. See § 7410(k)(3)&(4) (1994).

290. See *supra* notes 181-82 and accompanying text.

291. See 42 U.S.C. §§ 7410(m), 7509(a)(1)-(4) (1994). Sanctions may not be imposed statewide for at least 24 months, when multiple political jurisdictions within the state contribute to the failures. See 42 U.S.C. § 7410(m) (1994).

292. 42 U.S.C. § 7509(a) (1994). The 18 months provides a safe harbor for states if they cure their failures. See *id.*

293. See Lee, *supra* note 5, at A4 ("fifty-five of the 98 areas that fell below federal standards for ozone in 1990 now meet them."); *Several States Make Little or No Progress In Meeting Air Act Requirements, Report Says*, 26 *Env't. Rep. (BNA)* 1286 (Dec. 1, 1995) ("At least five states are making little or no progress [in reducing air pollutants] and will not meet the deadlines set by the Clean Air Act Only three states . . . were described as steadily making progress and 'on track to meet the public health standards by the deadlines in the Clean Air Act'").

294. See Dwyer, *supra* note 26, at 1211-14. States were required to submit to EPA by November 1994 "attainment plans" for ozone nonattainment areas that would include modeling demonstrations that emissions reductions would result in attainment by the relevant dates and rules that would assure the reductions were achieved. In September 1994, EPA abandoned strict compliance with the requirements. See John Seitz, Director Office of Air Quality Planning and Standards, U.S. EPA, November 1994 Submittal Policy, Sept. 1, 1994. More recently, EPA has adopted "an alternative approach to provide States flexibility in their planning efforts for ozone nonattainment areas classified as serious and above." Mary Nichols, Assistant Administrator for Air, U.S. EPA, Ozone Attainment Demonstrations 1, March 2, 1995, at 1 (also noting "unavoidable delays in rule development by the States.") (emphasis added).

states, to disapprove SIPs and to provide FIPs in order to achieve the required controls.²⁹⁵ EPA also has retracted many policies in order to accommodate states that believe that they can avoid sanctions.²⁹⁶ However, EPA has recently indicated that it may issue a SIP-call to require states to address ozone transport in order to reduce NAAQS violations.²⁹⁷

Finally, EPA has recently proposed to make more stringent the NAAQS for ozone and particulate matter.²⁹⁸ Although EPA has proposed to retain the requirements to achieve the existing NAAQS levels for at least five years, EPA is considering allowing states to "be freed from the most looming deadlines and . . . instead be asked to turn their attention toward meeting the revised standard."²⁹⁹ EPA has indicated that it will not penalize states during the five year implementation period for failing to achieve the NAAQS for ozone by the deadlines required by the statute, which have expired or will expire during that period.³⁰⁰

295. See Dwyer, *supra* note 26, at 1211-16. EPA has also adopted a policy that allows states to avoid "mandatory" sanctions for inadequate SIP revisions. EPA originally proposed relatively stringent policies interpreting the sanctions provisions. See Criteria for Exercising Discretionary Sanctions Under Title I of the Clean Air Act, 57 Fed. Reg. 44,534 (1992) (discretionary sanctions under 42 U.S.C. § 7410(m)(1994)); Application Sequence for Clean Air Section 179 Sanctions, 58 Fed. Reg. 51,270 (1993) (mandatory sanctions under 42 U.S.C. § 7509(a)(1994)). EPA's final rule for mandatory sanctions, however, allowed states to "reset the clock" for another 18 months after EPA first identifies the SIP revision as deficient, if they provide a new "complete" SIP revision, even if EPA subsequently disapproves the revision as inadequate. See Selection of Sequence of Mandatory Sanctions for Findings Made Pursuant to Section 179 of the Clean Air Act, 59 Fed. Reg. 39832, 39837-52 (1994). Thus, a state may always avoid the mandatory sanctions simply by submitting a new but inadequate revised SIP. EPA's policy was upheld as required by the statute. See *Natural Resources Defense Council, Inc. v. Browner*, 57 F.3d 1122, 1123-25 (D.C. Cir. 1995) (noting the complexities of timing in the SIP revision and approval processes).

296. See *supra* note 5; Dwyer, *supra* note 26, at 1213-14, 1216 (discussing EPA's "compromise" with California on automobile inspection and maintenance provisions, EPA's agreement to provide greater flexibility following the 1994 elections, and the response of other states to delay submissions or to submit plans that EPA previously claimed it would not approve prior to EPA's changes in policy).

297. See *supra* note 181.

298. See National Ambient Air Quality Standards for Ozone: Proposed Decision, 61 Fed. Reg. 65,716 (1996); National Ambient Air Quality Standards for Particulate Matter: Proposed Decision, 61 Fed. Reg. 65,638 (1996).

299. *In New Interim Implementation Policy EPA Moves to Accommodate State Concerns Over Tight NAAQS Deadlines*, 17 INSIDE E.P.A. WEEKLY REPORT, Nov. 29, 1996, at 12.

300. See *id.*

Decentralized implementation has to date been somewhat more successful in regard to PSD requirements.³⁰¹ The relative success may have resulted because the requirements are simpler and impose fewer costs than for nonattainment³⁰² or because states achieving the NAAQS may be more likely to share a commitment to the federal norms.³⁰³ Nevertheless, some elements of the PSD program were long delayed by EPA.³⁰⁴

3. *The Centralized NSPS And NESHAP Requirements.* Following the 1970 enactment, EPA issued only a few NSPS. As a result, Congress in 1977 required EPA to issue numerous additional NSPS by 1982 for categories of major sources that were significant contributors of air pollution.³⁰⁵ EPA again failed to issue the additional NSPS in the time required, although it eventually issued the majority of the NSPS on its "Priority list," and Congress in 1990 required EPA to propose to issue many more NSPS by specific dates.³⁰⁶ EPA has not yet proposed to issue many of the additional NSPS as required by the 1990 Amendments.³⁰⁷ Nevertheless, EPA has been relatively productive in issuing NSPS, at least compared to its pre-1990 record in promulgating NESHAPs.

EPA strongly resisted the congressional mandate to establish ambient standards for hazardous air pollutants, preferring to adopt technology-based standards.³⁰⁸ This was true even though EPA was

301. See Oren, *supra* note 27, at 10-12, 47-114 (finding little evidence of new significant deterioration beyond existing PSD increments, but raising concern over potential for future deterioration of quality).

302. See Novello Letter, *supra* note 253, at 4; but see Oren, *supra* note 27, at 113-14 (noting complexities of current provisions to prevent deterioration and the refusal of Congress and of EPA to adopt a simpler and more effective control regime).

303. See *supra* note 104 and accompanying text.

304. EPA was required to determine by 1979 increments for pollutants that were not specified by the statute, but substantially delayed issuing the additional limitations. See *Sierra Club v. Thomas*, 658 F. Supp. 165 (N.D. Cal. 1987).

305. See 42 U.S.C. § 7411(f) (1994); Revisions to the Priority List of Categories of Stationary Sources, 47 Fed. Reg. 950, 951 (1982).

306. See 42 U.S.C. § 7411(f) (1994); 40 C.F.R. 60.16 (1996).

307. See Regulatory Agenda, 60 Fed. Reg. 23,928, 24,012 (1995) (by 1992, EPA had not proposed any of the remaining 19 categories of NSPS; EPA entered into a partial consent decree in 1993).

308. See Dwyer, *supra* note 27, at 269-76 (describing EPA efforts to employ technology standards for specific pollutants applicable to categories of significant sources of such pollutants, in order to avoid the political and economic costs of the moral commitment established by the NESHAP provision); *Natural Resources Defense Council, Inc. v. EPA*, 824 F.2d 1146 (D.C. Cir. 1987) (en banc) (invalidating EPA standards based on technology and cost considerations,

placed under numerous court ordered deadlines to issue such standards.³⁰⁹ In fairness to EPA, Congress imposed unreasonably short deadlines for such a technically difficult and politically sensitive task.³¹⁰

EPA's reluctance to impose ambient health standards in 1990 led Congress to change its presumptive approach for NESHAPs to technology based controls, requiring health based regulation eight years after imposing the technology controls if they do not prove adequate under the 1970 health-based standards and Congress does not further amend the Act.³¹¹ If EPA failed to issue technology standards in the required time, however, states would be obligated to impose case-by-case technology controls on certain sources once they received approval for operating permit programs.³¹²

requiring EPA to specify threshold levels of pollution that protect public health).

309. See Dwyer, *supra* note 27, at 250-76. Numerous court challenges to EPA's failure to issue NESHAPs were successful and in one case resulted in a contempt citation against EPA. See *id.* at 261 & n. 120, 271 & n.171.

310. See *id.* at 277 & n.190, 278-80. By removing consideration of costs, Congress required EPA to evaluate only the benefits of health reductions (benefit-effectiveness analysis), increasing the significance of the disputed measures of health protection values. Cf. *supra* note 57. Further, Congress prevented regulation based on utilitarian considerations and required EPA to establish deontological rights. EPA simply was not well suited for resolving non-technical moral disputes.

311. See 42 U.S.C. §§ 7412(d), (f) (1994) (uniform, technology based controls imposed by category of source and potential additional ambient controls).

312. See 42 U.S.C. § 7412(g)(2) (1994). If a state failed to submit an operating permit program within three years, or EPA had not approved such a program within an additional two years, EPA was required to promulgate a federal operating permit program for such state, and thus to impose the case-by-case technology controls. See *id.*; 42 U.S.C. § 7661a(d) (1994). EPA recently issued final rules for the federal operating permit program. See Federal Operating Permits Program, 61 Fed. Reg. 34,202 (1996). EPA has provided interim authorization to many state operating programs pursuant to the final state permit program rules that EPA previously issued. See Operating Permits Program, 57 Fed. Reg. 32,250 (1992). EPA also has proposed to amend the state permit program rules to simplify procedures for revising permits. See Operating Permits Program Rule Revisions, 59 Fed. Reg. 44,460 (1994); Operating Permits Program and Federal Operating Permits Program, 60 Fed. Reg. 45,530 (1995). In general, these provisions would help to reduce the complexities and costs of dual permitting. See *supra* notes 1321-354 and accompanying text. Finally, EPA has adopted a sanctions policy for failing to submit approvable operating permit programs similar to the approach it adopted for sanctions for failure to submit approvable SIPs to attain the NAAQS by the dates required, requiring 18 months to expire from the time a complete submission was due or from the date that EPA disapproves a state's submission, and allowing states to avoid sanctions by (re)submission during that period. See *supra* note 295; John S. Seitz, Director Office of Air Quality Planning and Standards, U.S. EPA, Sanctions Policy For State Title V Operating Permits Programs, Mar. 15, 1995; John S. Seitz, Director Office of Air Quality Planning and Standards, U.S. EPA, Update to Sanctions Policy For State Title V Operating Permits Programs (1995). In the later guidance, EPA clarified that it did not intend to create a higher threshold for avoiding sanctions when

EPA has not issued the required technology standards on time and has revised some proposed standards to be more flexible.³¹³ EPA also made more flexible its regulations to delegate air toxic programs in response to political resistance from states concerned about interference with their existing programs.³¹⁴ Following substantial pressure from regulated entities³¹⁵ and from states,³¹⁶ EPA also reinterpreted (arguably rewrote) the statutory provision for states to issue case-by-case technology standards before EPA issues

EPA disapproves submission of a partial program than when it disapproves submission of a complete program.

313. See *Sierra Club v. Browner*, No. 95-627 (D.D.C. 1995) (consent decree to issue § 112(d) standards); National Emissions Standards for Hazardous Air Pollutants for Source Categories; Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry and Other Processes Subject to Negotiated Regulation for Equipment Leaks, 59 Fed. Reg. 19,402 (1994). Litigation over the rule has led to amendments, including provisions for further extensions before the compliance date of April 1997. See, e.g., National Emission Standards for Hazardous Air Pollutants for Source Categories; Organic Hazardous Air Pollutants from the Synthetic Organic Chemical Manufacturing Industry and Other Processes Subject to the Negotiated Regulation for Equipment Leaks; Rule Clarifications, 62 Fed. Reg. 2722 (1997).

314. See Approval of State Programs and Delegation of Federal Authority, 58 Fed. Reg. 29,296 (1993); Approval of State Programs and Delegation to Federal Authorities, 58 Fed. Reg. 62,262 (1993); *supra* note 221 and accompanying text. State air toxics programs have tended to be based on ambient levels, set by reference to industrial exposure limit or other risk data. See DAVID P. NOVELLO, *THE NEW TITLE III AIR TOXICS PROGRAM* 45 (1994). The pollutants and sources regulated vary widely from state to state. States continue to support additional ambient controls, notwithstanding the new federal technology controls and ultimate residual risk determinations. See *id.* at 47. EPA's delegation rule issued under § 112(l), allowed states to "adjust" or "substitute" for technology-based NESHAPs, but only if the state controls are demonstrated to be at least as stringent and if state programs are expressed in measures demonstrating equivalence. See *id.* at 47-48. EPA's delegation rule was subsequently challenged by environmental groups who claimed that the rule authorized delegation when state rules would be less stringent than federal rules and before state rules might take effect. In contrast, regulated entities argued that the rule allowed EPA to delegate authority to impose more stringent conditions, which was beyond EPA's statutory authority and was unconstitutional on legislative delegation and unitary executive grounds. Cf. *supra* note 145. The suit was dismissed for lack of standing and of prudential ripeness. *Louisiana Environmental Action Network v. Browner*, 87 F.3d 1379, 1381-84 (D.C. Cir. 1996).

315. EPA's approval of Washington's operating permit program was challenged by an industry petition, claiming that such approval would trigger case-by-case technology requirements without adequate guidance regarding how the standards were to apply, thereby denying due process of law. See *EPA to Delay Implementation of Air Toxics Rule for Plant Modifications*, INSIDE EPA'S CLEAN AIR ACT REPORT, Jan. 12, 1995, at 3.

316. See *EPA Releases Interpretive Guidance on 112(g) Requirements*, INSIDE EPA'S CLEAN AIR ACT REPORT, Feb. 23, 1995, at 16. An association of state and territorial governments sent a letter to EPA indicating how its proposed rule would interfere with existing state air toxic control programs, and would impose huge implementation costs that state agencies lacked the resources to bear. See *States, Industry Disagree over Use of Offsets*, INSIDE EPA'S CLEAN AIR ACT REPORT, Aug. 24, 1995, at 5.

— or if EPA fails to timely issue — national standards, further delaying implementation.³¹⁷

C. *Conclusions To Be Drawn From The Implementation History*

1. *Regulatory Failures and Congressional Responses.* The history of implementing these provisions indicates substantial friction and resistance by states, EPA, and the regulated community to implementing the immensely costly requirements of the Clean Air Act, thereby requiring substantial expenditure of regulatory oversight resources and imposing costly litigation. In part, the resistance to implementation has resulted from the willingness of Congress to delegate implementa-

317. Originally, EPA indicated that states were required to issue case-by-case determinations of maximum available control technology (MACT) when issuing permits to “modified,” “constructed,” or “reconstructed” major sources of hazardous air pollutants following approval of state or federal operating permit programs. See John Seitz, Director Office of Air Quality Planning and Standards, U.S. EPA, Guidance for Initial Implementation of Section 112(g), June 28, 1994. EPA later indicated that 42 U.S.C. § 112(g) (1994) would not apply until EPA issued a rule clarifying the nature of the “major sources” and “modifications” to which the MACT determinations would apply and that EPA would restrict the scope of modifications in its final rule, thereby further delaying imposition of technology standards. See Hazardous Air Pollutants: Provisions Governing Constructed, Reconstructed, or Modified Major Sources: Interpretive Notice, 60 Fed. Reg. 8,333 (1995); *EPA to Repropose Draft 112(g) Air Toxics Rule by September 15*, INSIDE EPA’S CLEAN AIR ACT REPORT, Aug. 10, 1995, at 3 (discussing testimony of EPA Assistant Administrator Mary Nichols regarding regulatory directions). EPA subsequently re-proposed and finalized a rule to implement section 112(g), which limited the requirement for case-by-case MACT determinations to newly constructed or reconstructed sources, extended the compliance dates for states to impose the requirements, and eliminated requirements for modified sources in order to provide greater certainty to regulated entities. Proposed Requirements for Control Technology Determinations for Major Sources in Accordance with Clean Air Act Section 112(g), 61 Fed. Reg. 13,125 (1996); Hazardous Air Pollutants: Regulations Governing Constructed or Reconstructed Major Sources, 61 Fed. Reg. 68,385, 63,386-87 (1996). Significantly, EPA’s position was based on the problem that EPA’s determination of a “major source” was simultaneously being subjected to legal challenge. Absent further deferral, EPA would have required states to issue case-by-case MACT determinations for sources that might not later be considered “major.” In fact, the U.S. Court of Appeals for the District of Columbia Circuit remanded EPA’s determinations regarding federally enforceable conditions that might limit the “potential to emit,” which thereby defines which facilities are major sources. See *National Mining Ass’n v. EPA*, 59 F.3d 1351 (D.C. Cir. 1995); John Seitz, Director Office of Air Quality Planning and Standards, U.S. EPA, Release of Interim Policy on Federal Enforceability of Limitations on Potential to Emit, Jan. 22, 1996; John Seitz, Director Office of Air Quality Planning and Standards, U.S. EPA, Release of Interim Policy on Federal Enforceability of Limitations on Potential to Emit, June 28, 1996. EPA similarly extended the section 112(j) deadline for the requirement for major sources to seek case-by-case MACT determinations 18 months after EPA failed to promulgate a timely MACT standard. See Hazardous Air Pollutants; Amendment to Regulations Governing Equivalent Emission Limitations by Permit, 61 Fed. Reg. 21,370, 21,371 (1996).

tion to EPA and from the supermajoritarian blocking ability and other influence exercised by states in the Congress.³¹⁸

The fewest implementation problems may have resulted from the uniformly preemptive technology forcing motor vehicle requirements. But those requirements addressed only a single industry and dealt with product regulation that allowed the economic market rather than regulators to allocate the costs among jurisdictions (car producers who may pass on those costs to owners located in different states). The requirements more closely matched the regulatory "jurisdiction" to the regulated institutions (and indirectly to the sources of political value) that create pollution.³¹⁹ The requirements were achieved within a few years of the dates initially specified by Congress, even though the original goals might be viewed as strategically symbolic and even though Congress subsequently delayed the compliance dates.

In contrast, the greatest implementation problems may have resulted from interstate externality provisions. Those provisions required regulators to allocate control costs and benefits among jurisdictions (firms located in different states). EPA consistently refused to implement a tailored allocation regime and rendered the provisions largely ineffectual.

Issuance of the NSPS as directed by Congress also was delayed. Given the paucity of standards issued compared to the original legislative goals, it is at least debatable whether presumptively decentralized technology-based standard setting would have achieved more effective and efficient results. Economies of scale may exist at either the federal or state level for such technology standards. The existence of net scale economies depends on whether the federal regulations tailored to categories of industry sources will reduce otherwise repetitive state efforts more than they fail to utilize existing state expertise. Similar uncertainties exist regarding standard setting under the ambient and technology based NESHAP provisions, which

318. Cf. Schoénbrod, *supra* note 38, at 1226 ("Practice shows, however, that delegates are often less capable than Congress of resolving the political conflicts in an issue. Delegation can set in motion a protracted game that frustrates statutory goals. For example, my own analysis of the Clean Air Act [*supra* note 105] suggests that government is sometimes less able to cope with delegation than without it.") (emphasis in original).

319. See *supra* note 56. Again, this excludes the concerns of citizens who either do not own cars or who would prefer to restrict car use by others. The result is the specification of an efficient transition regime regarding costs but the absence of any transition regime regarding benefits. See *supra* notes 176-77 and accompanying text. Was it efficient or good policy?

(in the case of ambient standards) were more substantially delayed when compared to the legislative goals.

For both the NSPS and the NESHAPs, there is little or no data from which to determine whether EPA improperly delegated implementing authority or whether fully centralizing implementation would be more efficient. Similarly, although EPA has attempted to avoid imposing technology standards that interfere with state programs, there is little data from which to evaluate whether preempting state requirements would be preferable to the existing implementation structure.

Centralized standard setting under the PSD requirements also has been delayed in regard to certain pollutants, but presumptively decentralized implementation has generally been successful. In contrast, extreme resistance to accomplishing the NAAQS resulted from decentralized establishment of control measures. Whatever the benefits of such federal standards may have been,³²⁰ and without regard to whether EPA would have done better, the presumptively decentralized implementation of the NAAQS has been an abysmal failure when measured by the original and subsequent legislative goals.

Unfortunately, the history of implementing the Clean Air Act does not provide sufficient data adequately to compare the relative efficiency or effectiveness of field preemptive standards and preemptive minimum standards implemented presumptively by states or by EPA.³²¹ But the history does demonstrate that Congress has presumptively chosen centralized or decentralized implementation principally based on recognition of cold political realities and by making highly debatable assumptions regarding relative efficiency without performing any comparisons of initial or potential institutional

320. The federal regulatory efforts are generally recognized as having resulted in substantially improved ambient air quality or at least as having prevented substantial deterioration of quality that would otherwise have resulted in an expanding economy. See generally Robert Melnick, *Pollution Deadlines and the Coalition for Failure*, 75 PUB. INTEREST 123 (1984). This should be unremarkable, since the federal government provided substantial financial inducements and imposed or threatened to impose sanctions if states did not improve their environmental quality. But it does not demonstrate whether: (1) wholly federal strategies would have achieved substantial greater reductions at lower costs; (2) more effective coercion of states would have done so; or (3) state strategies in the absence of federal regulation would have done so.

321. This brief history also did not address the extent to which federal funding and research may have resulted in economies of scale. But such measures do not impose compliance obligations or allocate costs and thus are less likely to result in significant normative disputes.

competence. In part, Congress based its approaches on scientific assumptions that have often proven invalid and on perceived institutional regulatory advantages that are likely unprovable. The rationales for federal regulation thus are valid, but the presumptive choices of federal or state implementation do not always match the rationales and reflect highly debatable value choices in the absence of empirical information.

In two cases, however, Congress significantly altered its implementation strategy. In regard to implementing the NAAQS, Congress in 1974 rescinded EPA's authority to impose land use and transport controls to attain the NAAQS. If the NAAQS were not already strategically symbolic by reflecting goals that the 1970 Congress did not believe, this action may have rendered the NAAQS strategically symbolic by removing authority needed to attain the goals on time and by dramatically increasing the costs of attainment.³²² Alternately, given the normative commitments of the public to the automobile and to housing patterns and given citizen sensitivity (as voters) to the serious transition costs, the prohibition may be considered an efficient response to the applicable measure of value and a practical instrumental strategy — when combined with the additional control measures imposed by Congress — to better achieving the elusive ambient air quality goals.³²³ The normative debate has no principled resolution without consensus over the measures of value.³²⁴

Second, in regard to the NESHAPs, Congress shifted its presumptive approach from ambient to technology standards in 1990. But Congress preserved authority for EPA to impose ambient controls in the future, when the incremental costs of any such regulation will be substantially reduced.³²⁵ Again, two normative accounts are possible. In response to widespread resistance, Congress withdrew protection and inefficiently allowed "excessive" levels of pollution "inefficiently" to continue into the indefinite future.

322. See Dwyer, *supra* note 26, at 1206.

323. See *supra* note 76; cf. Craig N. Oren, *Clearing the Air: The McCubbins-Noll-Weingast Hypothesis and the Clean Air Act*, 9 VA. INT'L. L. J. 45, 53 & n.44 (1989) (arguing that public support for environmental measures decreased after the oil shocks of the middle 1970s); RALPH NADER, *UNSAFE AT ANY SPEED* (1965) (challenging the American love affair with a particularly risky automobile as irrational given the number of people killed).

324. Significantly, substantial debate exists regarding the costs and benefits of the current proposal to make the NAAQS for ozone and particulate matter more stringent. See *supra* note 298 and accompanying text.

325. See *supra* note 106 and accompanying text.

Alternatively, Congress prudently adopted an “efficient” strategy to reduce the costs of excessive health-based pollution reduction, which was not “justified” by the ambient levels.

We will have only a few years to wait before we will see to which account EPA adheres. We can be certain that a vigorous debate over the cost-benefit analyses will ensue. But Congress did not change its presumptive reliance upon EPA to implement the requirements.

2. *Retention of the Goals of the Clean Air Act.* Notwithstanding the incredible resistance to implementation, and except in regard to the NAAQS provisions described above, Congress has not yet repealed in any significant measure the goals or controls of the Clean Air Act.³²⁶ When amending the Act, Congress did not retrospectively repeal judicial injunctions compelling EPA to effectuate centralized requirements that EPA had refused to implement. Congress also did not repeal injunctions compelling EPA to undertake the backup regulation required by cooperative federalism approaches.³²⁷

In general, congressional response to implementation failure has been to preserve the goals, to provide additional time for compliance, and to impose additional control measures and sanctions — burdened by unimaginably complex procedures and tremendous administrative discretion — in order to force recalcitrant states and EPA to implement the requirements. Many states have failed to respond to congressional prodding and have overtly refused to impose controls adequate to achieve federal goals by the dates required. Such refusal is unsurprising, given EPA’s reluctance to impose sanctions for nonattainment, which in large part was due to defunding threats and other powers exerted by states in Congress. EPA has also failed to implement Congress’s directives in a timely fashion and has gone out of its way to avoid withdrawing state authority or to delegate federal authority in order to avoid the burdens of regulation.³²⁸

The consequences of state and EPA failures are dramatic. High costs are imposed on society from regulatory confusion and litigation to force long-delayed bureaucratic action, as well as from lost health and environmental protection benefits caused by delay. In contrast, when evaluated by state-level values or other norms, the costs of

326. Compare *supra* notes 4-5 and accompanying text with *supra* note 162.

327. See *supra* notes 261-317 and accompanying text.

328. See *id.*

imposing the symbolic federal goals are excessive and delay or nonacquiescence is thus efficient and welfare-enhancing. Ultimately, the implementation history suggests that the success or failure of the Clean Air Act is a normative and not an empirical claim.³²⁹

Unless Congress imposes sanctions to induce states to regulate that EPA cannot effectively rescind, states will continue to provide levels of environmental quality lower than the stated federal goals. Similarly, unless Congress further restricts discretion from EPA and provides additional funding to accomplish its mandates, EPA will continue to avoid or will remain unable to accomplish the federal goals. If Congress does not intend to impose the measures needed to attain the goals in the face of certain future resistance, Congress should likely repeal the goals. Congress may then avoid enacting strategically symbolic legislation purportedly justified as efficient, social-welfare enhancing, or moral. This will at least provide citizens with a political target if they in fact believe that the repealed legislation meets such descriptions. Conversely, unless and until Congress repeals those goals, citizens should demand additional measures to reduce the transition costs in order to achieve purportedly efficient, social-welfare enhancing, or moral policies that are reflected in the federal goals.³³⁰ And in making these political judgments, we must always consider the role that the values of unelected federal judges play in shaping the public's values and in designing efficient transition regimes.³³¹

IV. THE CONTINUING FEDERAL REGULATORY "IMPERATIVE"

The previous sections have demonstrated: (1) that states possess no rights to specify their own policies or to implement federal ones; (2) that value disputes among the citizens of different subsidiary (state) jurisdictions are resolved through national political processes; (3) the continuing validity of the numerous theoretical rationales to support preemptive federal legislation; (4) the tremendous normative disputes that underlie application of these rationales in the absence of empirical information; (5) how those rationales grounded enactment and implementation choices for federal environmental regulatory policy; and (6) the tremendous resistance to implementation of

329. See *supra* notes 61, 166 and accompanying text.

330. See *supra* notes 228-30 and accompanying text.

331. See *supra* notes 213-17 and accompanying text.

federal policy that results when states do not share normative commitment to the federal regulatory goals. Given the high costs of federal regulation and of normative conflicts, it is worth asking again whether federal regulation is justified and who makes that judgment.

A. *Current Political Preferences*

To reiterate, any determination of the relative value of federal or state regulation and implementation will necessarily be a political judgment evaluated by national evaluative norms. These judgments must be made in national political processes that impose or rescind preemptive legislation subject to supermajoritarian representation requirements. The critical questions are: (1) what information exists to reveal the preferences of all relevant citizens; (2) whether those preferences are honestly and intelligently held; and (3) what philosophical analysis can be provided to demonstrate that honestly and "intelligently" held preferences are rational and moral.³³² We must therefore ask first whether the federal regulations that exist and provide the measure of value currently reflect widely shared evaluative norms and whether the evaluative norms reflect value errors.³³³

Because we lack self-evident measures of value, it is common to ask whether the initial determinations underlying federal legislation were based on erroneous political assessments of public values and whether values or conditions have dramatically changed. Our empirical indicators of past and present political norms are the self-reported statements of citizens in public opinion polls (contingent valuations of policies and politics) and "market" preferences expressed through voting for federal legislators and the President.³³⁴

Public opinion polls regarding the environment show a remarkable consistency over time. Thus, they tend to contradict claims that enactment of preemptive legislation was strategically symbolic due to the failure of legislators to assess properly citizens' political preferenc-

332. See *supra* notes 31, 230-31 and accompanying text.

333. See *supra* notes 201-17 and accompanying text.

334. See MENELL & STEWART, *supra* note 27, at 1192-93 (discussing the requirement of economic theory for markets or imputed market proxies to reveal preferences or values). I focus here on the two most direct measures of citizen preferences for legislation, *i.e.*, their self-reported statements and the products of their voting behavior. Other "market proxies" exist, such as substitution effects from ecolabelling, boycotts, and organized political protests, etc. Even labelling such actions as "market proxies," however, may do injustice to the inherently political nature of value.

es.³³⁵ They also fail to demonstrate that the current populace no longer supports existing federal laws.³³⁶

The remarkable stability of federal environmental laws, notwithstanding the 1994 election, also contradicts claims that public opinion has significantly changed.³³⁷ Following widespread resistance to implementing the federal controls, highly significant provisions of the 1970 Act were eliminated. But the basic provisions were supplemented with additional controls to achieve the goals, subject to temporal delay. Had even a significant minority of states opposed the federal goals, Congress should not have been able to impose the extremely burdensome *additional* control measures in 1977 or 1990. Particularly in 1990, after twenty years of experience, it would be hard to argue that the costs of such legislation came as a surprise.

The rhetoric of the challenges to federal environmental regulation also suggests an underlying purpose to lead rather than to follow citizen preferences.³³⁸ On this account, there are good reasons to think that existing preemptive, federal environmental legislation was not symbolic and continues to reflect efficient, welfare-enhancing policies for the nation. That is, it will reflect such policies if the liberal conceptions of value based on public preferences are applied.

But a legitimate argument to the contrary can also be constructed, focusing on the paternalistic conception that federal legislators should have viewed the expressions of their citizens as failing to reveal their "true" preferences. By 1973, the moral fervor of the public for environmental sacrifices began to cool.³³⁹ This suggests that individual preferences were not legitimately held in 1970, notwithstanding the apparent stability of public opinion. Further, Congress never devoted sufficient resources to accomplish its goals

335. A distinction must be made between whether large numbers of citizens honestly held their views and whether they intelligently did so. Cf. Melnick, *supra* note 320 (arguing that federal legislation was enacted based on the narrowly concentrated interests of national environmental groups); *supra* note 26.

336. See *supra* notes 2-3 and accompanying text.

337. See *supra* notes 162, 261-317 and accompanying text.

338. Cf. Percival, *supra* note 1, at 1179-80 ("Current efforts to reduce the size of government and to return greater power to the states have not been driven by any principled articulation of a methodology to determine which level of government is best suited to perform which functions. Political factors have been more influential in generating the movement toward devolution Giving states greater responsibility for environmental protection does not guarantee better performance. Indeed, history counsels that it may be a prescription for lowering environmental standards and reducing enforcement effort.")

339. See *supra* notes 31, 322, 335 and accompanying text.

and through other legislative means directed agency activity to avoid accomplishing the goals.³⁴⁰ Congress repeatedly delayed the dates by which attainment was to be achieved (conveying the symbolic message that the attainment dates were not real), removed critical control measures necessary to assure attainment, and preserved the goals and remaining controls only because "the statute's promise of a risk-free environment became too powerful a political symbol to discard casually."³⁴¹ Of course, one can add to this argument the more overtly paternalistic claim that if citizens legitimately preferred the federal goals, their values were simply misguided.

B. *Federal Courts Ultimately Must Resolve The Value Disputes*

Under existing judicial doctrine, EPA is presumed to be the best interpreter of ambiguous Congressional intent.³⁴² EPA has often viewed federal preemptive legislation as symbolic and has thus been unwilling to sanction states or otherwise to impose burdensome controls.³⁴³ By treating the legislation as symbolic, however, EPA has legitimized current attacks on the legislation and has undermined the values of honesty and, more debatably, of democracy.³⁴⁴ Academic criticism attempting to justify EPA's practice is itself based

340. See *supra* note 233.

341. Dwyer, *supra* note 27, at 250.

342. See *Chevron U.S.A., Inc. v. Natural Resources Defense Council, Inc.*, 467 U.S. 837, 843-44 (1984) (holding that federal courts must defer to any "reasonable" agency construction of an ambiguous statute); cf. Lawrence Lessig & Cass R. Sunstein, *The President and the Administration*, 94 COLUM. L. REV. 1, 12-13 (1994) (presuppositions about the meanings of text may color interpretation more than illuminate intended meaning; interpretation of the text and structure of the Constitution must therefore begin with historical analysis).

343. See, e.g., Dwyer, *supra* note 27, at 254-55 ("EPA adopted this construction of section 112 because it believed that strictly following the language of the statute was wholly inappropriate for regulating the health risks posed by airborne carcinogens . . . EPA's position was that the legislative history did not indicate that Congress intended such drastic results . . .").

344. This is because EPA must dissemble to the public and to courts when it avoids implementing the overly prescriptive commands of legislation that it believes is symbolic. See Dwyer, *supra* note 27, at 234, 277-82. Such dissembling provides little opportunity for democratic participation in rulemaking, which is further limited due to the lack of consensus on values. See *supra* note 230; cf. Dwyer, *supra* note 27, at 282-83 ("By taking an uncompromising stance toward hazardous airborne chemicals in section 112, Congress was able to claim credit for protecting health and the environment while avoiding difficult policy questions and shifting the political problems to EPA.").

on disputed normative beliefs regarding the best organization of our governmental decisionmaking structures.³⁴⁵

Given the difficulties of discerning citizen preferences and legislative intentions, the dispute over literal interpretation again becomes a moral question regarding the costs and benefits of paternalism. Wholesale deference to administrative interpretations poses serious value-error risks, without reference to the underlying values of particular disputes.³⁴⁶ Further, even strategically symbolic legislation that does not reflect public values or that legislators do not intend to be interpreted literally may not be dysfunctional if literally construed. Strict construction may force governmental and private actors to achieve their best performance in the service of the nation³⁴⁷ and may create an institutional structure in which federal legislators will improve their products at lower cost to the public.³⁴⁸

Because public and legislative intentions may often be ambiguous, retail deference to administrative interpretations also poses serious value-error risks. Even under current doctrine, courts must and will impose their undemocratic values through interpretation

345. Compare Schoenbrod, *supra* note 38, at 1244 (“[A]dministratively promulgated law can be sustained by congressional *inaction* or modified by informal action by a committee or individual member [C]ontroversial choices can be made without votes being taken and responsibility being publicly assumed by members of Congress”) (emphasis in original) with Dwyer, *supra* note 27, at 286 (“To label the agency as undemocratic when it avoids a literal interpretation of symbolic legislation is to miss the point of this type of statute: the statute means less ‘do it this way’ than ‘we’re serious, do something now.’”). How does the agency know what Congress *really* means and how does the public know who is responsible for imposing or failing to impose policy?

346. Compare DAVID SCHOENBROD, POWER WITHOUT RESPONSIBILITY: HOW CONGRESS ABUSES THE PEOPLE THROUGH DELEGATION 131-33 (1993) (explaining that public choice analyses of legislative decisionmaking wrongly assume that Congressional values are not stable and thus wrongly suggest that delegation is necessary to achieve *rational* policies) with Dwyer, *supra* note 27, at 282-83 (“[L]iteral interpretation of symbolic legislation would be a mistake and . . . the Agency should be allowed to reformulate symbolic legislation because *rational* policymaking involving volatile social issues is more likely to be done by an agency than by the legislature, particularly where statutes are difficult to amend and enacting symbolic legislation is an accepted means of doing business.”) (emphasis added).

347. See *supra* notes 223-24 and accompanying text.

348. See Schoenbrod, *supra* note 38, at 1232-33 (discussing the relationship of judicial doctrines addressing delegation of legislative power, vagueness concerns, and due process constraints on the Congressional failure to resolve the normative disputes); Schoenbrod, *supra* note 105, at 807-18 (discussing the benefits that would be obtained if the federal courts enforced a nondelegation doctrine that required Congress to specify the goals with precision and to allocate the costs of achieving those goals); Edward L. Rubin, *Law and Legislation in the Administrative State*, 89 COLUM. L. REV. 369, 385, 390-91 (1989) (discussing why the nondelegation and void-for-vagueness doctrines lack content due to ambiguity over values and why constraints are and must be provided by the Due Process Clause of the Fifth Amendment).

when reviewing interpretations of EPA, which also is not an elected body.³⁴⁹ Whether courts should do so is commonly referred to as the countermajoritarian dilemma.³⁵⁰

It remains highly significant that the federal judiciary has not treated the Clean Air Act as establishing dysfunctional symbolism, but rather has routinely interpreted the goals literally to impose remedial requirements. Congress did not reverse these decisions.³⁵¹ The judiciary has thus imposed values (either those of the public, of Congress, or of themselves) on governments and regulated entities.³⁵² Are the imposed values good ones?

349. See *supra* notes 232, 342; cf. Bradford C. Mank, *Is a Textualist Approach To Statutory Interpretation Pro-Environmentalist? Why Pragmatic Agency Decisionmaking Is Better Than Judicial Literalism*, 53 WASH. & LEE L. REV. 1231, 1232-67 (1996) (describing how both textualist approaches to interpretation of statutes and the *Chevron* doctrine determinations of ambiguity have been manipulated); Schoenbrod, *supra* note 38, at 1233 & n.54 (describing how the Supreme Court has "strained" to reach its results regarding serious disputes over value under the *Chevron* doctrine rather than the nondelegation doctrine). The *Chevron* doctrine exacerbates the problem of value disputes in the (re)interpretation of statutes. If the Court finds the agency's policy choice to be reasonable, it must uphold the rule and will not discuss whether the statute excessively delegates policymaking discretion. If the Court finds the agency's policy choice to be unreasonable, it will invalidate the rule and again will not discuss the scope of the delegation. In contrast, if required to address the scope of delegation, the Court will likely feel compelled to explain why an "intelligible principle" to guide agency decisions and judicial review does or does not exist. The Court's decision thus will more transparently reveal its own policymaking role, by focusing on its own choice of the level of generality rather than on an agency's purported reasonableness in choosing among competing policies. Delegation analysis more directly provides a basis to discuss whether the Court has adopted rational or arbitrary distinctions, and whether the Court's policy preferences are widely shared or deprive the public of the "remedial purposes" of the legislation.

350. See Gonzales, *supra* note 75, at 100 ("American constitution builders of the late 1780s came to believe that courts ought to be afforded discretion in shaping law, even statutory law."); *id.* at 106-37 (courts should reject "honest-agent" statutory-construction approaches to interpreting legislation in favor of "public-regarding" common-law approaches). The Framers of the Constitution did not make a final institutional choice separating legislative from other powers, but rather created "a government of separated institutions sharing powers." Strauss, *supra* note 75, at 604 (quoting RICHARD NEUSTADT, *PRESIDENTIAL POWER—THE POLITICS OF LEADERSHIP FROM FDR TO CARTER* 26 (1980)); see Amar, *supra* note 69, at 225, 226 & n.81, 227-28 (noting that the federal Congress and state courts were not in 1789 sufficiently independent of state legislatures for the Framers to rely upon these institutions to cabin state legislative excesses). Consequently, the constitutional dispute again requires the Supreme Court to resolve the competing values.

351. See Fisch, *supra* note 88 (Congressional acquiescence in judicial interpretations creates settled equilibrium expectations, raising fairness concerns and higher transaction costs for legal change).

352. Cf. SCHOENBROD, *supra* note 347, at 157 (common lawmaking may have supermajoritarian support like legislation and "judges are insulated from day-to-day politics" preventing narrow interests from dictating policies).

CONCLUSION

We have spent over twenty-five years trying to get states and EPA to attain the levels of environmental quality that our nation desires and it looks like we will have to wait a lot longer still. If many states have not achieved and will not achieve compliance with federal goals in the presence of federal incentives and the potential for sanctions, it defies credulity to believe they will achieve the goals on their own.³⁵³ Because most citizens seriously believe that the goals are appropriate, as indicated by the few empirical indicators that we possess, the concept of federal regulation remains justified on any of a number of theoretical grounds. As a practical matter, federal regulation is here to stay.³⁵⁴

Given the history of resistance to the legislative goals and the pervasive desire to retain local control through supermajoritarian legislative and constitutional enactment requirements, we are likely to retain an enormously costly federal regulatory structure that imposes legislative goals that many states and EPA will vigorously avoid implementing. We are unlikely to repeal such legislation and are unlikely to effectively implement it, absent additional legislation that removes even more discretion from state and federal officials and imposes even greater control costs. Arguments that Congress should provide states or EPA with "flexibility" to adapt policies to local conditions or unforeseen circumstances should thus be viewed as open invitations to further waste, dispute, and delay.³⁵⁵ As a nation, we should either impose the controls necessary to achieve our federal policies or should cheerfully return policymaking to the states because we lack the courage of our national political convictions.³⁵⁶ But

353. See *States Neglecting Pollution Rules, White House Says*, N.Y. TIMES, Dec. 15, 1996, at A1.

354. See Rubin, *supra* note 112, at 1-2 ("We are much more likely to turn the clock back 500 million years by bombing ourselves into the protoplasmic slime than we are to turn it back 120 years to the pre-administrative state."). See generally James Wilson, *The Rise of the Bureaucratic State*, reprinted in ROBERT RABIN, PERSPECTIVES ON THE ADMINISTRATIVE PROCESS 16 (1979) (correlating the rise of bureaucratic government to specific historical forces, which are unlikely to disappear).

355. See Lee, *supra* note 5, at A4 ("There are some in Congress who believe that the Clean Air Act should be repealed," Browner said. "By giving the states flexibility in enforcing the law, we hope to avoid a congressional fight over the act."). The national and international value consensus is increasingly unstable and may neither be equilibrating nor efficient. See *supra* note 55. The potential for domestic and foreign unrest should be promptly addressed.

356. See Schoenbrod, *supra* note 105, at 748-51 (noting that Congress' failure to achieve its goals has resulted from its continuing desire to have states and localities implement, and federal

due to supermajoritarian enactment requirements, the inexorable progress toward integration, and the strength of supermajority preferences for environmental protection benefits, we will be stuck with the federal goals for the foreseeable future.

The existing federal regulatory structure has resulted, moreover, from the willingness — indeed the express desire — of citizens to impose their moral beliefs on their fellow citizens in the selfish or altruistic desire to benefit themselves and their fellows. It will thus be more productive to discuss the explicit moral basis for our political judgments when arguing about federal regulation than to argue about why those who disagree with our values should be free to avoid their imposition. At the least, such explicit moral debate may make political discussion more civil. But it also provides the only hope for resolving the intractable social problems and regulatory questions with which we are faced, by bridging the normative chasms about which we so profoundly disagree.³⁵⁷

administrative agencies define, federal environmental policy); *but see* Dwyer, *supra* note 26, at 1216-19 (describing as inevitable the need for state implementation, based on limited federal resources, traditional state prerogatives to regulate the environment and related matters, diversity of local conditions, and the controversial nature of the controls which impose concentrated costs at local levels).

357. *Cf.* Massaro, *supra* note 166, at 48-108 (suggesting that “calls to reason” and “calls to empathy” may receive greater judicial recognition when doctrine is based on moral views); *id.* at 92, 102-03, 107 (“What, other than direct experience, is most likely to modify a view twisted by defects in reason and empathy? That is, how do people change their minds? . . . [Empirical and social constructivist critique] undermines [the] assumption that moral questions are too complex to be handled by claims of irrationality . . . [A]rguments from reason also demonstrate how and when reason and moral theory become inadequate The argument is even more effective when it is complemented by a counternarrative that deploys parodic reversal [N]arratives drawn from different cultures . . . may display to the judicial audience ways in which what seems universal is actually local, and thus may ‘force[] us to ask whether we have good reasons for what we legislate and judge’ [But t]o know all is simply not, in every case, to forgive all. Nor, add many modern moralists in a stern voice, should it be.”) (citation omitted).

