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Rethinking Regulatory Reform after American Trucking

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I. INTRODUCTION

For as long as environmental law has existed, critics of the regulatory system have called for fundamental reforms. The Supreme Court's decision in *Whitman v. American Trucking Ass'ns, Inc.*,[2] may have marked the end of one stage in this debate over regulatory reform. The Court was unmoved by the longstanding argument that cost-benefit analysis should determine air quality standards. It also laid to rest the claim that the Clean Air Act gave the Environmental Protection Agency ("EPA") too much open-ended authority, resulting in an unconstitutional delegation of legislative power. Although the Court's decision was not surprising, advocates of structural change in environmental law will now have to address their complaints to Congress. For the present, at least, the Court has put its imprimatur on the current regulatory system. As one disappointed critic of EPA complained, "cost-benefit analysis has taken a considerable hit," and its supporters "will just have to lick their wounds."[3]

The debate over regulatory reform will no doubt continue. To date, much of the debate has been warped by a failure to appreciate the realities of environmental regulation. The debate so far has focused on how EPA creates environmental standards. However, the debate has overlooked how those standards are transmuted in the course of implementation, rendering much of the debate over the creation of the standards unrealistic.

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2. 2531 U.S. 457 (2001). See Lisa Schulz Bressman, *Disciplining Delegation After* Whitman v. American Trucking Ass'ns, 87 CORNELL L. REV. 452, 469-72 (2002) for a brief summary of the case. A fuller explanation of the complicated regulatory context can be found in William V. Luneburg, *Clean Air Act Implementation and the Impact of* Whitman v. American Trucking Associations, Inc., 63 U. PITT. L. REV. 1 (2001). For convenience of reference, the following case designations will be used in this article: the term "*American Trucking*" will be used for the Supreme Court decision in the text. The major opinions in the litigation to date will be referred to as the following: Am. Trucking Ass'ns v. EPA, 175 F.3d 1027 (D.C. Cir. 1999) [hereinafter ATA I]; Am. Trucking Ass'ns v. EPA, 195 F.3d 4 (D.C. Cir. 1999) [hereinafter ATA II]; Whitman v. Am. Trucking Ass'ns, 531 U.S. 457 (2001) [hereinafter ATA III]; Am. Trucking Ass'ns v. EPA, 283 F.3d 355 (D.C. Cir. 2002) [hereinafter ATA IV].

3. Heather Ross, *Clean Air—Is the Sky the Limit?*, 143 RESOURCES 13, 15 (Fall 2001).

When we look at the overall regulatory system, it seems clear that standard setting has absorbed far too much of our attention. In the context of the whole regulatory system, whether or not the EPA's discretion should be limited with more detailed legislation or through cost-benefit analysis is not a major problem. Contrary to the assumption of many critics, the regulatory system is not oblivious to cost. Costs and benefits collide in the implementation process, ultimately leading to a rough balance. Nor is the EPA an unrestrained "loose cannon." Rather than being a leviathan—a Commissariat of Pollution Control imposing its caprices on the American economy—the EPA more generally operates as an aggressive negotiator, needing cooperation from other players in order to accomplish its goals. The regulatory system's most serious problems are not at the standard setting stage. Rather, the problem is that so much policy is made after the standards are set in a setting where coherence, accountability, and transparency may be difficult to obtain.

Part II of the article reviews current debates about regulatory reform by focusing on two proposals for reforming environmental law: (a) using cost-benefit analysis to set environmental standards, and (b) using the nondelegation doctrine to cut back on EPA's discretion. Part III then reviews *American Trucking's* complex background. We cannot evaluate the Court's ruling without understanding how air quality standards and other environmental requirements are actually implemented. Not only does cost play an important role in implementation decisions, but implementation also creates an opportunity for innovative regulatory techniques. After exploring these implementation issues in Part IV, the article reevaluates the cost-benefit and delegation issues in Part V. Cost-benefit analysis before standards are issued can be misleading because costs and benefits shift during implementation. Moreover, discretion in issuing standards—the focus of advocates of a strong delegation doctrine—is far less pervasive than discretion in implementation. The conclusion is that regulatory reformers should move on to new issues that are more connected with the realities of the regulatory system.

Why has the debate been so fixated on standard setting? One reason is simply that setting standards actually is impor-

tant. It sets the stage for, and thereby shapes, the remainder of the regulatory process. Moreover, standard setting raises normative questions that reverberate through the process as a whole, and the issue of how to set standards raises intriguing theoretical questions of its own. It is probably also not irrelevant that standard setting takes place in Washington, where it attracts the attention of nationally known economists, lawyers, and judges (not to mention law clerks who are likely to become academics). Finally, arguing about standards avoids the need for immersion in the complex process of implementation. Consequently, the initial step, setting the standards, has tended to receive far more attention than the later steps of implementation and enforcement. But it is time we turned more of our attention to these later stages, where the regulatory system really comes to grips with environmental problems.

There is an irony here. Despite the battle between advocates of cost-benefit analysis and defenders of traditional regulation, they share the same static view of the structure of regulation. In this view, the government gathers all available data and establishes a mechanism that will, once and for all, implement the desired standard of environmental quality. Admittedly, the two sides differ in terms of the criteria for establishing the standard, one being purely environmental benefits and the other being the ratio of costs to benefits. They may disagree about how much discretion Congress should be allowed to give the EPA in setting standards. They may also differ in their preferences about implementation, since advocates of cost-benefit analysis may be more likely to favor the use of market mechanisms. But they both have the same fundamental vision of a unitary decision maker laying down permanent regulatory policies. Both implicitly depend on a static, unilateral vision of the policymaking process.

This fundamental vision of modern environmental law is distorted. Environmental law does not involve setting standards once and for all and then blindly forcing compliance. Rather, it is a dynamic process in which long-term goals are constantly reevaluated and renegotiated in the course of ongoing interactions between federal and state regulatory agencies, industry, and political actors. EPA's discretion over standards probably matters less than its discretion in implementation,

which the delegation doctrine does not reach. Cost-benefit analysis may be a useful source of information at various parts of this process, particularly when we try to determine the merits of various implementation techniques. However, trying to base fundamental policy decisions on this technique would be a mistake.

In short, meaningful regulatory reform needs to start by understanding the dynamic regulatory process we actually have. Continuing to debate how best to run a static regulatory system is beside the point.

II. TWO DEBATES ABOUT REGULATION

When the Court decided *American Trucking*, it was far from writing on a clean slate. Instead, it was adding a coda to a long battle, one that has consumed many trees. The cost-benefit debate has produced a particularly rich literature, which will only be sampled here. The delegation issue involves theoretical disputes about the separation of powers that are largely beyond the scope of this article. But with respect to both issues, the reader should at least gain a familiarity with the basic battle lines of the environmentalists and the regulatory reformers.

A. *The Cost-Benefit Dispute*

For the past quarter-century, a debate has raged between environmentalists and advocates of cost-benefit analysis.[4] One side relies on ethics while the other relies on economics as the basis for environmental decisions. The opposing views have been developed in an increasingly sophisticated body of scholarship.

In rejecting a balancing test between costs and benefits, some environmental advocates invoke the principle that polluting is morally wrong.[5] They argue that the issue is not how much polluters should sacrifice financially to save lives, but in-

4. See DANIEL A. FARBER, ECO-PRAGMATISM: MAKING SENSIBLE ENVIRONMENTAL DECISIONS IN AN UNCERTAIN WORLD 35-69, 83-114 (1999), for an evaluation of the key competing arguments.

5. *See* David B. Spence, *Paradox Lost: Logic, Morality, and the Foundations of Environmental Law in the 21st Century*, 20 COLUM. J. ENVTL. L. 145, 171 (1995). Of course, not all environmentalists are so staunchly opposed to economic thinking.

stead, how pollution regulation can "prevent[ ] people from being killed by the actions of other people."[6] Rather than deploring the economic impact of environmental law, they say that the government should encourage "a habit of living that is simple, frugal, and natural—a habit of living that seeks to release human potentiality by helping individuals to transcend the daily temptations of shallow and greedy consumerism."[7] Ultimately, the argument continues, "environmentalism aspires to achieve development without growth" by releasing "individual potential" without "continuing the relentless economic expansion that threatens to overwhelm the carrying capacity of the planet."[8]

Critics of this form of environmentalism do not quarrel with the proposition that environmental quality is desirable. Instead, they stress that "life necessarily involves tradeoffs."[9] To the view that "[h]uman health and safety should come first," they respond:

> Plainly . . . this is not always so. There are many potential ways that society could engender greater public safety, such as requiring a standard weight for new automobiles or shutting down entire polluting industries, yet we refuse to choose them because of the cost. . . .
>
> . . . Current environmental laws permit tons of pollutants to enter water and air every day, because, as a nation, we do not

6. Lisa Heinzerling, *Pragmatists and Environmentalists*, 113 HARV. L. REV. 1421, 1437 (2000).

7. *Id.* at 1446.

8. *Id.*

9. Scott Farrow & Michael Toman, *Using Benefit-Cost Analysis to Improve Envionmental Regulations*, ENVIRONMENT, Mar. 1999, at 12, 35. This article also provides a useful primer on cost-benefit analysis and its potential utility. However, not all critics of current regulation embrace cost-benefit analysis. Staking out a unique position, Richard Epstein argues for treating pollution as an invasion of property rights, while limiting government protection for endangered species. See Richard A. Epstein, *Too Pragmatic by Half*, 109 YALE L.J. 1639 (2000), for a discussion of this position. For instance, he says that it is "not clear" that the state "could license the pollution of public waters even if it received compensation." *Id.* at 1653. This seems to be a more absolutist position than that taken by Congress or by some environmentalists. On the other hand, according to Epstein, if the state wants to preserve habitat for endangered species, it must compensate landowners. *Id.* at 1665-66.

judge pollution so harshly that we are willing to give up our entire way of life to eliminate it.[10]

Critics of environmentalism often advocate the use of cost-benefit analysis. This technique became part of our regulatory system over twenty years ago, when President Reagan issued an order requiring its use by all government agencies except where otherwise forbidden by law. As modified by later presidents, this mandate remains in place today. Later, expanded use of cost-benefit analysis was a major plank in the Contract with America.[11] One proposal for regulatory reform would have completely replaced public health mandates with cost-benefit analysis for all new regulations.[12] Such a proposal came very close to enactment seven years ago.[13]

The environmentalist counterattack questions the morality of cost-benefit analysis. Mark Sagoff, an environmental philosopher, has developed this critique in particular detail.[14] His basic claim is that cost-benefit analysis applies only to personal preferences, as expressed in monetary terms, while environmentalism involves true moral values.[15] Such moral issues, he believes, properly belong to the political process and cannot be resolved through economic analysis.[16] In a nutshell, Sagoff's thesis "is that social regulation expresses what we believe, what we are, what we stand for as a nation, not simply what we wish to buy as individuals."[17] One of Sagoff's recent essays eloquently compares our attitude toward the environment to the

10. Paul Boudreaux, *Environmental Costs, Benefits, and Values: A Review of Daniel A. Farber's Eco-Pragmatism*, 13 TUL. ENVTL. L.J. 125, 130 (1999) (book review).

11. *See* Richard L. Revesz, *Federalism and Environmental Regulation: A Public Choice Analysis*, 115 HARV. L. REV. 553, 635 (2001).

12. *See* Robert L. Glicksman & Stephen B. Chapman, *Regulatory Reform and (Breach of) the Contract with America: Improving Environmental Policy or Destroying Environmental Protection?*, 5 KAN. J.L. & PUB. POL'Y 9, 16-17 (1996); Cass Sunstein, *Congress, Constitutional Moments, and the Cost-Benefit State*, 48 STAN. L. REV. 247, 269-72 (1996).

13. *See* Thomas O. McGarity, *The Clean Air Act at a Crossroads: Statutory Intepretation and Longstanding Administrative Practice in the Shadow of the Delegation Doctrine*, 9 N.Y.U. ENVTL. L.J. 1, 17 (2000).

14. See MARK SAGOFF, THE ECONOMY OF THE EARTH: PHILOSOPHY, LAW AND THE ENVIRONMENT (1988) for a discussion of his position.

15. *Id.* at 56.

16. *Id.* at 8-9, 17-18, 26-27, 113.

17. *Id.* at 16-17.

reverence we feel at Gettysburg.[18] He concedes that economic feasibility does operate as a constraint;[19] nevertheless, the "principle economists tout, net benefits maximization, is rarely if ever relevant or appropriate."[20] Our global environmental principle should be the same one that operates at Gettysburg national park: "Keeping the place the same holy place, that's what's important."[21]

In response to such criticisms, some supporters of cost-benefit analysis have moved away from endorsing cost-benefit analysis as an ultimate moral standard. They advance pragmatic arguments on its behalf while decoupling it from the normative framework that Sagoff and others have challenged.[22] For instance, Judge Posner contends that the theoretical objections to cost-benefit analysis "have crumbled at the practical level" as the method has become "fashionable . . . at all levels of government."[23] Posner argues that cost-benefit analysis can "improve the quality of governmental decision making," if only by uncovering "bizarre anomalies" in the treatment of risks by different agencies.[24] Brushing aside moral critiques of cost-benefit analysis, he claims that the technique needs to be founded "on nothing deeper or more rigorous than a showing that it has consequences that we like."[25] Its most important benefit, he

18. Mark Sagoff, *At the Monument to General Meade,* or *On the Difference Between Beliefs and Benefits*, 42 ARIZ. L. REV. 433 (2000).

19. *Id.* at 462.

20. *Id.*

21. *Id.* (quoting Robert Moore). Sagoff is not alone in questioning the equation of environmental values and ordinary economic benefits. Economist Amartya Sen agrees that the "very idea that I treat the prevention of an environmental damage just like buying a private good is itself quite absurd." Amartya Sen, *The Discipline of Cost-Benefit Analysis*, 29 J. LEGAL STUD. 931, 949 (June 2000). Philosophers such as Martha Nussbaum also criticize cost-benefit analysis for overlooking the "distinctive nature" of some costs; some costs, she says, are "bad in a distinctive way. No citizen should have to bear them." Martha C. Nussbaum, *The Costs of Tragedy: Some Moral Limits of Cost-Benefit Analysis*, 29 J. LEGAL STUD. 1005, 1036 (2000).

22. See Matthew D. Adler & Eric A. Posner, *Rethinking Cost-Benefit Analysis*, 109 YALE L.J. 165 (1999); CASS R. SUNSTEIN, FREE MARKETS AND SOCIAL JUSTICE 139 (1996), for an examination of other efforts to defend cost-benefit analysis without embracing a reductionist normative program.

23. Richard A. Posner, *Cost-Benefit Analysis: Definition, Justification, and Comment on Conference Papers*, 29 J. LEGAL STUD. 1153, 1158 (2000).

24. *Id.* at 1157.

25. *Id.* at 1169.

says, has been to "demonstrate . . . that federal regulation of hazards to safety and health is a crazy quilt and in particular that many of the regulations are bad specifically because they flunk a cost-benefit test."[26]

Critics of cost-benefit analysis reply with some practical concerns of their own. They worry that its use may further ossify the regulatory process and shift decisionmaking authority from "front line" agencies such as EPA, to economists in the Office of Management and Budget (OMB) who may lack similar accountability or scientific expertise.[27] Critics of the process also stress the technical difficulties involved in cost-benefit analysis. Merely determining regulatory costs can be quite difficult;[28] quantifying the benefits of environmental regulation is even more controversial.[29] Thus, they argue, cost-benefit analysis may not be quite the panacea its advocates sometimes seem to suggest.

Partisans of these conflicting viewpoints have warred bitterly.[30] Advocates of cost-benefit analysis sometimes dismiss their opponents as little more than religious zealots.[31] Environmentalists respond that cost-benefit analysis is a recipe for "paralysis by analysis."[32] They sometimes accuse cost-benefit analysis of a moral insensitivity akin to calculating a beloved pet's possible market value as a lab animal or food source.[33] And so the debate continues.

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26. *Id.* at 1170. See Cass R. Sunstein, *Cognition and Cost-Benefit Analysis*, 29 J. LEGAL STUD. 1059 (2000), for a pragmatic argument for cost-benefit analysis based on cognitive psychology.

27. *See generally* THOMAS O. MCGARITY, REINVENTING RATIONALITY 281 (1991).

28. *See* Winston Harrington, Richard D. Morgenstern & Peter Nelson, *Predicting the Costs of Environmental Regulations: How Accurate are Regulators' Estimates?*, ENVIRONMENT, Sept. 1999, at 10-14, 40.

29. *See* Lisa Heinzerling, *Regulatory Costs of Mythic Proportions*, 107 YALE L.J. 1981 (1998).

30. See David M. Driesen, *The Societal Cost of Environmental Regulation: Beyond Administrative Cost-Benefit Analysis*, 24 ECOLOGY L.Q. 545 (1997), for a summary of viewpoints.

31. See Robert W. Hahn, *Toward a New Environmental Paradigm*, 102 YALE L.J. 1719, 1754 (1993), for a criticism of environmentalist "visionaries" as "almost of necessity religious in nature" and likely to "demonstrate little tolerance for opposing views."

32. Thomas O. McGarity & Sidney A. Shapiro, *OSHA's Critics and Regulatory Reform*, 31 WAKE FOREST L. REV. 587, 626 (1996).

33. ELIZABETH ANDERSON, VALUE IN ETHICS AND ECONOMICS 193 (1993).

B. *The Delegation Dispute*

A less publicized but almost equally fervent debate has involved the powers of administrative agencies. Critics argue that Congress has ducked its own responsibilities by giving the hard policy choices to agencies like EPA. The breadth of agency discretion raises concerns about political accountability for critical decisions of national policy. In constitutional terms, at least in a sufficiently extreme case, this transfer of authority could violate the delegation doctrine, which holds that Congress alone must exercise true legislative power.[34]

The basic legal principles are clear. On the one hand "it is a breach of the National fundamental law if Congress gives up its legislative power and transfers it to the President . . . ."[35] On the other hand, "Congress has found it frequently necessary to use officers of the Executive branch . . . by vesting discretion in such officers to make public regulations interpreting a statute and directing the details of its execution."[36] Hence, the Supreme Court has ruled, delegation is lawful if Congress establishes an "intelligible principle" to guide the agency.[37]

Although the Supreme Court has used this doctrine to strike down federal statutes only twice—both times in the same year[38]—individual Justices have invoked it on more recent occasions.[39] Chief Justice Rehnquist in particular has complained that health and safety laws give the agency complete discretion about tradeoffs between human lives and costs.[40] The question is whether the doctrine should be revitalized as a realistic check on administrative agencies.

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34. U.S. CONST. art. I, § 1.

35. J.W. Hampton, Jr., & Co. v. United States, 276 U.S. 394, 406 (1928).

36. *Id.*

37. *Id.* at 409.

38. *See* A.L.A. Schechter Poultry Co. v. United States, 295 U.S. 495 (1935); Panama Refining Co. v. Ryan, 293 U.S. 388 (1935).

39. *See* Indus. Union Dep't v. Am. Petroleum Inst., 448 U.S. 607, 646 (1980) (*Benzene Case*) (plurality opinion invoking delegation doctrine to justify narrow interpretation of statutory grant of authority).

40. *See id.* at 675. More recently, Justice Thomas has argued that the intelligible interest test is too weak: "I believe that there are cases in which the principle is intelligible and yet the significance of the delegated decision is simply too great for the decision to be called anything other than 'legislative'." ATA III, 531 U.S. 457, 487 (2001).

Regulatory reformers argue that a revitalized nondelegation doctrine would serve several purposes. First, they maintain, it would improve accountability and deliberation. Democracy, in its most basic sense, requires decisionmaking by the people and their delegates; fundamental policy should not be set by unaccountable technocrats.[41] Government, in short, is supposed to derive from "We the People," not "They the Bureaucrats."

Second, anti-delegationists argue that restraining delegation would protect liberty by requiring multiple organs of government to agree on major new policies. As Sunstein says, "[t]he vesting of lawmaking power in Congress is designed to ensure the combination of deliberation and accountability that comes from saying that government power cannot be brought to bear on individuals unless diverse representatives, from diverse places, have managed to agree on the details."[42] As episodes of executive tyranny in other legal systems show, unlimited delegation can make possible "lawmaking exercises that would otherwise have been extremely cumbersome, and hence remove[ ] an important check on arbitrary rule."[43]

Finally, anti-delegationists argue that the restrictions on delegation restrain arbitrary agency actions by providing a statutory benchmark against which they can be tested in court. This argument invokes our vision of the rule of law as opposed to "the exercise of discretion or preference by those persons who happen to be in positions of authority."[44]

Critics of the delegation doctrine have their own arguments. Jerry Mashaw argues that delegation actually improves accountability because agencies must answer to the President, the only nationally elected official.[45] Moreover, in some ways

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41. *See* DAVID SCHOENBROD, POWER WITHOUT RESPONSIBILITY: HOW CONGRESS ABUSES THE PEOPLE THROUGH DELEGATION 101 (1993).

42. Cass R. Sunstein, *Is the Clean Air Act Unconstitutional?*, 98 MICH. L. REV. 303, 336 (1999).

43. *Id.*

44. Lisa Schultz Bressman, Schechter Poultry *at the Millenium: A Delegation Doctrine for the Administrative State*, 109 YALE L.J. 1399, 1424 (2000) (quoting JERRY L MASHAW, GREED, CHAOS, AND GOVERNANCE: USING PUBLIC CHOICE TO IMPROVE PUBLIC LAW 138-39 (1997)).

45. *See* JERRY L. MASHAW, GREED, CHAOS, AND GOVERNANCE: USING PUBLIC CHOICE TO IMPROVE PUBLIC LAW 145-57 (1997).

agency proceedings are more open to effective public participation than are legislative proceedings.[46] Critics of the doctrine stress both the practical need to give agencies substantial discretion, especially in highly technical areas, as well as the impossibility of defining how much delegation is too much. For instance, Justice Scalia has long argued that delegation is central to our current system of government and that no clear standard exists to govern the degree of delegation.[47] The factors involved, according to Scalia, are "both multifarious and (in the nonpartisan sense) highly political," and the Court has "almost never felt qualified to second-guess Congress regarding the permissible degree of policy judgment that can be left to those executing or applying the law."[48]

The Clean Air Act has provided fertile ground for critics who seek tighter delegations and more use of cost-benefit analysis. According to one critic of EPA, if air pollution regulation is "not the standardless exercise of legislative power—or 'delegation running riot'" then "it is difficult to imagine what could be."[49] As we will see in Part III, this argument had some success in the D.C. Circuit.

III. THE BATTLE OVER REVISED AIR QUALITY STANDARDS

The Supreme Court's opinion in *American Trucking* does not dwell on the context of the case. Nevertheless, without understanding that context, it is difficult to assess the significance of the opinion. We begin with the regulatory scheme and the promulgation of the particular regulations involved in the case, and then trace the resulting litigation in the D.C. Circuit through the Supreme Court.

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46. *See* Peter H. Shuck, *Delegation and Democracy: Comments on David Schoenbrod*, 20 CARDOZO L. REV. 775, 781-82 (1999).

47. *See* Mistretta v. United States, 488 U.S. 361, 415-16 (1989) (Scalia, J., dissenting).

48. *Id.* at 416.

49. C. Boyden Gray, *The Clean Air Act Under Regulatory Reform*, 11 TUL. ENVTL. L.J. 235, 247-48 (1998).

A. *The Regulatory Scheme*

The Clean Air Act is an incredibly long and complex statute.[50] However, the core of the statute is relatively simple. Under section 108, EPA is required to prepare a list of pollutants emitted by multiple sources that have adverse health or environmental effects.[51] Once a substance is on the list, the next step is to issue national ambient air quality standards (NAAQS) under section 109. There are two types of standards: primary standards that are "requisite to protect public health" and secondary standards that protect the "public welfare" (which includes various forms of environmental effects).[52] In setting these standards, EPA is specifically required to explain any deviation from the recommendations of an independent advisory agency.[53]

The statute originally set an ambitious timetable for achieving these air quality standards. Front-line authority for achieving the standards rests with the states. Section 110 originally required every state to submit an implementation plan

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50. See WEST PUBLISHING COMPANY, SELECTED ENVIRONMENTAL LAW STATUTES: 2000-2001 EDUCATIONAL EDITION 738-1026 (2000), for a recent reprint of the statute that occupies almost 300 double-columned pages. The evolution of the statute is reviewed in Arnold W. Reitze, Jr., *The Legislative History of U.S. Air Pollution Control*, 36 HOUS. L. REV. 679 (1999).

51. *See* Clean Air Act § 108, 42 U.S.C. § 7408 (2000). Section 108(a)(1) instructs the Administrator to list "each air pollutant":

> (A) emissions of which, in his judgment . . . may reasonably be anticipated to endanger public health or welfare;
>
> (B) the presence of which in the ambient air results from numerous or diverse mobile or stationary sources; and
>
> (C) for which air quality criteria had not been issued before December 31, 1970, but for which he plans to issue air quality criteria under this section.

EPA argued that the language of clause (C) ("for which he plans to issue") rendered listing discretionary, but the law is now clear that listing is mandatory once EPA determines the criteria are present. *See* NRDC v. Train, 545 F.2d 320 (2d Cir. 1976) (requiring EPA to list lead as a criteria pollutant).

52. EPA is to prescribe primary standards "the attainment and maintenance of which in the judgment of the Administrator, based on such criteria [under § 108] and allowing an adequate margin of safety, are requisite to protect the public health." Clean Air Act § 109(b)(1), 42 U.S.C. § 7409(b)(1) (2000). The secondary standards are supposed to be "requisite to protect the public welfare from any known or anticipated adverse effects associated with the presence of such air pollutant in the ambient air." Clean Air Act § 109(b)(2), 42 U.S.C. § 7409(b)(2) (2000).

53. *See* Sunstein, *supra* note 42, at 321. The use of independent scientific evaluations has become increasingly important in environmental regulation. *See* Lars Noah, *Peer Review and Regulatory Reform*, 30 ENVTL. L. REP. 10606 (2000).

within nine months.[54] EPA was required to approve the plan if it promised to attain the primary standards within three years of approval.[55] EPA is not allowed to consider economic or technological feasibility when reviewing state implementation plans (usually called SIPs), although states may choose to take cost into account when designing their SIPs.[56] If the state fails to submit an acceptable plan, EPA issues a plan of its own for that state.[57]

The initial deadline for achieving the air quality standards turned out to be utterly unrealistic. Congress responded by extending the schedule for compliance. Section 172, as amended in 1977, effectively postponed compliance with the primary standards until 1982, or 1987 for oxidants and carbon monoxide.[58] But even the revised deadlines turned out to be too ambitious. In 1990, the statute was once again amended, providing a complex new set of rules designed to promote attainment. Briefly, the 1990 amendments require states to modify their SIPs to achieve compliance by a new deadline and to impose detailed interim requirements on nonattainment areas.[59] States failing to submit such SIP amendments face possible funding cutoffs and may have an EPA implementation plan imposed on them. Increasingly stringent requirements are placed on new sources in non-attainment areas.[60]

The 1990 amendments also contain specific provisions relating to particular pollutants such as ozone.[61] The statute divides ozone non-attainment areas into five classes.[62] Only Los Angeles is in the worst class ("extreme" nonattainment).[63]

54. *See* Train v. NRDC, 421 U.S. 60, 63-67 (1975) (describing the statutory scheme).

55. *See* Clean Air Act § 110(a)(1), 42 U.S.C. § 7410(a)(1) (2000). The statute also contains special provisions dealing with pollution control for new cars and newly constructed industrial facilities, which are not relevant here.

56. *See* Union Elec. Co. v. EPA, 427 U.S. 246, 265 (1976).

57. *Id.* at 246.

58. *See* ROGER FINDLEY & DANIEL FARBER, ENVIRONMENTAL LAW 364-65 (5th ed. 1999).

59. *See id.* at 366.

60. *See id.* For a more detailed description, see Luneberg, *supra* note 2, at 10-18.

61. *See* FINDLEY & FARBER, *supra* note 58, at 366.

62. *See id.*

63. *See id.*

Deadlines for compliance are keyed to this scheme. For example, "marginal" areas must comply within three years, while at the other extreme a city like Los Angeles is given twenty years.[64] As usual in environmental law, complexity abounds. Additional requirements relate to percentage reductions in emissions of volatile organic compounds, permitting rules for major sources, and restrictions on new construction.[65]

Interstate transport of nitrogen oxide complicates ozone control by creating atmospheric ozone. Nitrogen oxides can be transported hundreds of miles into the Northeast, with the result that some states would not be in compliance with the standards even if they had no emissions of their own.[66] The 1990 amendments established a commission of the states in the transport area to advise EPA on pollution control methods.[67] The commission voted to recommend that EPA impose extremely strict standards on car emissions throughout the region. Although EPA's effort to follow this recommendation was blocked by litigation, negotiations between EPA, the states, and the auto industry resulted in a stringent voluntary program.[68] While these arduous attempts to comply with the existing ozone standards were underway, the process of reevaluating those standards had already begun.

B. *Rulemaking Issues*

The revised NAAQS for ozone and particulates were issued in 1997. Prior rulemakings had established that NAAQS are to be based on three factors: the seriousness of adverse health effects, whether effects are temporary or permanent, and the number of people sensitive to the effects.[69] Because the technical issues were somewhat different, it is worth considering the standards for the two substances separately.[70]

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64. *See id.*

65. *See generally id.* at 365-67.

66. *See* FINDLEY & FARBER, supra note 58, at 281.

67. *See id.*

68. *Id.*

69. *See* Mark Seidenfeld & Jim Rossi, *The False Promise of the "New" Nondelegation Doctrine*, 76 NOTRE DAME L. REV. 1, 3 (2000).

70. For sharp criticism of EPA's evaluation of the evidence, see Gray, *supra* note 49, at 239-45.

1. *The Ozone Standard*

Ozone is not directly emitted by pollution sources. Instead, it is formed from other air pollutants such as nitrogen oxides and hydrocarbons in the presence of sunshine.[71] The new rule changed the ozone standard from .12 ppm to .08 ppm; it also changed the averaging period from one hour to eight hours. The two changes were to some extent offsetting; the new standards allowed short bursts of higher concentrations while the .08 level was actually a return to an earlier level that had been in effect about twenty years ago.[72] To determine the health risk to the public from ozone, the agency estimated exposures for children and workers whose activities were outdoors.[73]

Assuming that a significant risk existed at the currently allowed .12 ppm level, the question was how far to lower the ceiling. EPA concluded that a level above .08 ppm would not protect sensitive populations adequately.[74] EPA also rejected arguments for a lower standard of .07 ppm because the most certain effects at the .08 level are "transient and reversible," and the existence of serious effects is much less certain at lower levels.[75] The agency also observed that a .07 ppm standard would be close to natural background levels in some locations, and no members of its scientific advisory group had supported a level below .08 ppm.[76] As interpreted by a sympathetic observer, the agency's somewhat cryptic remarks indicated that EPA was "balancing the severity of the potential effect against the degree of certainty with which it could predict that effect would in fact result."[77] This lead the EPA to conclude that it could not confidently identify a .07 level with significant adverse effects, while it would be "much more confident" that levels above .08 ppm presented serious risks.[78]

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71. George D. Thurston, *Scientific Research for Ozone and Fine Particulate Standards*, 16 PACE ENVTL. L. REV. 33, 35 (1998).

72. *See* McGarity, *supra* note 13, at 5.

73. *Id.*

74. *Id.* at 6-7.

75. *Id.* at 7.

76. *Id.* at 7. No background levels close to .08 had been observed. *See id.* at 15.

77. McGarity, *supra* note 13, at 11.

78. *Id.* at 11.

EPA's background document on ozone's health effects is said to be the size of "three Manhattan phone books."[79] In issuing the revised standard, the agency cited almost two hundred health studies that suggested the existence of health effects in children and other sensitive groups at the prior level.[80] For instance, EPA found decreased lung function in tests of children exposed to .12 ppm and found that hospital admissions increased on days with high ozone levels.[81] The agency also determined that ozone posed a particular risk to asthmatics because it not only inflamed airways and increased sensitivity to allergens, but also reduced the effectiveness of the most common steroid medications.[82] All told, studies showed a thirteen percent increase in respiratory patients per 100 ppb increase in ozone levels.[83] Interestingly, the studies found that some apparently normal individuals are highly sensitive to ozone, while others are tolerant of much greater exposures.[84]

The Regulatory Impact Analysis (RIA) accompanying the ozone standards was mixed. Taking into account that full attainment of the standards might be difficult, it found that even partial attainment of the standards might prevent between zero and eighty deaths annually, over one hundred emergency room admissions for asthma, and a substantial number of illnesses.[85] As a result, even partial attainment of the standards could bring a total monetized benefit of $400 million to $2.1 billion at a cost of roughly $1.1 billion.[86] The benefits estimate did not include all positive effects, such as general improvement in lung function.[87] On the other hand, the RIA did not take into account much higher estimates of cost produced by the American

79. John Vandenberg, Colloquium: *Scientific Research for Ozone and Fine Particulate Matter*, 16 PACE ENVTL. L. REV. 53, 55 (1998).

80. *Id.* at 56.

81. Thurston, *supra* note 71, at 39.

82. *Id.* at 39-40

83. *Id.* at 40.

84. Vandenberg, *supra* note 79, at 57.

85. Sunstein, *supra* note 42, at 328.

86. *Id.* at 328-29.

87. *See* Ronald Evans, *Economic Impact Analysis: The EPA Perspective*, 16 PACE ENVTL. L. REV. 63, 67 (1998).

Petroleum Institute and others.[88] It also ignored possible positive effects of low-level ozone in blocking ultraviolet radiation.[89]

2. *Particulates*

EPA has regulated particulates since 1971, but has changed both the level of regulation and the definition since then. In 1987, EPA concluded that particulate matter (PM) with diameters below 10 micrometers were small enough to enter the lungs, and it set an annual standard of 50 micrograms per cubic meter of air.[90] After EPA was successfully sued by the American Lung Association, it embarked on a reappraisal of the standard.[91] The agency then distinguished between fine PM (under 2.5 micrometers) and coarse PM, setting a standard of 15 micrograms per cubic meter. The old PM standard was modified only slightly to apply to coarse PM.[92]

According to EPA, more than sixty epidemiological studies showed significant connections between serious illness and PM levels at or below the currently permitted level.[93] In one particularly striking study, asthma and pneumonia admissions dropped sharply when a steel mill in Utah closed and PM levels declined, but then levels increased when the plant reopened and PM levels rose.[94] The record showed a range of adverse health effects at the current levels, including risks of hundreds of premature deaths a year, many more hospital admissions, and tens of thousands of breathing problems in children.[95] But some observers contested these conclusions by arguing that some of the correlations were spurious; for instance, both particulate levels and hospital admissions may vary for independent reasons on

88. *See* Alan Krupnick, *Economic Analysis*, 16 PACE ENVTL. L. REV. 69, 74-75 (1998).

89. *See* ATA I, 175 F.3d 1027, 1051 (D.C. Cir. 1999).

90. *See* Lucinda Minton Langworthy, *EPA's New Air Quality Standards for Particulate Matter and Ozone: Boon for Health or Threat to the Clean Air Act?*, 28 ENVTL. L. REP. 10502, 10503 (1998).

91. *See* Am. Lung Ass'n v. Browner, 884 F. Supp. 345 (D. Ariz. 1994).

92. Langworthy, *supra* note 90, at 10503.

93. *See* Vandenberg, *supra* note 79, at 58.

94. *See* Thurston, *supra* note 71, at 44.

95. *See* Sunstein, *supra* note 42, at 326.

different days of the week.[96] Studies of the impact of fine PM were particularly difficult. Because there was no regulatory standard in effect for these particulates, monitoring was not required, so information about current exposure levels was spotty.[97]

Particulate reductions accounted for the bulk of the benefits reported in the RIA for the new standards.[98] The RIA reported that the new particulate regulations would prevent 350 annual deaths, almost seven thousand cases of chronic bronchitis, and a considerable number of lost workdays and reduced activity days. Using a "partial attainment" scenario, the RIA estimated the benefits at $19 billion to $104 billion, with an estimated cost of $8.6 billion.[99] Indeed, the RIA suggested that even tighter standards would produce additional health benefits of four billion dollars, which could translate into as many as two hundred additional saved lives.[100] However, EPA concluded that studies showing ill effects at even lower levels were statistically unreliable.[101]

C. *The Delegation Question*

The final rules were issued in July of 1997, and were promptly challenged in court. Arguments were held on December 17, 1998, before a panel of the D.C. Circuit consisting of Judges Williams, Ginsburg, and Tatel. On May 14, 1999—two years after the standards had been issued—the court issued an opinion that stunned many legal observers.[102] The court held that the EPA's interpretation of the statute would render it an unconstitutional delegation of legislative power.[103]

Reviewing EPA's explanation for its choice of standards, the court could find little rationale beyond the truism that "effects are less certain and less severe at lower levels of expo-

96. *See* Craig N. Oren, *Run Over by* American Trucking *Part I: Can EPA Revive Its Air Quality Standards?*, 29 ENVTL. L. REP. 10653, 10660 (1999) (referred to as Oren, Part I).

97. *See id.*

98. *See* Krupnick, *supra* note 88, at 76.

99. Sunstein, *supra* note 42, at 329.

100. *Id.* at 329-30.

101. *See ATA I*, 175 F.3d 1027, 1059 (D.C. Cir. 1999) (Tatel, J., dissenting).

102. *Id.* at 1027.

103. *Id.* at 1033.

sure."[104] The same reasoning, according to the court, could justify any pollution level whatsoever:

> The principle EPA invokes . . . could as easily, for any non-threshold pollutant, justify a standard of zero. The same indeterminacy prevails in EPA's decisions *not* to pick a still more stringent level. For example, EPA's reasons for not lowering the ozone standard from 0.08 to 0.07 ppm—that "the more serious effects . . . are less certain" at the lower levels and that the lower levels are "closer to peak background levels," could also be employed to justify a refusal to reduce levels below those associated with London's "Killer Fog" of 1952. . . . Thus, the agency rightly recognizes that the question is one of degree, but offers no intelligible principle by which to identify a stopping point.[105]

As to "[w]hat sorts of 'intelligible principles' might EPA adopt," the court admitted that circuit precedent precluded cost-benefit analysis.[106] "Nonetheless," the court said, "an agency wielding the power over American life possessed by EPA should be capable of developing the rough equivalent of a generic unit of harm that takes into account population affected, severity and probability,"[107] perhaps following the lines of a scheme devised by Oregon to allocate funds among various medical treatments for the poor.

Besides this blockbuster ruling that the Clean Air Act was unconstitutional (at least under EPA's interpretation), the court dealt with a number of subsidiary matters. It reaffirmed the irrelevance of cost to setting NAAQS.[108] The court also ruled that the new ozone standard could not be implemented until Congress mandated a timetable for implementing the old standard.[109] The court also held that EPA must consider the potentially beneficial effects of ozone in blocking ultraviolet rays[110] and that the standard for coarse particulates was invalid because it also included fine particulates.[111]

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104. *Id.* at 1035.

105. *Id.* at 1036-37 (citations omitted).

106. *ATA I,* 175 F.3d at 1038.

107. *Id.* at 1039.

108. *Id.* at 1040 (D.C. Cir. 1999).

109. *Id.* at 1045-51. General nonattainment rules can be found in subpart 1 of Part D of the Clean Air Act, but the court concluded that subpart 2, specifically addressing ozone attainment, was controlling. *Id.*

110. *ATA I,* 175 F.3d at 1050-52.

111. *Id.* at 1052-55.

Judge Tatel wrote a spirited dissent, accusing the majority of ignoring "the last half-century of Supreme Court nondelegation jurisprudence . . . ."[112] He emphasized that the agency's line drawing was based on findings that risks were either less certain or transient and reversible below certain levels.[113] In sum, he concluded that the EPA "set the ozone level just above peak background concentrations where the most certain health effects are not transient and reversible," and the EPA set the fine particulate level at "the lowest long-term mean concentration observed in studies that showed a statistically significant relationship between fine particle pollution and adverse health effects."[114]

Administrator Carol Browner publicly denounced the majority opinion as "extreme, illogical and bizarre."[115] Over 250 public interest groups immediately urged the Justice Department to appeal.[116] Even the lawyer who represented small businesses in the challenge to the air standards admitted that the ruling was completely unexpected: "This time last year, there were three people in Washington who believed in nondelegation in this area," he said.[117]

Not surprisingly, the government sought rehearing by the panel and rehearing en banc. Although the petitions failed,[118] the dissents were significant in two respects. First, in his dissent from rehearing by the panel, Judge Tatel parted company with the majority over the ozone implementation issue, arguing that EPA should be able to impose the new standard for areas that had already met the old one.[119] Second, Judge Silberman, a conservative stalwart, dissented from the denial of a rehearing en banc, calling the panel's reliance on the nondelegation doctrine "ingenious" but "fundamentally unsound."[120] Dissenting on the en banc issue, Judge Tatel said again that the panel

112. *Id.* at 1057.
113. *Id.* at 1058-60.
114. *Id.* at 1061.
115. Steve France, *EPA, Lawyers, Scholars Take Measure of 'Nondelegation' Theory in Ozone Ruling*, 67 U.S.L.W. 2739 (1999).
116. *Id.*
117. *Id.*
118. ATA II, 195 F.3d 4 (D.C. Cir. 1999).
119. *Id.* at 11-12.
120. *Id.* at 14.

not only departed from a half-century of controlling precedent "but in doing so, it stripped the Environmental Protection Agency of much of its ability to implement the Clean Air Act, this nation's primary means of protecting the safety of the air breathed by hundreds of millions of people."[121]

D. *The Relevance of Cost*

The D.C. Circuit's use of the nondelegation doctrine was widely criticized by commentators.[122] Some commentators suggested that the Supreme Court use the opportunity to require use of cost-benefit analysis in setting NAAQS.[123] However, the Supreme Court sided with EPA on both of these issues.[124] Surprisingly, not only was the result unanimous, but the opinion was written by Justice Scalia, the most anti-environmentalist of the Justices.[125] Justice Scalia's opinion is brisk and to the point.

First, Scalia rejected the arguments for considering cost. Because the text of the statute mentions only public health in setting NAAQS, Justice Scalia stated that the exclusion of cost might have been thought fairly clear "[w]ere it not for the hundreds of pages of briefing" submitted on the issue.[126] Inasmuch as the statute does allow for consideration of costs in many

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121. *Id.* at 17.

122. *See* Robert W. Adler, American Trucking *and the Revival(?) of the Nondelegation Doctrine*, 30 ENVTL. L. REP. 10233 (2000); Lisa Heinzerling, *The Clean Air Act and the Constitution*, 20 ST. LOUIS U. PUB. L. REV. 121 (2001); McGarity, *supra* note 13; Oren, *supra* note 96; Seidenfeld & Rossi, *supra* note 69; Sunstein, *supra* note 42; Deborah Behles, Comment, *A Wrong Turn Crushes Protective Air Regulations:* American Trucking Ass'ns v. EPA, 85 MINN. L. REV. 319 (2000). See Bressman, *supra* note 44 for the best defense of Judge Williams' opinion.

123. *See* C. Boyden Gray, *The Search for an Intelligible Principle: Cost-Benefit Analysis and the Nondelegation Doctrine*, 5 TEX. REV. L. & POL. 1, 47 (2000). *See also* Sunstein, *supra* note 42, at 377-78 (suggesting that "it is not entirely clear that the statute should be construed to forbid cost-benefit analysis" and that, if the Supreme Court failed to reject the lower courts' preclusion of cost-benefit analysis, a statutory amendment might be in order).

124. *See* ATA III, 531 U.S. 457 (2001)

125. *See* Richard J. Lazarus, *Thirty Years of Environmental Protection Law in the Supreme Court*, 17 PACE ENVTL. L. REV. 1, 11 (1999) (assigning Scalia an environmental score "so low that one can fairly posit that Justice Scalia perceives environmental protection concerns as promoting a set of legal rules antithetical to that which he favors").

126. *ATA III*, 531 U.S. at 465.

other contexts, Justice Scalia said that the Court had previously refused to find implicit authorization in ambiguous sections of the Act. Hence, the challengers were required to show "a textual commitment of authority" to EPA to consider costs and "that textual commitment must be a clear one."[127] No such clear textual commitment could be found. True, industry cited minor references to cost in peripheral provisions relating to the standards, but such nuances should not be allowed to set the overall interpretation of the statute: "Congress, we have held, does not alter the fundamental details of a regulatory scheme in vague terms or ancillary provisions—it does not, one might say, hide elephants in mouseholes."[128]

On somewhat different grounds, Justice Breyer agreed in his concurrence that cost was irrelevant. All things being equal, according to Breyer, "we should read silences or ambiguities in the language of regulatory statutes as permitting, not forbidding, this type of rational regulation."[129] But he found the legislative history preclusive, for it showed that Congress intended to impose standards beyond current economic or technological feasibility in order to force technology improvements and to preserve public health.[130] Nevertheless, he argued, the statutory language allowed EPA to ignore trivial risks and to avoid "deindustrialization."[131] Since preindustrial society was not a very healthy society, a standard that necessitated the return of the Stone Age would not be "requisite to protect the public health."[132]

Justice Scalia also flatly rejected the D.C. Circuit's novel version of nondelegation doctrine. Simply speaking, the Clean Air Act provided a sufficient intelligible principle: "Section 109(b)(1) of the CAA [Clean Air Act], which to repeat we interpret as requiring the EPA to set air quality standards at the level that is 'requisite'—that is, not lower or higher than is necessary—to protect the public health with an adequate margin of safety, fits comfortably within the scope of discretion permitted

127. *Id.* at 468.
128. *Id.* at 468.
129. *Id.*at 490 (Breyer, J., concurring).
130. *See id.* at 492-96.
131. *ATA III*, 531 U.S. at 494.
132. *Id.*

by our precedent."[133] Scalia scoffed at the lower court's view that EPA could cure a nondelegation problem by adopting administrative standards. "The very choice of which portion of the [statutory] power to exercise," he said, "would *itself* be an exercise of the forbidden legislative authority."[134]

EPA did not fare as well, however, on the issue of ozone implementation. Unlike the D.C. Circuit, the Supreme Court did not find the relationship between subpart 1 (ordinary nonattainment rules) and subpart 2 (special ozone nonattainment rules) to be unambiguous.[135] But EPA's interpretation—that it could ignore subpart 2 and simply implement the new ozone standards under subpart 1—was unreasonable because it would have allowed the elaborate restrictions and timetable of subpart 2 to be nullified the day after the statute was passed.[136] The Court left to EPA, after remand, the task of developing a reasonable interpretation of the nonattainment implementation provisions.[137]

In short, the Court's decision was primarily important for what it did *not* do: it did not change the well-established view of the lower courts that consideration of cost is precluded, and it did not agree with the D.C. Circuit's novel constitutional argument. The upshot is to close the door to cost-benefit analysis in setting air quality standards. However, it is obvious that finalizing and implementing the standards will be a long process. The Court's decision came down on February 27, 2001, three and a half years after the regulations were issued. Another year later, the D.C. Circuit held that the standards were not arbitrary or capricious, finally opening the door to implementation.[138] Other issues still remain to be settled.[139]

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133. *Id.* at 475-76.

134. *Id.* at 473. Professor Bressman argues that this part of Justice Scalia's discussion was dictum, since the Court found that Congress had provided a sufficiently clear standard for regulators. *See* Bressman, *supra* note 2, at 473.

135. For a careful analysis of the D.C. Circuit's handling of the issue, see Craig N. Oren, *Run Over by* American Trucking *Part II: Can EPA Implement Revised Air Quality Standards?*, 30 ENVTL. L. REP. 10034 (2000) (Oren, Part II). The Supreme Court's ruling on the issue is analyzed in Luneburg, *supra* note 2, at 51-55.

136. *See ATA III*, 531 U.S. at 483-86.

137. *Id.* at 486.

138. *See* ATA IV, 283 F.3d 355 (D.C. Cir. 2002).

IV. IMPLEMENTING ENVIRONMENTAL STANDARDS

To evaluate the arguments for regulatory reform, we need to understand how environmental standards are actually implemented. Much of the debate over regulatory reform seems to assume that environmental standards are seamlessly translated into pollution reductions. As it turns out, the road to compliance is considerably longer and more problematic, providing many opportunities for readjustments and compromise.

A. *The Tangled Path to Environmental Compliance*

Environmental mandates have a familiar life cycle. A new statute or amendment is passed with much fanfare. The statute directs EPA to issue new rules before some deadline, usually less than a year away. The time comes and goes, but no EPA action is forthcoming. Sometimes EPA is unable to comply because of insufficient information or budget shortfalls; sometimes EPA simply chooses not to comply for political reasons or because it believes the mandate is unworkable. This phenomenon is a ubiquitous feature of environmental law: deadlines are missed, standards are ignored or fudged, and enforcement misfires.[140] Thus, as Richard Stewart explains, environmental law has an "official track" of formal statutory compliance and a "'shadow' track of decisionmaking that involves varying elements of more informal procedures and higher-level administrative review of negotiations between regulators, the regulated, and (in some cases), third parties."[141]

The Clean Water Act provides some striking examples. Under section 304(b) of the Act,[142] the EPA was required to is-

139. EPA has begun to revamp its plans for implementing the ozone standard. *See EPA Begins Rewrite of Ozone Policy to Meet High Court Test*, INSIDE EPA WEEKLY REPORT, March 16, 2001, at 1.

140. These compliance problems are by no means hidden and are probably well known to anyone with even a small familiarity with the field. Even twenty years ago, it was clear that regulatory standards were often merely targets rather than strict mandates. *See* James A. Henderson & Richard N. Pearson, *Implementing Federal Environmental Policies: The Limits of Aspirational Commands*, 78 COLUM. L. REV. 1429 (1979). But to a surprising extent, we have managed to focus our attention elsewhere, thereby sustaining a state of denial regarding the extent of the compliance shortfall.

141. Richard B. Stewart, *A New Generation of Environmental Regulation?*, 29 CAP. U.L. REV. 21, 38 (2001).

142. Clean Water Act § 304(b), 33 U.S.C. § 1314(b) (2000).

sue effluent guidelines in 1973. These guidelines were supposed to form the basis for effluent limitations under section 301, which in turn had compliance deadlines as early as 1977 and a 1983 deadline for stricter standards.[143] But EPA fell far behind schedule. For example, it did not issue regulations for the chemical industry until 1987.[144] Regulations for certain mining operations were issued in 1988 and upheld two years later.[145] Thus, these particular standards were at least fifteen years overdue. As a result of such delays, many permits were issued in the meantime without the benefit of EPA regulations. Under the statute, until the regulations are in place for an industry, permits are supposed to be issued under "such conditions as the Administrator determines are necessary to carry out the provisions of this Act."[146] In practice, states imposed ad hoc pollution requirements largely unrelated to the apparent demands of the statute.[147]

As the role of state implementation plans under the Clean Air Act illustrates, environmental statutes often call for states to assume enforcement authority, subject to federal supervision. In theory, state programs must meet strict standards. In reality, federal supervision is often lax, and states often can openly

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143. *See* Clean Water Act § 301, 33 U.S.C. § 1311 (2000). EPA actually merged the § 304 guidelines with § 301 effluent limitations, which could be considered a kind of slippage as well.

144. *See* David G. Gray, Note, *"Then the Dogs Died": The Fourth Amendment and Verification of the Chemical Weapons Convention*, 94 COLUM. L. REV. 567, 617 n.320 (1994).

145. *See* Rybachek v. Alaska Miners Ass'n, 904 F.2d 1276, 1299-1301 (9th Cir. 1990).

146. Clean Water Act § 402(a)(1)(B), 33 U.S.C. § 1342(a)(1)(B) (2000).

147. Howard Latin, *Regulatory Failure, Administrative Incentives, and the New Clean Air Act*, 21 ENVTL. L. 1647, 1672 (1991).

> Congress wanted technology-based standards to apply uniformly to similar sources across the nation, but the permits were negotiated on an individualized basis incorporating whichever control measures and compliance schedules dischargers would accept. EPA characterized these permits as grounded on "best professional judgment;" but they often reflected simply the "best deal" the Agency could obtain in light of manpower and time constraints and its desire to demonstrate progress. These "best professional judgments" were usually made by EPA regional personnel with water quality, not technology based, orientations. Thus, many control measures imposed in the permits bore little resemblance to the technology-based requirements mandated by the statute.

Id.

deviate from statutory requirements. The "threat of the EPA withdrawing approval for any state enforcement programs and having the federal government assume primary responsibility" is "hollow due to a lack of federal resources and an expanding number of regulated entities."[148] Under the Clean Water Act, states have also managed to dodge or even disobey federal mandates outright. As the General Accounting Office (GAO) reported, one state refused to apply new federal standards simply because it found them to be too strict, but "EPA did not withdraw the program because it was 'an unrealistic option.'"[149] States are notoriously uneven in their implementation of the statute. For instance, sources in one state were allowed to remain out of compliance for about fifty percent longer than those in another state.[150] Indeed, EPA lacks the data it would need to effectively monitor state programs even if it had the desire to do so.[151] However, the desire itself is often lacking. For instance, EPA colluded with the states for many years to avoid implementing the "total maximum daily load" requirements of the Clean Water Act. Only after a series of successful citizen suits by environmentalists did federal and state agencies belatedly undertake compliance efforts.[152]

The Clinton Administration championed a creative effort to "reinvent" environmental implementation.[153] To soften the effects of environmental regulations on firms, the Administration supported measures such as wetlands mitigation and brownfields regulations.[154] The best-known example is Project XL, in which the EPA negotiated with selected firms for im-

148. Victor Flatt, *A Dirty River, Runs Through It: The Failure of Enforcement of the Clean Water Act*, 25 B.C. ENVTL. AFF. L. REV. 1, 31 (1997).

149. *Id.* at 18.

150. *Id.* at 26-27. *See also* Nicholas C. Yost, *The State of Environmental Law Enforcement: A Speech Presented at the American Bar Association's 1998 Annual Meeting*, 28 ENVTL. L. REP. 10711, 10712 (1998) (on uneven state enforcement).

151. Flatt, *supra* note 148, at 18-19.

152. *See* Oliver Houck, *TMDLs III: A New Framework for the Clean Water Act's Ambient Standards Program*, 28 ENVTL. L. REP. 10415, 10416 (1998).

153. For a description of these efforts (and their debatable validity under current law), see Bradford Mank, *The Environmental Protection Agency's Project XL and Other Regulatory Reform Initiatives: The Need for Legislative Authorization*, 25 ECOLOGY L.Q. 1 (1998). A particularly useful set of case studies can be found in Carol Weissner, *Regulatory Innovation: Lessons Learned from EPA's Project XL and Three Minnesota Project XL Pilots*, 32 ENVTL. L. REP. 10075 (2002).

154. Stewart, *supra* note 141, at 69-71, 76-77.

proved environmental performance. For instance, to promote regulatory flexibility, EPA promoted the use of "risk bubbles" that allow a facility to increase some discharges beyond the mandated levels in return for larger voluntary reductions in emissions posing higher risks.[155] According to advocates, Project XL had the potential to make "truly revolutionary changes," allowing use of multi-media performance standards and market-based controls to improve environmental quality and streamline regulation.[156] However, critics alleged that the idea was simply to excuse some supposedly less significant regulatory violations in exchange for agreements to transcend the standards in more important respects.[157]

B. *Implementing the Clean Air Act*

The same complex process of implementation is found under the 1970 Clean Air Act. Indeed, as it turns out, the NAAQS that were reviewed in *American Trucking* epitomize the critical role of the implementation process. Without understanding the true function of air quality standards in the regulatory system, we cannot sensibly evaluate the process for issuing the standards.

1. *The Difficulties of Clean Air Compliance*

As discussed in Part III, the nation was supposed to have achieved the primary national air quality standards by 1975. Two years after the deadline had been missed, Congress amended the statute and extended the deadline to 1982 (or 1987 for some pollutants). When these deadlines arrived, EPA was placed in an embarrassing position. For instance, over seventy cities missed the 1987 deadline for ozone and carbon monoxide. EPA managed to put off any serious sanctions until Congress passed the 1990 amendments, again postponing the

155. *Id.* at 65.

156. Beth S. Ginsberg & Cynthia Cummis, *EPA's Project XL: A Paradigm for Promising Regulatory Reform*, 26 ENVTL. L. REP. 10059, 10062 (1996). For a review of efforts to conceptualize these innovative approaches, see Daniel A. Farber, *Triangulating the Future of Regulation: Three Emerging Models of Environmental Protection*, 2000 U. ILL. L. REV. 61 (2000).

157. *See* Rena Steinzor, *Regulatory Reinvention and Project XL: Does the Emperor Have Any Clothes?*, 26 ENVTL. L. REP. 10527 (1996).

compliance dates.[158] After 1990, a new cycle of mandates, delay, and partial compliance began.

These delays and misfires are not due solely to resistance from industry and other anti-regulation forces. For instance, as Stewart explains: "[E]nvironmental groups could have successfully challenged EPA's practice during the late 1980s of approving [unrealistic] state implementation plans . . . but these groups declined to do so because more stringent and realistic SIP provisions would have required sharp limitations on automobile use."[159] Early in the 1980s, according to Stewart, when many states had missed their attainment deadlines, "[d]emocrats in Congress, generally supportive of strong environmental regulation, pressured EPA not to bring enforcement actions, fearing a political backlash that could lead to amendments that would weaken the Act."[160]

Just as it has had trouble obtaining state cooperation under the Clean Water Act,[161] EPA has admitted its unwillingness to impose strict deadlines or sanctions on state agencies regulating air pollution.[162] The full exercise of federal authority in this area is often impractical because a "successful federal air pollution control program requires the willing participation of state administrative agencies."[163] Thus, "Congress and EPA can quell minor revolts among state agencies, but widespread dissatisfaction, manifested in the time-honored 'go-slow' approach, will bring EPA and even Congress to the bargaining table."[164] Consequently, "states have been able to work compromises with EPA rather than be slavishly subject to federal dictates."[165]

But it is not merely recalcitrance by outside forces that interferes with implementation. EPA itself is sometimes the source of resistance. EPA doggedly refused to implement the

158. *See* FINDLEY & FARBER, *supra* note 58.

159. Stewart, *supra* note 141, at 59.

160. *Id.* at 59.

161. *See* sources cited *supra* notes 148-152.

162. Latin, *supra* note 147, at 1691.

163. See John Dwyer, *The Practice of Federalism Under the Clean Air Act*, 54 MD. L. REV. 1183, 1218 (1995). Dwyer's account of the inability of EPA to obtain state compliance with requirements for "inspection and maintenance" programs is particularly striking. *Id.* at 1210-15.

164. *Id.* at 1224.

165. *Id.* at 1216.

original provision of the Clean Air Act regulating toxic pollutants because it considered the provision unworkably draconian.[166] More generally, in the early years of the Act, EPA regional offices "issued hundreds of administrative orders and compliance schedules that diverged" from legal requirements and "were more lenient than necessary to reach attainment."[167] Until recently, the EPA had been similarly resistant about enforcing important provisions of the statute dealing with transboundary pollution.[168]

However, it would be a mistake to view the implementation process too narrowly, as merely an erratic method of forcing compliance with federal standards. Both EPA and the states have sometimes used implementation as an opportunity for creative environmental strategies. For example, EPA adopted an innovative program of marketable credits when it phased out leaded gasoline; the program created a net cost savings of hundreds of millions of dollars.[169] States have also been active in experimenting with new implementation approaches. For instance, a major experiment in using marketable permits took place in California. The program covered almost all facilities emitting over four tons per year of nitrogen oxides or sulfur oxides, and by 1998 more than $42 million in trades had taken place among the three hundred facilities in the program.[170] Similar systems for volatile organic chemicals were instituted in Illinois, New Jersey, and Michigan.[171]

2. *Implementing the New NAAQS*

In the rulemaking on the new ozone and particulate standards, EPA had asked for comments on the implementation issues. The comments were voluminous—even the index to the comments is two inches thick.[172]

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166. *See* John Dwyer, *The Pathology of Symbolic Legislation*, 17 ECOLOGY L.Q. 233, 250-51 (1990).

167. Latin, *supra* note 147, at 1689.

168. *See* Thomas Merrill, *Golden Rules for Transboundary Pollution*, 46 DUKE L.J. 931, 984 (1997).

169. *See* Stewart, *supra* note 141, at 105.

170. *See* Daniel P. Selmi, *Transforming Market Incentives from Theory to Reality*, 24 ENVTL. L. REP. 10695 (1994).

171. Stewart, *supra* note 141, at 107.

172. *See* Oren, *supra* note 135, at 10034.

Implementing the new ozone and PM standards presented special challenges. First, both pollutants are capable of traveling very long distances, posing difficulties under a statute that focuses on state-by-state regulation. For example, ozone and PM problems in New York City are partially due to emissions in New Jersey, Pennsylvania, Ohio and even Indiana.[173] Second, based on experience with other pollution programs in states like California, EPA concluded that ten thousand dollars per ton is the limit on what people are willing to pay to control nitrogen oxides or hydrocarbons.[174] Hence, to be feasible, implementation would have to work within this limit.

The same day that the new air quality standards were issued, President Clinton took the unusual step of releasing a memorandum to EPA about implementation.[175] Besides discussing some of the timing problems in implementing the new standards, the memo contains some intriguing substantive features. It stresses regional strategies rather than the traditional state implementation plans:

> For the past 2 years the EPA has been working with the 37 most eastern States through the Ozone Transport Assessment Group (OTAG) in the belief that reducing interstate pollution will help all areas in the OTAG region attain the NAAQS. A regional approach can reduce compliance costs and allow many areas to avoid most traditional nonattainment planning requirements. . . . If the States choose to establish a regional emission cap-and-trade system, modeled on the current acid rain program, reductions can be obtained at a lower cost. The EPA will encourage and assist the States to develop and implement such a program. Most important, based on the EPA's review of the latest modeling, a regional approach . . . will allow the vast majority of areas that currently meet the 1-hour standard but would not otherwise meet the new 8-hour standard to achieve healthful air quality without additional local controls.[176]

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173. Thurston, *supra* note 71, at 37. For this reason, NAAQS change must be considered in tandem with EPA's "NOx SIP call" and its handling of § 126 petitions. *See* Luneburg, *supra* note 2, at 28-35, 41-46.

174. *See* Evans, *supra* note 87, at 65.

175. Implementation of Revised Air Quality Standards for Ozone and Particulate Matter, 62 Fed. Reg. 38,421 (July 18, 1997). *See also* Luneburg, *supra* note 2, at 25 (describing Clinton's directive as a surprise to outside observers).

176. Implementation of Revised Air Quality Standards for Ozone and Particulate Matter, 62 Fed. Reg. at 38,425.

As for the particulate standard, the memo stressed that no control measures can be put in place until a new monitoring network can determine current air levels of fine particulates.[177] In the meantime, EPA would issue "unclassifiable" designations that would not require any nonattainment measures until monitoring was complete.[178] The acid rain program could reduce particulate levels, reducing the projected nonattainment problem by one-third.[179] The memo also attempted to cap compliance costs:

> It was agreed that $10,000 per ton of emission reduction is the high end of the range of reasonable cost to impose on sources. Consistent with the State's ultimate responsibility to attain the standards, the EPA will encourage the States to design strategies for attaining the PM and ozone standards that focus on getting low cost reductions and limiting the cost of control to under $10,000 per ton for all sources. Market-based strategies can be used to reduce compliance costs. The EPA will encourage the use of concepts such as a Clean Air Investment Fund, which would allow sources facing control costs higher than $10,000 a ton for any of these pollutants to pay a set annual amount per ton to fund cost-effective emissions reductions from non-traditional and small sources.[180]

Finally, the memorandum stressed the need for on-going research into the health effects of fine pollutants and the possible benefits of ground-level ozone in blocking ultraviolet light.[181]

Complex timing issues complicate implementation of the new NAAQS even more.[182] Primary air quality standards must be attained within five years of EPA's determination that an area is out of compliance; EPA can provide a five-year extension after considering the severity of the nonattainment and the fea-

177. *See id.* at 38,427-28.

178. *Id.* at 38,427.

179. *Id.*

180. *See id.* at 38,429.

181. Implementation of Revised Air Quality Standards for Ozone and Particulate Matter, 62 Fed. Reg. at 38,430. The memorandum also suggested the creation of a special "transitional" designation, with less onerous legal obligations, for areas meeting the current ozone standard but out of compliance with the new ones; the validity of this transitional designation is controversial. *See* Oren, *supra* note 135, at 10037.

182. These issues are analyzed detail in Oren, *supra* note 135.

sibility of controlling the pollution.[183] With regard to the new ozone and particulate standards, Congress stepped in to further postpone the deadlines. Title VI of the Transportation Equity Act for the 21st Century[184] allows EPA to postpone nonattainment designations for fine particulates until the end of 2005; it also gave a one-year extension on nonattainment designations for ozone.[185] With respect to the ozone standard, as we saw in Part III, considerable confusion also exists about how to relate the statutory timetable for achieving the old standards with a schedule for the new standards. The Supreme Court rejected the EPA's proposal as unreasonable, but the court left it up to EPA on remand to come up with a more acceptable solution.[186]

The upshot is that serious implementation efforts will not begin for particulates until 2005 and probably will not end until 2015.[187] The timetable for ozone compliance is even less clear. The Clinton Administration had stressed the need for creativity in devising new implementation strategies; we can expect the Bush Administration to place even greater emphasis on cost sensitivity and state initiatives in implementation.

V. REGULATORY REFORM REVISITED

With the benefit of this deeper understanding of environmental implementation, we return to the debate over regulatory reform. As we will see, although advocates of regulatory reform have some legitimate concerns about environmental law, their chosen tools are often irrelevant to the realities of environmental regulation.

A. *Cost-benefit Analysis and Dynamic Environmental Regulation*

Support for cost-benefit analysis extends beyond hardcore opponents of environmental regulation. One moderate advocate of cost-benefit analysis is Cass Sunstein. He observes: "[I]t

183. *See* Langworthy, *supra* note 90, at 10503.

184. Transportation Equity Act, Pub. L. No. 105-178, § 6101-04, 112 Stat. 463-465 (1998).

185. Langworthy, *supra* note 90, at 10504.

186. Some possible EPA responses are discussed in Luneburg, *supra* note 2, at 56-64.

187. *See id.* at 28.

seems both natural and sensible to assess further reductions in terms of their cost."[188] For instance, he points out that if the expense of reducing sulfur dioxide by one part per million is "trivial, then the reduction is almost certainly worthwhile," but matters look very different when benefits are "highly uncertain" and "the cost would run into the tens of billions of dollars."[189] According to Sunstein, "it is impossible to assess 'safety' in a cost vacuum," so that "[i]n general, cost-benefit analysis should be followed, acknowledging that it will raise some hard questions of value."[190] Consequently, he advocates what might be considered a "kinder and gentler" version of cost-benefit analysis that leaves some room for unquantified values.[191]

This is a plausible argument, and it is not one that can be dismissed as simply insensitive to noneconomic values or hostile to the regulatory state. But, as Sunstein himself has recognized, the realities of the implementation may provide the best argument against using cost-benefit analysis to determine the standards.[192]

As we saw in Part IV (A), environmental implementation tends to be a long and twisted road. The Court recognized in *American Trucking* that cost is a substantial concern during implementation.[193] The statute permits cost to be taken into account in a variety of contexts: in excusing individual sources from compliance where their continued operation is economically critical, in setting standards for new factories and for automobiles, and in setting certain other emissions reductions.[194] But this is really only the tip of the iceberg. For instance, as

188. Sunstein, *supra* note 42, at 316.

189. *Id.*

190. *Id.* at 378.

191. *See id.* at 370. Some sense of what he has in mind can be found in his earlier work. He has called for a two-part process, the first stage consisting of a quantitative cost-benefit analysis, while the second would introduce other values, if any are relevant, that cost-benefit analysis leaves out. SUNSTEIN, *supra* note 22. Just how costs and benefits are defined would depend in part on the type of statute. For statutes like pollution regulations, which are designed to prevent harms to third parties and deal with collective action problems, it may argue that there is much to be said in favor of a quantified cost-benefit analysis. *See* Sunstein, *supra* note 42, at 369-70 (1999). A similar approach to cost-benefit analysis is ably defended in Adler and Posner, *supra* note 22.

192. *See* Sunstein, *supra* note 42, at 378.

193. *See* ATA III, 531 U.S. 457, 466-68 (2001).

194. *See id.*

discussed in Part IV (B), the new ozone and particulate standards will be implemented with careful attention to cost, including some innovative economic mechanisms. Thus, in reality, the statute is not the cost-blind behemoth that its detractors fear.

Setting goals without regard to cost, while attending to costs in the implementation process, has several advantages. First, it is responsive to the strong value our society places on public health and safety. Chris Schroeder, who is generally skeptical about the desirability of an environmental baseline, has argued that such a baseline is legitimate in the field of public health. "When environmental harms pose a discernible risk to human life or threaten serious adverse health effects," he observes, we can "discern a public favoring maximum feasible environmental controls."[195] He criticizes cost-benefit analysis for taking a reductionist approach to human life, emphasizing that no public official has ever been willing to stand up to say that a regulation's cost exceeded the monetary value of human life.[196] Thus, he says, our laws should embrace the pricelessness of human life, even though tradeoffs will be necessary, because there is an "enormous difference between explicitly declaring human life to have finite value and implicitly doing so."[197] The current scheme, then, allows us to reaffirm our commitment to the value of human life, while allowing us to respect the limits of feasible regulation.

Second, cost-benefit analysis has limited utility in the earliest stages of this lengthy, evolving process. In his concurrence in *American Trucking*, Justice Breyer stresses the mismatch between cost-benefit analysis and the concept of technology-forcing:

> [T]he statute's technology-forcing objective makes regulatory efforts to determine the costs of implementation both less important and more difficult. It means that the relevant economic costs are speculative, for they include the cost of unknown future technologies. It also means that efforts to take costs into account can

195. Christopher H. Schroeder, *Clear Consensus, Ambiguous Commitment*, 98 MICH. L. REV. 1876, 1909 (2000).

196. *Id.* at 1910.

197. *Id.* at 1911.

> breed time-consuming and potentially unresolvable arguments about the accuracy and significance of cost estimates.[198]

Given the unusually long delays that will attend implementation of the ozone and particulate standards, trying to foresee technological developments is even more treacherous.[199] Thus, a cost-benefit analysis would involve considerable guesswork about technology.

But technological change is only part of the problem. Compliance also is likely to involve the use of innovative legal mechanisms, such as regional marketable permits, compliance funds, and other programs that have not yet been conceived.[200] Projecting compliance costs under these circumstances is, to say the least, highly speculative. In the meantime, our understanding of the benefits of the regulation will improve over time. For example, we will not have accurate data on current levels of fine particulates until a new monitoring program is in place, and our knowledge of health effects will also be improved as current research programs bear fruit. Indeed, as our information improves, the standards may once again be readjusted. Milking our current database for the last drop of information relating to costs and benefits of the NAAQS would be wasteful. It makes far more sense to set a target, start down the road toward meeting it, and readjust our goals and our compliance methods as we go along.

Given the reality of delayed and/or partial compliance, cost-benefit analysis might not be the optimal government strategy even if our sole goal was economic efficiency and even if cost-benefit analysis produced clear results (which often it does not). The fact that the standards are sometimes too harsh (that is, compliance costs are too high compared with benefits) may be perfectly reasonable given the existence of widespread regulatory slippage. In effect, the standards may merely be the government's opening demand in negotiations, and the final bargain is likely to be more favorable to the other side. If the government began the negotiations with an "optimal" regulatory bid (optimal in the sense that implementation would maxi-

198. *ATA III*, 531 U.S. at 492-93.

199. See Jonathon H. Adler, *Free & Green: A New Approach to Environmental Protection*, 24 HARV. J.L. & PUB. POL'Y 653, 659 (2001).

200. *See id.* at 678.

mize net economic benefits), the ultimate bargain would probably be too favorable to the regulated party. Thus, the criticism of regulatory standards is undermined once we recognize that the standards are often only partially implemented.[201]

In short, given the realities of environmental regulation, the conventional regulatory system may work better in practice than it does on paper. Cost-benefit analysis, on the other hand, may have less ability to improve the process than an economist theorist would expect. At any given time, no single decision-maker has either the knowledge or the power to set the future path of policy. Sometimes a rough cost-benefit analysis may be useful, especially in making plans for implementation. But overall, the performance of the system depends on the skill and intelligence of the regulators and on their ability to interact constructively with other key players, rather than on the use of any specific formalized decision standard. Increased emphasis on cost-benefit analysis would not radically improve the overall cost-effectiveness of environmental law.

B. *Delegation*

The nondelegation doctrine reflects a concern about unchecked power in the hands of administrators. The concern about politically unaccountable regulation is legitimate. But the doctrine itself seems irrelevant to modern environmental law for several reasons.

First, to the extent that the nondelegation doctrine calls for more congressional oversight of the EPA, that is like a demand for shipping more snow to the Eskimos. We currently have vo-

201. Similarly, attacks on the "one size fits all" nature of regulation also lose some of their force once the compliance process is understood. Compliance costs and environmental impacts affect enforcement and compliance levels. Industries or localities with unusually high compliance costs have a greater incentive to resist government demands, and those high costs may also have political ramifications such as lost jobs or declining tax base that might limit the government's regulatory enthusiasm. On the other hand, more severe or more visible environmental impacts will create more pressure on the government for enforcement of the standards, and make a citizen suit more likely. Consequently, enforcement probably will be strictest for sources with low compliance costs and high environmental impacts, and weakest for sources with high costs and low impacts. This is more or less the kind of regime an economist would recommend in the place of the supposedly uniform standards, though admittedly the individual tailoring is highly imprecise.

luminous, complex environmental laws, full of many pages of specificity and details. The Clean Air Act, for instance, is comparable in details and complexity to the income tax statute. Rather than being left adrift without legislative guidance, EPA often seems to be drowning in a sea of legislative micromanagement.

Second, at the specific stage of setting environmental standards, some degree of agency discretion seems unavoidable. Unless Congress is going to set the standards itself, which it seems ill-equipped to do, the agency will be forced to make highly contestable judgment calls. Such judgment calls would be required regardless of what technique the agency embraced for setting standards. Forcing the EPA to rely on cost-benefit analysis would not end the need for these judgment calls. Cost-benefit analysis inevitably allows considerable flexibility for several reasons: the uncertainty associated with most of the risks, the difficulties of monetizing benefits, the dispute about how to reduce future costs and benefits to present value, and the frequent inaccuracy of cost projections.[202] All of these factors are exacerbated when setting NAAQS, which are based on evaluation of cutting-edge epidemiological research. Achieving the NAAQS would produce a range of health, mortality, and environmental benefits that are hard to monetize, will not have their full effects for many years, and will have costs that are dependent upon technological change and negotiation of regulatory techniques. Thus, adopting cost-benefit analysis as the regulatory standard would only modestly help to limit agency discretion.

Third, the delegation doctrine does not address the real problems of accountability in the current regulatory system. Setting national environmental standards is a high profile, big-stakes action, certain to attract the full attention of Congress, the White House, the press, and the affected parties. It is also subject to careful judicial review. The implementation process, in contrast, is often piecemeal, involves obscure procedural matters, and is as likely to happen through quiet negotiation as open public deliberation. In short, implementation decisions

202. *See* FARBER, *supra* note 4, at 83-91. *See also* Heinzerling, *supra* note 29 (demonstrating the contestability of cost/benefit estimates for specific regulations).

are likely to "come under the radar screen." This creates serious problems of accountability and transparency. However, applying the nondelegation doctrine to the choice of environmental standards would do nothing to address these problems.

This is not to say that we should dismiss the concerns motivating the desire to revitalize the nondelegation doctrine.[203] Maintaining the legitimacy of the implementation process is a serious concern among environmental scholars today, particularly those who are seeking to define a "third way" of environmental regulation.[204] Part IV demonstrated how far the regulatory process has often deviated from the public, formal standards supposedly required by law. Important policy is often made through regulatory inaction, settlement of litigation, and other techniques that operate outside of full public scrutiny. Because these techniques often operate on an ad hoc basis, they may also lead to incoherent public policy unless they are carefully used. Moreover, these techniques do not always contain the usual opportunities for public input or the normal mandates for deliberative decisionmaking. They take place, in other words, very much in the shadow of the law, not in the light of public deliberation. In one way or another, the same problems have plagued various reinvention efforts, which have been repeatedly criticized for their lack of procedural regularity and public accountability.[205] On the other hand, if properly used, negotiation can actually increase the legitimacy of the system. Recent evidence suggests that negotiated policymaking can actually function so as to increase the perceived legitimacy of the outcomes, provided the process is designed correctly.[206] However, once again the delegation doctrine is unlikely to prove very helpful.

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203. Somewhat similar concerns are presented by settlements and consent decrees, which prevent a full airing of legal issues in court. *See generally* Jody Freeman, *The Contracting State*, 28 FLA. ST. U. L. REV. 155, 200 (2000).

204. For recent discussion of these efforts, see Daniel Esty, *Next Generation Environmental Law: A Response to Richard Stewart*, 29 CAP. U. L. REV. 183 (2001); FARBER, *supra* note 4, at 183-98; Christopher H. Schroeder, *Third Way Environmentalism*, 48 KAN. L REV. 801 (2000); Stewart, *supra* note 141.

205. *See* Jody Freeman, *Collaborative Governance in the Administrative State*, 45 UCLA L. REV. 1 (1997).

206. *See* Jody Freeman & Laura I. Langbein, *Regulatory Negotiation and the Legitimacy Benefit*, 9 N.Y.U. ENVTL. L. J. 60 (2000).

Those who seek to reform regulation must first understand regulatory realities. The system has genuine problems, but those problems are not best addressed by changing the formal rules that govern issuance of environmental standards. Instead, reforms should focus on implementation. Critics of the current regulatory system are right that the system cannot function effectively according to its original design, which contemplated direct translation of standards into compliance. EPA needs flexibility in designing creative implementation methods, but the process needs to be more transparent to public scrutiny. Cost-benefit analysis can help guide the choice between implementation methods; however, we also need to improve other parts of our information base as illustrated by the new monitoring system required for the fine particulate standards. Critics are also right to worry about whether EPA's decisions are democratically accountable. But again, the biggest problems are in the implementation process, where we need to ensure against sweetheart deals for industry or overzealous catering to environmental groups.[207]

In short, room does exist for substantial improvement in environmental law. We need to continue our search for more cost effective methods to reach our goals. We need to make the implementation process more transparent, accountable, and coherent. Unfortunately, much of the current debate over regulatory reform is misdirected. The debate has focused far too much on the initial regulatory stage in which standards are created. But, much of the real action is elsewhere. If environmental scholarship is to be relevant to the problems of environmental regulation, we need to change our focus. It is time to bring the debate about regulatory reform into line with regulatory realities.

207. *See* Freeman, *supra* note 203, at 198-99, 207.