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Eric W. Orts

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ARTICLES

REFLEXIVE ENVIRONMENTAL LAW

*Eric W. Orts**

* Nelson Peltz Term Assistant Professor of Legal Studies, The Wharton School, University of Pennsylvania. B.A., Oberlin College, M.A., New School for Social Research; J.D., University of Michigan; J.S.D., Columbia University. The Reginald H. Jones Center for Management Policy, Strategy, and Organization provided funding for this research. I am grateful for comments from Tom Dunfee, Susan Freiwald, Kinnan Goleman, Michael Herz, Paul Kleindorfer, Jim Krier, Howard Kunreuther, Bill Laufer, and John Parkinson. Richard Shell and Aidan Synnott gave helpful comments at early stages of drafting. I benefited from presenting versions of the paper to my colleagues at Wharton and to faculty at the University of Texas. Any errors are mine. I thank Natalia Bragilevskaya, Tamara English, and Rae Hall-Goodman for secretarial support, and Julie Beckun, David Brady, Marco Gabriele, Steve Ross, and Tanuja Varaprasathan for research assistance. Special thanks to my wife, Janet.

> The victories we have won in such areas as air and water pollution and natural area protection will, in hindsight, seem relatively easy. The next generation of environmental challenges will be more intractable, more difficult problems that fundamentally relate to how we live on the land and on the planet. . . . [We have to look] at how we run an industrial society, and at how to make the kinds of changes in the structure of this society, in the organization of our economy and our culture, and in our personal habits, to avoid the possibility of environmental catastrophe.[1]

> [T]he successes that are available if we continue the traditional regulatory path are incremental at best. The current regulatory system is about going from A to B to C. The changes we undertake today are about going from A to Z. I don't believe anyone in this country—whether an environmentalist or a CEO—believes that incremental steps will achieve the kind of future we all want.[2]

> Important as pressure from environmentalists and governmental direction are to stimulating change, in the end only the corporate community can efficiently provide the necessary organization, technology, and financial resources needed to design and implement change on the scale required. Companies that are trying to be leaders on a new path to a sustainable future merit our encouragement and support, just as the inevitable backsliders deserve a vigorous shove onto the trail.[3]

I. INTRODUCTION

The environmental problems of human society demand a new type of regulation. Great success in dealing with environmental issues has proven elusive, even though a host of environmental statutes have been on the books for more than two decades.[4] To be sure, there has been progress on some particular problems. For example, conclusive

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[1] Bruce Babbitt, *The Future Environmental Agenda for the United States*, 64 U. COLO. L. REV. 513, 514 (1993).

[2] Carol M. Browner, The Common Sense Initiative: A New Generation of Environmental Protection, Address at the Center for National Policy Newsmaker Luncheon (July 20, 1994) (transcript on file with author).

[3] James G. Speth, *Foreward* to BEYOND COMPLIANCE: A NEW INDUSTRY VIEW OF THE ENVIRONMENT at ix, x (Bruce Smart ed., 1992).

[4] The first important federal environmental legislation in the United States appeared in the early 1970s. Frank P. Grad, *Foreword: A Symposium on the United States Supreme Court's "Environmental Term" (1991-1992)*, 43 WASH. U.J. URB. & CONTEMP. L. 3, 4 (1993). Serious European concern with environmental policy also began in the early 1970s. *See* STANLEY P. JOHNSON & GUY CORCELLE, THE ENVIRONMENTAL POLICY OF THE EUROPEAN COMMUNITIES 1-2 (Stanley P. Johnson ed., 1989). Although it is true that laws loosely described as "environmental" existed previously for many years,

> [u]ntil 1970 . . . these policies were little more than a hodge-podge of mostly state and local governmental rules and regulations with an occasional federal law thrown in. Some of these state and local ordinances dealt explicitly with open burning of leaves, garbage, and other wastes—these laws were the precursors of modern-day air-pollution statutes. Other laws, again mostly local but with some exceptions, restricted the discharge of certain liquid and solid wastes in to navigable waterways—these became the basis for eventually much more ambitious federal water-pollution legislation and regulation.

scientific evidence of depletion of the atmospheric ozone-layer induced a relatively quick response in international law.[5] To the surprise of some environmentalists, industry reacted faster than expected in eliminating production of ozone-depleting chemicals.[6] Another success story is the reduction of airborne lead in the United States. During the decade of the 1980s, lead emissions declined ninety-six percent and ambient lead concentration levels decreased eighty-seven percent.[7] Conventional regulation also produced modest reductions of other air and water pollutants.[8] In the big picture, however, good news is outweighed by failure to achieve hoped for improvement.[9] Just listing some of the many pressing environmental issues can lead to despondency: species extinction, deforestation, desertification, toxic waste, acid rain, global climate change, and severe air and water pollution in large cities and poor countries.[10] With respect to many of

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Dallas Burtraw & Paul R. Portney, *Environmental Policy in the United States in* ECONOMIC POLICY TOWARDS THE ENVIRONMENT 289 (Dieter Helm ed., 1991).

[5] The story is recounted in RICHARD E. BENEDICK, OZONE DIPLOMACY (1991).

[6] William K. Stevens, *Ozone-Depleting Chemicals Building Up at Slower Pace*, N.Y. TIMES, Aug. 26, 1993, at A1 (stating that the global slowdown of ozone-depleting chemicals building up in atmosphere can be "attributed to industry's unexpectedly rapid cut in the production of the chemicals even before international agreements to phase them out took full effect"). *See also* Philip Shabecoff, *Industry Acts to Save Ozone*, N.Y. TIMES, Mar. 21, 1988, at A1 (discussing industrial efforts to develop substitutes for ozone-depleting chemicals).

[7] COUNCIL ON ENVIRONMENTAL QUALITY, UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT: UNITED STATES OF AMERICA NATIONAL REPORT 197 (1992). This success owes almost entirely to the 99% reduction of lead in gasoline. *Id.* Even the most ardent environmentalists have found much to praise in lead pollution reduction. *E.g.*, BARRY COMMONER, MAKING PEACE WITH THE PLANET 22 (4th ed. 1992) ("The successful effort to reduce lead pollution only accentuates the failure to achieve a comparable reduction in the emissions of all the other air pollutants."). A recent government study reported a 78% decline in the amount of lead in the bloodstreams of Americans over the 15-year phase out period of leaded gasoline (1976 to 1991). Sandra Blakeslee, *Concentrations of Lead in Blood Drop Steeply*, N.Y. TIMES, July 27, 1994, at A18. *See also* Thomas O. McGarity, *Radical Technology-Forcing in Environmental Regulation*, 27 LOY. L.A. L. REV. 943, 947-52 (1994) (providing a less sanguine account of "lead phase down" but nonetheless calling it an "environmental success story").

[8] *See, e.g.*, Cass R. Sunstein, *Paradoxes of the Regulatory State*, 57 U. CHI. L. REV. 407, 409-10 (1990) (describing "significant successes" in air and water pollution control).

[9] *See, e.g.*, COMMONER, *supra* note 7, at 19-40 (describing what he calls "the environmental failure"); E. Donald Elliott, *Environmental TQM: Anatomy of a Pollution Control Program That Works!*, 92 MICH. L. REV. 1840, 1844 (1994) (noting "the disappointing record of traditional strategies used in U.S. environmental law to achieve its stated goals"); Lakshman Guruswamy, *Integrated Environmental Control: The Expanding Matrix*, 22 ENVTL. L. 77, 83-87 (1992) (describing "failures of the existing system"); Sunstein, *supra* note 8, at 411 (stating that environmental regulation has "frequently failed").

[10] One of the best sources canvassing the scope of current environmental problems is Agenda 21, the non-binding framework agreement reached at the Earth Summit in Rio de Janeiro in 1992. *See, e.g.*, THE EARTH SUMMIT: THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT (UNCED) 125-508 (Stanley P. Johnson ed., 1993) (reprinting Agenda 21 with commentary); *see also* CHRISTOPHER D. STONE, THE GNAT IS OLDER THAN

these issues, conventional environmental regulation has not proven especially effective.

One reason is that conventional regulation is continually outpaced by the increasing complexity of environmental problems. Modern environmental statutes most often prescribe specific technologies or performance standards to control pollution. Command-and-control statutes of this sort, however, have not worked well enough. As discussed in Part II of this Article, command-and-control has been severely criticized as inefficient and ineffective.

Some scholarly critics of command-and-control have recommended an alternative in the form of market-based regulation. Looking to use the allocative efficiency of markets to regulatory advantage, market-based approaches seek to internalize within the economic system the "externalities" of environmental harm imposed by economic activity. Part II also reviews various types of market-based regulation.

More recently, Judge (now Justice) Stephen Breyer has proposed the creation of a superagency larger and more powerful than the Environmental Protection Agency (EPA) to bring order to the irrational potpourri of environmental statutes.[11] He would have Congress delegate broad powers to such a superagency to rationalize existing environmental statutes in accordance with scientific assessments of relative risks posed by various hazards. However, this idea runs into difficulty when one considers the complexity of environmental problems and choices. Limits to human cognition, even when focused through the powerful crucible of science, and limits implicit in a democratic form of government suggest that an elite superagency is not likely to produce enduring solutions to environmental problems. Other methods of environmental regulation should be considered before resorting to an elite, state-centered approach.[12]

In the context of thinking about alternative methods of environmental regulation, this Article explores a new model. Part III develops a theory of reflexive environmental law. Reflexive law focuses on influencing the "self-referential" capacities of the social institutions

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MAN: GLOBAL ENVIRONMENT AND HUMAN AGENDA 5-18 (1993) (diagnosing basic environmental problems).

11 STEPHEN BREYER, BREAKING THE VICIOUS CIRCLE: TOWARD EFFECTIVE RISK REGULATION 59-72 (1993). Justice Breyer does not actually use the term "superagency," but this is clearly what he means. His proposal for reform includes establishment of "a small, centralized administrative group, charged with a rationalizing mission" and having "interagency jurisdiction" (*i.e.*, above and beyond the EPA), "political insulation" with civil service protection, the "prestige" of an elite staff, and significant legal "authority" to "impose its decisions." *Id.* at 60-61.

12 *Id.* In the conclusion of this Article, I revisit Justice Breyer's proposal for an environmental superagency. *See infra* Part VII.

subject to regulation.[13] Reflexive law gets its name from being self-referential in two respects. First, it is a self-critical legal theory. A theory of reflexive law emphasizes the limits of law in the face of complexity. The complexity of society and its problems diminishes the capacity of law to direct social change in a specified or detailed manner. Second, a theory of reflexive law proposes an alternative approach to law reform. It focuses on enhancing self-referential capacities of social systems and institutions outside the legal system, rather than direct intervention of the legal system itself through agencies, highly detailed statutes, or delegation of great power to courts.

An example of a reflexive legal strategy is to encourage public disclosure of the internal decisionmaking and performance of intermediate social institutions. Securities law provides a familiar illustration of a legal strategy of disclosure.[14] Although governmental enforcement remains an option, securities regulation relies heavily on financial self-reporting. Public disclosure implies public scrutiny. Publicly disclosed reports and the possibility of public or private action to penalize false or misleading statements drive reflexive operations within firms, which adopt processes to assure the accuracy of their reports.

Translating the model of financial reporting to the natural environment, reflexive environmental law aims to establish self-reflective processes within businesses to encourage creative, critical, and continual thinking about how to minimize environmental harms and maximize environmental benefits. In other words, reflexive environmental law aspires to engender a practice of environmentally responsible management.[15]

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[13] The term "reflexive law" as I use it derives most directly from Gunther Teubner, *Substantive and Reflexive Elements in Modern Law*, 17 LAW & SOC'Y REV. 239 (1983) [hereinafter Teubner, *Reflexive Elements*]. As a general approach in social theory, "reflexivity" is defined as "the fact that social practices are constantly examined and reformed in the light of incoming information about those very practices." ANTHONY GIDDENS, THE CONSEQUENCES OF MODERNITY 38 (1990); *cf.* PIERRE BOURDIEU & LOÏC J.D. WACQUANT, AN INVITATION TO REFLEXIVE SOCIOLOGY 36-46 (1992) (describing various approaches to "reflexive sociology").

For recent applications of the idea of reflexive law in the environmental context, see the essays collected in ENVIRONMENTAL LAW AND ECOLOGICAL RESPONSIBILITY: THE CONCEPT AND PRACTICE OF ECOLOGICAL SELF-ORGANIZATION (Gunther Teubner et al. eds., 1994). Two of the essays are reprinted in Eric Bregman & Arthur Jacobson, *Environmental Performance Review: Self-Regulation in Environmental Law*, 16 CARDOZO L. REV. 465 (1994) and Gunther Teubner, *The Invisible Cupola: From Causal to Collective Attribution in Ecological Liability*, 16 CARDOZO L. REV. 429 (1994); *see also* Michael Herz, *Parallel Universes: NEPA Lessons for the New Property*, 93 COLUM. L. REV. 1668, 1668, 1689-93 (1993) (describing National Environmental Policy Act as an example of reflexive law).

[14] *See infra* text accompanying notes 382, 458 (discussing securities regulation).

[15] Many businesses have already taken significant strides in the direction of taking the natural environment into account in their operations. For a recent popular account, see PAUL HAWKEN, THE ECOLOGY OF COMMERCE: A DECLARATION OF SUSTAINABILITY (1993).

Elements of a reflexive environmental law are emerging. Part IV surveys some examples. Market-based environmental regulation has reflexive aspects.[16] The National Environmental Policy Act[17] and its state spinoffs establish procedural mechanisms for self-referential administrative decisionmaking that takes into account environmental impact.[18] Administrative enforcement policies encourage companies to conduct self-evaluative environmental audits.[19] Some federal statutes and EPA policy initiatives encourage voluntary pollution prevention programs and promote internal monitoring and improvement of environmental performance.[20] However, these examples of emergent forms of reflexive environmental law suffer from a lack of comprehensive theoretical perspective. They are inchoate. Reflexive elements in current environmental law exhibit little conscious anticipation of how they might work systematically.

The balance of this Article considers what may qualify as the exception to the rule of incompletely reflexive law. The Eco-Management and Audit Scheme (EMAS) of the European Union may represent the purest and most consciously reflexive environmental law yet advanced.[21] Effective in Europe beginning in April 1995, the EMAS establishes a voluntary program for companies to adopt standard procedures for environmental management, auditing, and reporting.[22] It erects a framework for independent verification of compliance, and it provides modest incentives for businesses to participate. Part V describes and critically examines the basic elements of the European EMAS regulation.

Part VI proceeds to consider whether a version of the EMAS should be adopted in the United States. I first present an American version of an Environmental Management and Auditing System,[23] which attempts to improve on the European model and to take into account regulatory differences. I consider arguments for and against an American version of the EMAS and conclude that the more persuasive arguments favor adopting an American EMAS on an experi-

16 *See infra* subpart IV.A.

17 42 U.S.C. §§ 4321-4370 (1988).

18 *See infra* subpart IV.B.

19 *See infra* subpart IV.C.

20 *See infra* subpart IV.D.

21 Council Regulation 1836/93 Allowing for Voluntary Participation by Companies in the Industrial Sector in a Community Eco-Management and Audit Scheme, 1993 O.J. (L 168) 1.

22 *Id.* The Council adopted the EMAS regulation on September 29, 1993. The 21-month grace period allows time for Member States to set up the required regulatory bodies and procedures to oversee the EMAS process. *Id.* art. 21, at 7.

23 I substitute the word "system" for "scheme" in the proposed American version of an EMAS for two reasons. First, the idea of a legal "scheme" sounds somewhat odd to an American ear. It suggests some kind of conspiracy. Second and more importantly, "system" captures the idea of setting up a framework for routine internal review, external verification, and public reporting of the environmental performance of businesses.

mental basis. An American EMAS would have to address certain issues peculiarly important in the American context, such as a need to protect proactive environmental management practices from discovery.[24] If properly formulated, however, an American EMAS would help to address the importance and complexity of environmental issues by employing businesses themselves in the task. In addition, an EMAS would supplement and help to integrate conventional methods of environmental regulation.

Let me emphasize that I do not regard reflexive environmental law as necessarily superior to conventional methods of command-and-control or market-based regulation. The type of regulation best suited for a particular problem depends on a pragmatic assessment of the circumstances. In the long run, however, reflexive environmental law may provide more than a useful supplement to conventional methods. It suggests a paradigmatic alternative to the present regulatory regime which relies on direct governmental investigation and enforcement. Like securities regulation, reflexive environmental law relies on disclosure first and enforcement second.

Recognizing that a multiplicity of EMAS regulations (for example, one in Europe and another in the United States) would create potentially conflicting standards, Part VI also addresses the need for international harmonization.[25] New environmental management and auditing guidelines of the International Standards Organization, which will become known as the ISO 14000 series, may point toward a possible solution of this difficulty.[26] Nevertheless, an international agreement along these lines may eventually be called for.

In this Article, I argue that the EMAS provides a viable concrete example of reflexive environmental law. My hope is that readers will find my argument sufficiently persuasive to continue critical discussion of the EMAS regulation and to adopt an experimental version of it in the United States. I also hope commentators and policymakers will extend a reflexive approach to additional areas of environmental regulation where appropriate.

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[24] Even in the absence of the proposal made here, the issue of discovery of internal environmental auditing has become contentious. *See* Marianne Lavelle, *Audit Privilege Mobilizes EPA, Business Bar*, NAT'L L.J., Aug. 8, 1994, at A1 (discussing disputes about the use of corporate environmental audits in civil enforcement actions and prosecutions); *see also infra* notes 209-10, 218, 428-31 and accompanying text.

[25] *See infra* subpart VI.C.

[26] *See* Alison Lucas & Michael Roberts, *Environmental Management Standard Set for 1995 Debut*, CHEM. WK., Nov. 9, 1994, at 33 (describing the status of ISO 14000 negotiations and drafting process).

II. Traditional Strategies of Environmental Regulation

At present, there are two general approaches to environmental regulation. The first is called, often pejoratively, command-and-control regulation. The second, which is often put forward as an alternative to command-and-control, is market-based regulation.

A. Command-and-Control and Its Critics

Environmental regulation remains relatively new. The first major environmental statutes adopted in the early 1970s in the United States and Europe were command-and-control.[27] This form of regulation is top-down. It seeks to control pollution in one of two ways.[28] First, the government can establish performance standards for polluters, commonly enforced through a system of permits. Issued through a bureaucratic process, pollution permits allow industrial firms and other identifiable sources to continue emitting pollutants, but only at regulated rates.[29] Pollution in excess of the technical limits specified in the permits is prohibited. Second, the government can require uniform technology-based controls for certain types of activities that cause pollution. Examples include requiring catalytic converters on automobiles and requiring installation of "best available technologies" for sources of air or water pollution. Violations of both performance-based and technology-based command-and-control regulations are remedied by civil fines and, increasingly, criminal prosecutions.[30]

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[27] *See supra* note 4.

[28] The following overview of command-and-control methods is drawn in part from Robert W. Hahn & Robert N. Stavins, *Incentive-Based Environmental Regulation: A New Era from an Old Idea?*, 18 Ecology L.Q. 1, 5-6 (1991). *See also* James E. Krier, *The Pollution Problem and Legal Institutions: A Conceptual Overview*, 18 UCLA L. Rev. 429, 463-66 (1971).

[29] For an illustration of the complexity of the process of obtaining modern pollution permits, see Zygmunt J.B. Plater et al., Environmental Law and Policy: Nature, Law, and Society 731-37 (1992) (describing the system for air pollution permits under Michigan's State Implementation Plan).

[30] Criminal enforcement of environmental laws is increasing exponentially in the United States. Federal indictments for environmental crimes rose from only 14 in 1982 to more than 100 per year in the 1990s. Barbara Franklin, *Environmental Crimes; Committee Weighs Sanctions for Corporate Polluters*, N.Y. L.J., Apr. 30, 1992, at 5, 7. Since 1990, jail time and criminal fines won in environmental cases have tripled each year. Scott Allen, *EPA Turns from Fines to Jail for Polluters*, Boston Globe, Apr. 3, 1994, at 1. These increases resulted from greater resources devoted to investigate and prosecute environmental crimes. The number of criminal investigators at EPA rose from only 20 in the early 1980s, to 60 by 1990, and to 123 in 1994. This number is expected to double to around 250 criminal investigators by 1996. The EPA contemplates eventually having a formidable staff of 500. Similar increases are anticipated at the Department of Justice and the Federal Bureau of Investigation. *Id.*; James M. Strock, *Environmental Criminal Enforcement Priorities for the 1990s*, 59 Geo. Wash. L. Rev. 916, 918, 933-34 (1991); Allan R. Gold, *Increasingly, Prison Term Is the Price for Polluters*, N.Y. Times, Feb. 15, 1991, at B6. The new criminal investigators and prosecutors will have something to do. Congress recently enhanced many federal environmental statutes—including the Clean Water Act, the Resource Conservation and Recovery Act, the Safe Drinking Water Act, and the Clean Air Act—with

Command-and-control approaches to environmental regulation have been heavily criticized. Economic studies have repeatedly demonstrated that command-and-control methods are often wildly inefficient and even "irrational."[31] Although most critics recognize that command-and-control has achieved significant success in some cases, they emphasize that it is a blunt instrument for achieving environmental goals. The command-and-control method often sets environmental policy goals without fully considering the economic costs involved.[32] It also often works ineffectively.[33] Even at great cost, command-and-control often fails to achieve the environmental results hoped for.

Because command-and-control relies heavily on active governmental oversight, its effectiveness depends also on the enthusiasm and competence of regulators. Administrations less interested in the goals of environmental policy than other objectives—such as economic growth—can relax command-and-control regulations. For example, many believe that the Reagan and Bush Administrations accom-

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broadened criminal provisions. Many misdemeanor offenses under these statutes have been reclassified as felonies. *See* Judson W. Starr & Thomas J. Kelly, Jr., *Environmental Crimes and the Sentencing Guidelines: The Time Has Come . . . and It Is Hard Time*, 20 ENVTL. L. REP. (Envtl. L. Inst.) ¶ 10.096 (1990); Strock, *supra*, at 924 (citing statutes).

31 For an early critique along these lines, see James E. Krier, *The Irrational National Air Quality Standards: Macro- and Micro-Mistakes*, 22 UCLA L. REV. 323, 323-35 (1974) (arguing against uniform national air quality standards). For objections specifically to command-and-control use of "best available technology" standards, see, *e.g.*, Bruce A. Ackerman & Richard B. Stewart, *Reforming Environmental Law*, 37 STAN. L. REV. 1333, 1334-40 (1985); Richard B. Stewart, *Models for Environmental Regulation: Central Planning Versus Market-Based Approaches*, 19 B.C. ENVTL. AFF. L. REV. 547, 550-51 (1992). *See also* T.H. Tietenberg, *Economic Instruments for Environmental Regulation*, *in* ECONOMIC POLICY TOWARDS THE ENVIRONMENT 86, 95-97 & tbl. 4.1 (Dieter Helm ed., 1991) (summarizing empirical studies that have shown high cost of command-and-control regulation as opposed to least-cost alternatives).

32 Ackerman & Stewart, *supra* note 31, at 1364-65 (recognizing "very great accomplishments" of early command-and-control statutes, but criticizing them for failing to adequately "set intelligent priorities, make maximum use of the resources devoted to improving environmental quality, encourage environmentally superior technologies, and avoid unneeded penalties on innovation and investment"); Hahn & Stavins, *supra* note 28, at 6 ("Although uniform technology-based standards may be effective in achieving established environmental goals and standards, they often do so at relatively high costs to society.").

33 *See, e.g.*, Ackerman & Stewart, *supra* note 31, at 1334-40 (criticizing command-and-control "best available control technology" as wasteful, inefficient, and counterproductive); Hahn & Stevens, *supra* note 28, at 6 ("Uniform emissions standards, the dominant policy mechanism chosen to attack a number of environmental problems, tend to lead to inefficient outcomes in which firms use unduly expensive means of controlling pollution. The reason is simple: the costs of controlling pollutant emissions vary greatly among and even within firms. Indeed, the cost of controlling a unit of a given pollutant may vary by a factor of 100 or more among sources, depending upon the age and location of plants and the available technologies."). *But see* Howard Latin, *Ideal Versus Real Regulatory Efficiency: Implementation of Uniform Standards and "Fine-Tuning" Regulatory Reforms*, 37 STAN. L. REV. 1267 (1985) (defending command-and-control regulation against market-based criticism).

plished an environmental slow-down for macroeconomic purposes.[34] Most notorious was the regulation of the regulators accomplished by former Vice President Quayle's Council on Competitiveness. The Council routinely and secretly pruned environmental regulations it judged to have deleterious effects on economic growth.[35]

Two other problems with command-and-control regulation are perennial. First, administrative agencies responsible for issuing regulations are vulnerable to "capture" by the very industries they are supposed to regulate. Second, administrative bureaucracy betrays a tendency to build itself up independently and to perpetuate itself through the self-seeking behavior of employee-bureaucrats—or what economists call "rent-seeking."[36] The problem of capture raises questions about the fairness and effectiveness of command-and-control. The very fact of an administrative "command center" presents an obvious moral hazard: those commanded may improperly attempt to influence the commands given.[37] The problem of bureaucratic rent-

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[34] *E.g.*, KIRKPATRICK SALE, THE GREEN REVOLUTION: THE AMERICAN ENVIRONMENTAL MOVEMENT 1962-1992, at 49-52 (1993). EPA lost 29% of its budget and a quarter of its staff during the first two years of the Reagan Administration, and in the same period "[e]nvironmental legislation ground to a halt." *Id.* at 50-51. It is possible, however, that the very radicalism of the Reagan revolution spawned a counter-reaction, not only in the form of sizeable increases in charitable donations to large environmental lobbying groups (*e.g.*, Sierra Club, Audubon Society, and National Wildlife Federation), but also in the growing popularity of more radical environmental ideologies and organizations (*e.g.*, deep ecology, bioregionalism, and Earth First!). *See, e.g.*, *id.* at 52-69.

[35] The Council on Competitiveness was established in 1989. As one commentator describes it:

> To its supporters, the Council represented a small counterweight of responsibility and common sense, balanced against the profligate, blindered federal bureaucracy, for the laudable goals of eliminating excessively burdensome regulations and spurring the economy. To its detractors, the Council was simply a friend to business interests that had lost before Congress, the agency, and OMB [Office of Management and Budget], and were now given a fourth bite at the apple behind closed doors. On this account, the Council functioned only to weaken health, safety, and environmental regulations, while displacing agency decision-making authority, violating congressional mandates, and avoiding any public or congressional scrutiny.

Michael Herz, *Imposing Unified Executive Branch Statutory Interpretation*, 15 CARDOZO L. REV. 219, 225 (1993). Representative Henry Waxman called the Council "a illegal shadow government," and one editorial writer described it as a "tidy little protection racket being run out of the White House." *Id.* at 226 & n.37 (quoting Waxman and an editorial in the *Atlanta Constitution*). President Clinton disbanded the Council on Competitiveness in his second full day in office. *Id.* at 223 n.23.

[36] *See, e.g.*, Cass R. Sunstein, *Constitutionalism After the New Deal*, 101 HARV. L. REV. 421, 448-51 (1987) (noting both types of problems).

[37] *See, e.g.*, Richard B. Stewart, *The Reformation of American Administrative Law*, 88 HARV. L. REV. 1669, 1713 (1975) ("It has become widely accepted, not only by public interest lawyers, but by academic critics, legislators, judges, and even by some agency members, that the comparative overrepresentation of regulated or client interests in the process of agency decision results in a persistent policy bias in favor of these interests."). An influential economic treatment of the problem is found in GEORGE STIGLER, THE CITIZEN AND THE STATE (1975). Stigler concludes that in the usual case "regulation is acquired by the industry [that is targeted] and is designed

seeking follows whenever a centralized power is set up. Those given power may work to hinder sound public policy. Rather than advancing the interests of society-at-large, bureaucrats may prefer to help themselves.[38] Administrative capture and bureaucratic rent-seeking thus supply another level of criticism of command-and-control.

Command-and-control regulations have also been criticized as too static. Statutes enacted at a particular time in history are limited by the available knowledge of the time, especially scientific and technical knowledge. Because command-and-control statutes cannot "learn" easily from changing circumstances and developing knowledge, they often fall short of achieving their objectives in a rapidly changing world.[39] Experience with automobile emissions control under the Clean Air Act in the past twenty years provides a good example. Strict technology-forcing legislation mandated significantly improved emission controls for new cars. But vehicle miles traveled (VMT) doubled during the same time period due to increasing suburbanization, the advent of hour-long commuting habits, and the appearance of many more cars on the road. Rapidly increasing VMT more than offset the gains of newer, cleaner vehicles replacing older, dirtier ones.[40] Technological controls on new automobiles prevented the current air pollution problem from being much worse, but it failed

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and operated primarily for its benefit." *Id.* at 114. A recent example of the phenomenon of "capture" appears in recent proposals to abolish the Interstate Commerce Commission. The principal lobbyists attempting to save the 100-year-old agency are precisely those businesses who are supposedly regulated by it. *Interstate Commerce Commission Comes under Siege in Congress*, N.Y. TIMES, July 31, 1994, at 25. For further discussion in the context of a reflexive response to this problem, see *infra* section VI.B.5.

38 In other words, "[t]he fear [is] that administrators will attempt to promote their own interests at the expense of the interests of the public" and "seek above all to enlarge their own powers." Sunstein, *supra* note 36, at 450.

39 For discussion of this problem of "learning" in environmental regulation and recommending regulatory "decentralization" and "dynamic" regulation, see Daniel A. Farber, *Environmental Protection as a Learning Experience*, 27 LOY. L.A. L. REV. 791 (1994).

40 Robert E. Yuhnke, *The Amendments To Reform Transportation Planning in the Clean Air Act Amendments of 1990*, 5 TUL. ENVT'L L.J. 239, 239-41 (1991); *see also* 1 WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW: AIR AND WATER POLLUTION 81 (Supp. 1994) (describing 69 percent increase of vehicle registrations from 1970 to 1989 and growth in VMT of 25 billion miles annually); David Ibata, *Cars Remain Road-Cloggers of Choice*, CHI. TRIB., June 17, 1993, at D1 (describing suburbanization and driving patterns in the Chicago area). The EPA recently summarized the pessimistic conclusion:

> Despite being subject to the most rigorous vehicle pollution control program in the world, cars and trucks still create about half of the ozone air pollution and nearly all of the carbon monoxide air pollution in United States cities . . . . Of all highway vehicles, passenger cars and light-duty trucks emit most of the vehicle-related carbon monoxide and ozone-forming hydrocarbons. They also emit substantial amounts of nitrogen oxides and air toxics. Although the U.S. has made progress in reducing emissions of these pollutants, total fleet emissions remain high. This is because the number of vehicle miles travelled on U.S. roads has doubled in the last 20 years to 2 trillion miles per year, offsetting much of the technological progress in vehicle emission control over the same two decades. Projections indicate that the steady growth in vehicle travel will continue.

to account for the "behavioral treadmill" of automobile use that undermined the basic strategy.[41] Although command-and-control regulation of automobiles improved ambient air quality in some places,[42] many urban areas remain in violation of federal standards.[43] Citizens of many large American cities, including New York, Chicago, Philadelphia, Washington, and most infamously Los Angeles, continue to breathe unhealthy air.[44]

Yet another difficulty with command-and-control regulation is *environmental juridification*. The word "juridification" means "proliferation of law." It was coined to describe modern regulatory approaches to industrial labor organization,[45] and the word was first used in the context of labor, corporate, antitrust, and welfare law.[46] However, juridification applies more broadly to any area of social life that the regulatory impulse of modern states deems worthy of "controlling" through enactment of highly technical and specific laws. Increasingly, juridification extends to the natural environment, a phenomenon some commentators refer to ironically as "legal pollution."[47]

Approval and Promulgation of Air Quality Implementation Plans, Commonwealth of Pennsylvania, Enhanced Motor Vehicle Inspection and Maintenance Program, 59 Fed. Reg. 33,709 (1994) (to be codified at 40 C.F.R. pt. 52) (proposed June 30, 1994).

41 1 RODGERS, *supra* note 40, at 82 (describing Clean Air Act Amendments of 1990 concerning mobile sources of air pollution as an attempt to address the "vast behavioral treadmill" created by continuing increase of numbers of vehicles and VMT).

42 According to EPA, the decade of the 1980s witnessed an overall decline of annual average concentrations of particulates (down 20%), sulfur oxide (down 35%), carbon monoxide (down 32%), and lead (down 88%). COUNCIL ON ENVIRONMENTAL QUALITY, *supra* note 7, at 194.

43 In 1992, 70 areas in the United States were in violation of standards for particulates, 96 areas violated ozone standards, and 41 areas failed to comply with standards for carbon monoxide. *Id.* at 195.

44 In 1992, Los Angeles was the only city in violation of the federal standard for nitrogen dioxide. *Id.* And it continues to have the worst ozone problem, followed by Houston, Philadelphia, Washington, and New York. Robert Reinhold, *Hard Times Dilute Enthusiasm for Clean-Air Laws*, N.Y. TIMES, Nov. 26, 1993, at A1. A recent study of fine-particle air pollution found that citizens in cities with the dirtiest air stood a 15% greater risk of death as compared with those who lived in regions with cleaner air. Philip J. Hilts, *Dirty-Air Cities Far Deadlier Than Clean Ones, Study Shows*, N.Y. TIMES, Mar. 10, 1995, at A20.

45 Gunther Teubner, *Juridification—Concepts, Aspects, Limits, Solutions*, in JURIDIFICATION OF SOCIAL SPHERES: A COMPARATIVE ANALYSIS IN THE AREAS OF LABOR, CORPORATE, ANTITRUST AND SOCIAL WELFARE LAW 3, 9 (Gunther Teubner ed., 1987). The term juridification originated in German: *Verrechtlichung*. *Id.*

46 See the collection of essays in JURIDIFICATION OF SOCIAL SPHERES: A COMPARATIVE ANALYSIS IN THE AREAS OF LABOR, CORPORATE, ANTITRUST AND SOCIAL WELFARE LAW, *supra* note 45.

47 *E.g.*, Richard B. Stewart, *Reconstitutive Law*, 46 MD. L. REV. 86, 101 (1986) (describing the *Federal Register* alone as "a jurisprudential wasteland, littered with legal pollution"); Teubner, *supra* note 45, at 3 (citing Thomas Ehrlich, *Legal Pollution*, N.Y. TIMES, Feb. 8, 1976 (Magazine), at 17).

The amount of environmental law and regulation in the United States alone is staggering.[48] Not counting state statutes and common law, there are over one hundred separate environmental statutes at the federal level.[49] The texts of seven major federal environmental statutes run to several thousand pages.[50] Accompanying regulations stretch for several feet on a library shelf. The myriad provisions of the Clean Air Act alone, according to Chief Justice Rehnquist, "virtually swim before one's eyes."[51] Another judge describes the statute as "prolix" and "larded with definitions."[52] It is fair to say that no single individual can possibly "know" all of the environmental law out there, even if one's attention is limited only to United States law. As Carol Rose writes, "How can we make sense of environmental law? Our legislators churn out great undigestible masses of statutes about the environment, which in turn are interpreted by mounds of regulations, all densely packed with bizarre terms and opaque acronyms."[53]

Environmental juridification significantly increases the burden of compliance for businesses. By the year 2000, EPA estimates that expenditures made in the United States under environmental programs to control pollution will amount to approximately *two percent* of GNP.[54] Moreover, a recent survey of corporate general counsels found that less than a third of them believed fully complying with applicable environmental laws was even possible.[55] The burden be-

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48 *See, e.g.*, Robert F. Blomquist, *"Clean New World": Toward an Intellectual History of American Environmental Law, 1961-1990*, 25 VAL. U. L. REV. 1, 2 (1990) (referring to "the staggering complexity in the structure, process and content of modern American environmental law").

49 COUNCIL ON ENVIRONMENTAL QUALITY, *supra* note 7, app. D (providing a "selected list" of national environmental legislation).

50 Burtraw & Portney, *supra* note 4, at 291. The seven statutes counted by authors are the Clean Air Act, the Clean Water Act, FIFRA (the Federal Insecticide, Fungicide, and Rodenticide Act), the Safe Drinking Water Act, TSCA (the Toxic Substances Control Act), RCRA (the Resource Conservation and Recovery Act), and CERCLA (the Comprehensive Emergency Response, Compensation, and Liability Act). *Id.* at 291-97. Not included are some other important statutes, such as NEPA (the National Environmental Policy Act) and the Endangered Species Act.

51 United States Steel Corp. v. EPA, 444 U.S. 1035, 1038 (1980) (Rehnquist, J., dissenting from denial of certiorari).

52 Council of Commuter Org. v. Thomas, 799 F.2d 879, 885 (2d Cir. 1986) (Newman, J.).

53 Carol M. Rose, *Rethinking Environmental Controls: Management Strategies for Common Resources*, 1991 DUKE L.J. 1, 1. Specialization is one attempt to cope with the increasing complexity of environmental law. It has become the watchword among both academics and practitioners of environmental law.

54 U.S. EPA, THE COST OF A CLEAN ENVIRONMENT, at v (1990). As two observers note, this amount is "eye-catching" and probably represents "a greater share [of GNP] devoted to environmental protection than that of any other Western democracy." Burtraw & Portney, *supra* note 4, at 302.

55 Marianne Lavelle, *Environmental Vise: Law, Compliance*, NAT'L L.J., 1993 CORPORATE COUNSEL SURVEY, Aug. 30, 1993, at S1 ("Only 30 percent of the attorneys believed that full compliance with the matrix of U.S. and state environmental laws was possible."); *see also* Starr,

comes even greater for many multinational businesses when the laws of several countries, as well as international environmental law, are added to the equation.

Environmental juridification points to a critical weakness of the command-and-control approach. There are cognitive limits to protecting the environment through detailed orders.[56] As new laws are passed to regulate critical areas[57] and old laws are revised to close or open loopholes,[58] the legal system's capacity actually to process the material becomes impaired. Eventually, traditional command-and-control regulation breaks down under its own weight.

B. Market-Based Environmental Regulation

The inadequacy of command-and-control regulation fuels the hottest growth industry in environmental law: "free market environmentalism."[59] As one commentator observes dryly, "it is currently fashionable to advocate the use of markets to solve environmental problems."[60] But the idea is not really new.[61]

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supra note 30, at 9 ("All sides concede that it is impossible for a company to be in 100-percent compliance with these complex regulations 100-percent of the time.").

56 William Rodgers suggests that a recent tendency of judges to issue per curiam opinions may indicate that the explosively expanding nature of environmental law is beginning to reach cognitive limits. He writes:

> One small indicator of a slippage of judicial pride, confidence, and control in this complex legal world is a proliferation of per curiam opinion that consign authorship of rulings on important and controversial matters to an anonymous judicial bureaucracy—a 10-pager on the Subtitle D rules, a 17-pager on the Toxicity Characteristic Leaching Procedure, a 24-pager on the mixture and derived-from rules, a 27-pager on the 1990 National Contingency Plant, and a 30-pager on the RCRA's land ban as it affects so-called Third-Third Wastes. It appears as if the courts have joined the rest of us in concluding that keeping abreast of these subjects is beyond the capacity of named mortals.

4 WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW: HAZARDOUS WASTES AND SUBSTANCES at III (Supp. 1994).

57 An obstacle to formulating a coherent environmental law is the tendency to pass an environmental statute in response to the latest environmental disaster. Well-known examples are passage of Superfund/CERCLA after the discovery of Love Canal, passage of the Community Right-to-Know legislation after Bhopal, and passage of the Oil Pollution Control Act after the Valdez spill. *See, e.g.*, Bradley C. Bobertz, *Legitimizing Pollution Through Pollution Control Laws: Reflections on Scapegoating Theory*, 73 TEX. L. REV. 711, 719-41 (describing examples and the influence of the media in the process).

58 For a discussion of the importance of loopholes in environmental law, see John-Mark Stensvaag, *The Not So Fine Print of Environmental Law*, 27 LOY. L.A. L. REV. 1093 (1994).

59 *See* TERRY L. ANDERSON & DONALD R. LEAL, FREE MARKET ENVIRONMENTALISM (1991); Symposium, *Free Market Environmentalism*, 15 HARV. J.L. & PUB. POL'Y 297 (1992).

60 Dieter Helm & David Pearce, *Economic Policy Towards the Environment: An Overview*, *in* ECONOMIC POLICY TOWARD THE ENVIRONMENT 1, 15 (Dieter Helm ed., 1991). The following summary of market-based methods of environmental regulation is drawn in part from this source.

61 *See, e.g.*, James E. Krier, *The Tragedy of the Commons, Part Two*, 15 HARV. J.L. & PUB. POL'Y 325, 325 (1992) ("The idea of relying more fully on market-based incentives to control environmental problems is by now almost old hat.").

The starting point for economic approaches to environmental problems is to conceive detrimental environmental effects as economic "externalities."[62] Harmful environmental effects are called externalities because the "internal" economic calculations of polluters do not incorporate "external" costs of environmental damage in the absence of regulatory intervention.[63] Therefore, economists aim to artificially structure the market to take the external costs into account.[64]

There are at least four conventional economic approaches to environmental regulation. The first is attributed to Pigou.[65] Essentially, a modern Pigouvian approach assesses taxes or charges to activities that are environmentally harmful. Regulators must calibrate the level of tax or charge to the amount of pollutant discharged or the degree of harm caused. Taxing pollution provides an obvious economic disincentive to pollute. France, Germany, and the Netherlands, for example, use effluent charges in water pollution regulation.[66] Another illustration is the Clinton Administration's proposal for a broad-based "energy tax," which aggressive lobbying dealt a quick death.[67]

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[62] *See, e.g.*, Helm & Pearce, *supra* note 60, at 4 ("Recognizing environmental problems as externalities is essential in framing economic policy.").

[63] *See, e.g., id.* at 2 ("Environmental effects are externalities—effects of which the costs and benefits are not fully reflected in potential or actual market exchanges. They represent incomplete or missing markets.").

[64] If externalities can be internalized, according to economists, then the market will yield "optimal pollution." *See, e.g.*, Carol M. Rose, *Environmental Lessons*, 27 LOY. L.A. L. REV. 1023 (1994).

> Pollution costs may be real, but control or forbearance costs are real too, and in vast numbers of environmental areas, a dominating task has been to weigh the one against the other. That is the first part of [what Professor Rose calls] the budgeting problem: locating and providing for what has been called optimal pollution.

Id. at 1032 (citing William J. Baumol & Wallace E. Oates, *The Use of Standards and Prices for Protection of the Environment, in* THE ECONOMICS OF ENVIRONMENT 53, 58 (Peter Bohn & Allen V. Kneese eds., 1971)).

[65] *See, e.g.*, Helm & Pearce, *supra* note 60, at 7 (citing A.C. PIGOU, THE ECONOMICS OF WELFARE (4th ed. 1962)). There is doubt, however, about whether Pigou actually said all the things now attributed to him. He appears to have advocated that polluters be granted subsidies rather than pay taxes or charges. Krier, *supra* note 61, at 325-26 n.3. Pollution subsidies are unlikely to be favorably received today. *See* Krier, *supra* note 61, at 470 ("Not only do subsidies acknowledge a right to pollute which is repugnant to most of society, they also tend in many cases to transfer wealth to relatively affluent groups.").

[66] *See* Hahn & Stavins, *supra* note 28, at 7; Eckard Rehbinder, *Environmental Regulation Through Fiscal and Economic Incentives in a Federalist System*, 20 ECOLOGY L.Q. 57, 72 (1993). Only Germany uses charges as disincentives to pollute, rather than as revenue-raising instruments. France and the Netherlands use revenue gained from effluent charges for the public financing of water treatment plants. Even in Germany, the experience with effluent charges is mixed. *See* Rehbinder, *supra*, at 72-74.

[67] Michael Wines, *Tax's Demise Illustrates the First Rule of Lobbying: Work, Work, Work*, N.Y. TIMES, June 14, 1993, at A1. Clinton's proposal failed even after making a number of concessions to various interest groups, for example, granting tax breaks for ethanol, diesel fuel, home heating oil, electricity, and even coal. *Id.* The proposed tax was a "BTU tax" based on the

A major difficulty with energy taxes or pollution charges is that the government must set the fee schedule at a certain rate, estimating both the potential amount of environmental harm a particular pollutant may cause and the efficacy of particular rates in actually changing behavior. If people simply agree to pay more and continue polluting at similar levels, government coffers grow richer, but there is no environmental benefit. Experience shows that "setting the rate of the charge is difficult."[68] The basic advantage of the Pigouvian approach is to internalize environmental harms by means of charges or taxes.[69] The basic disadvantage is that this is easier said than done.

A second economic approach to environmental problems is attributed to Coase.[70] This approach conceives the problem of externalities differently, arguing that it involves a failure to allocate property rights sufficiently broadly. The Coasian school advocates internalizing externalities by expanding property, that is, extending rights of "ownership" in the natural environment. If the natural environment (water, air, land, animals) can be reduced to human ownership, then the market will, in theory, accurately value the newly created property. A good example is the suggestion that to prevent the extinction of elephants, people should own them. If elephants were property, then their value—including their ivory—will be protected by their human owners. Although some elephants will be killed for ivory, the species will survive, because property rights give their human owners an incentive to preserve *their* animals.[71]

British Thermal Unit heat-measure or equivalents for various fuels. Alternative energy taxes include a carbon tax (measuring carbon content), an ad valorem tax (based on market price of fuels), or a gasoline tax. *See, e.g.*, *Pointing to Tax Increases*, U.S. NEWS & WORLD REP., Feb. 8, 1993, at 46. On energy taxes generally, see SANFORD E. GAINES & RICHARD A. WESTIN, TAXATION FOR ENVIRONMENTAL PROTECTION (1991).

68 Rehbinder, *supra* note 66, at 74. Setting the pollution charge rates is difficult because "the market does not set the price." Instead, "[t]he charges are merely artificially set prices for the use of the absorption capacity of environmental media. Thus, in reality, the charges are not market instruments. They are but a special type of interventionist strategy that makes an instrumental use of the market, forcing firms to internalize the state-determined costs of environmental degradation." *Id.*

69 A good example of a "green" subsidy would be paying people to install upgraded pollution control devices on their cars. Krier, *supra* note 61, at 470 n.117.

70 R.H. Coase, *The Problem of Social Cost*, 3 J.L. & ECON. 1 (1960).

71 *See, e.g.*, RAYMOND BONNER, AT THE HAND OF MAN: PERIL AND HOPE FOR AFRICA'S WILDLIFE (1993) (arguing in favor of human ownership or property rights in elephants so as to preserve the species in its native African habitat). *But see, e.g.*, DOUGLAS H. CHADWICK, THE FATE OF THE ELEPHANT (1994) (arguing in favor of maintaining a ban on harvesting and trading ivory to eliminate the market demand for ivory and therefore remove incentives that may lead to the extinction of elephants); IAIN AND ORIA DOUGLAS-HAMILTON, BATTLE FOR THE ELEPHANTS (1992) (same). *See also* Andrew J. Heimert, Note, *How the Elephant Lost His Tusks*, 104 YALE L.J. 1473 (1995) (comparing the regulatory strategies pursued in the 1980s in Kenya, which prohibited trade in elephant products, and Zimbabwe and South Africa, which granted certain ownership rights in elephants, and concluding the ownership strategy proved more suc-

Radical advocates of Coasian free market environmentalism claim that allocation of property rights in the natural environment can solve most, if not all, current problems.[72] But these environmental free marketeers often do not take full account of the economic costs of the government regulation required to administer the new property rights they wish to establish. New forms of private property require registers to record ownership and methods of enforcing the new property rights against trespassers.[73] Also, technical advances may be needed, which may often entail substantial costs, to establish "tracers" for private ownership of formerly common resources.[74] Finally, there are political and moral objections to "commodifying" certain kinds of resources,[75] such as wilderness preserves.[76]

A third market-based approach to environmental regulation involves the creation of tradeable pollution rights.[77] This approach is essentially a market-based variant of a command-and-control permit system, but adds a Coasian element by assigning marketable pollution "rights" as a sort of property. The economic twist appears in the administration of the system.[78] Like command-and-control permit systems, market-based variants rely on command-and-control methods to determine the overall level of pollution allowed. Permits to pollute, however, are broken down into units, which may be traded. The gov-

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cessful). The Convention on International Trade in Endangered Species of Wild Fauna and Flora (known as CITES) banned international trade in elephants and elephant parts in 1989. Although the debate resurfaced in 1992, the ban remains in effect. *Id.* at 1478-79.

72 *See generally* ANDERSON & LEAL, *supra* note 59.

73 *See, e.g.*, Krier, *supra* note 61, at 332-33 (discussing costs of government and legally established property systems needed for markets and private property). "Nothing is free, whether a lunch or a market," Krier concludes, "so free market environmentalism is, if not a moronic idea, at least an oxymoron." *Id.* at 332.

74 It is true that establishing property rights will create incentives to invent technologies adequate for the surveillance and enforcement of them. *See, e.g.*, Peter S. Menell, *Institutional Fantasylands: From Scientific Management to Free Market Environmentalism*, 15 HARV. J.L. & PUB. POL'Y 489, 499 (1992) (suggesting that "market forces will generate new technologies for defining and enforcing [new] property rights"). But technological solutions are not guaranteed for any imaginable allocation of property rights. For example, how could ownership of the ozone layer be handled technologically? Also, even if new technologies are needed, private ownership systems may not be the least-cost way to develop them. Government-sponsored research may in some cases provide greater efficiency. *See, e.g., id.* at 502.

75 *See, e.g.*, Krier, *supra* note 61, at 346-47; *see also* Margaret J. Radin, *Market-Inalienability*, 100 HARV. L. REV. 1849, 1855 (1987) ("Market-inalienability often expresses an aspiration for noncommodification. By making something nonsalable we proclaim that it should not be conceived of or treated as a commodity.").

76 *See* JOSEPH L. SAX, MOUNTAINS WITHOUT HANDRAILS: REFLECTIONS ON THE NATIONAL PARKS (1980).

77 Popularization of this approach owes to the Canadian economist J.H. Dales. Krier, *supra* note 61, at 325-26 (citing J.H. DALES, POLLUTION, POLICY, AND PRICES: AN ESSAY IN POLICY-MAKING AND ECONOMICS (1968)).

78 The following description draws on various sources, including Ackerman & Stewart, *supra* note 31, at 1341-47.

ernment must keep track of trades and set a ceiling for total pollution. The cost of this governmental oversight function must be included when assessing the overall efficiency of the system. When a permit-trading system works according to plan, market-based tradeable permits allow the environmental goal to be achieved more economically than through command-and-control because companies are free to decide whether it is more cost effective to buy more pollution rights or to purchase abatement equipment. A good example is the acid rain permit trading program recently adopted in the United States.[79] The government sets an overall limit for sulfur dioxide emissions, and then participating public utilities trade pollution rights among themselves. The total of the pollution permits issued equals the overall limit. At least in theory, market trading of permits enables achievement of the goal of acid rain reduction in a more economically efficient manner than direct regulation.[80]

Market-based permit trading does not, however, always yield the most economically efficient results. To determine whether direct command-and-control or market-based permit trading is best for any given environmental problem requires an assessment of the relative costs and benefits of alternative approaches. In the acid rain program, permit trading may work efficiently, given that the number of participants are relatively few; that is, in the hundreds.[81] However, environmental problems that implicate thousands or millions of polluters, such as automobile pollution, make the sheer expense of setting up a permit market prohibitive. In these cases, government must resort to

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79 Clean Air Act Amendments of 1990, Pub. L. No. 101-549, § 401, 104 Stat. 2399 (1990).

80 For an overview of the acid rain permit trading program, see 1 RODGERS, *supra* note 40, at 64-74. *See also* Jeanne M. Dennis, Comment, *Smoke for Sale: Paradoxes and Problems of the Emissions Trading Program of the Clean Air Act Amendments of 1990*, 40 UCLA L. REV. 1101 (1993).

81 *See, e.g.*, 1 RODGERS, *supra* note 40, at 72 ("There is some empirical evidence that distinguishes pollution-trading schemes that work from those that don't, and this suggests we can expect the best of an arrangement that has a single strong overseer (EPA), one principal output (SO_2) that can be measured confidently, and relatively small numbers of knowledgeable and cohesive traders (the large electrical utilities)."). A recent study of the acid rain trading program suggests that it does not yet have all the kinks worked out. Douglas J. Lober & Michael Bailey, *Implementing a Market-based Environmental Policy Tool: Utility Company Behavior in the Sulfur Dioxide Allowance Trading Program* (paper presented at the First Open Meeting of the Human Dimensions of Global Change, Duke University University, June 3, 1995) (unpublished manuscript, on file with author). One problem involves adverse public reaction to utilities that buy "rights to pollute." Another relates to difficulties in setting up effective markets for trading permit rights that work in different kinds of business cultures. Nevertheless, savings in compliance costs likely to have been enabled by the program have been recently estimated at approximately $9 billion over ten years. Barry D. Solomon, *The Geography of SO_2 Allowance Trading*, ENVTL. PROF. (forthcoming 1995) (manuscript, on file with author).

other regulatory methods.[82] For example, with respect to automobile pollution, the Clean Air Act Amendments of 1990 emphasize, among other things, the enhancement of vehicle inspection and maintenance programs.[83]

A fourth type of market-based regulation attempts to harness the consciences of consumers to favor environmentally friendly products. This type of environmental marketing regulation is used (1) to aid consumer identification of "green products" or environmentally harmful products and (2) to assure truthful environmental advertising claims.

Environmental marketing regulation to identify "green products" is the more ambitious variant. This involves creating and administering programs for "green labels." A prominent and potentially influential example is the European Union's Eco-label Award Scheme, which establishes a procedure for government certification of environmentally friendly products.[84] (See Figure 1). Now in effect in Europe, the

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[82] Dieter Helm and David Pearce provide a helpful conceptual structure to describe the variability of different environmental problems, dividing them into one-to-one, one-to-many, and many-to-many types.

> In . . . simple one-to-one cases, the parties are easily identified, and the costs of pollution can typically be evaluated. These cases can often be tackled either through taxes or subsidies and through negotiation and bargaining . . . .
>
> Greater complexity is introduced when a large number of individuals and firms are affected. Many standard pollution problems fall into this one-to-many category: chemical spillages into water systems and oil tanker disasters, for example. In this case it remains relatively easy to identify the source of the pollution, but the affected parties are usually each too small to warrant the expense of solving the problem as in the one-to-one case above. . . . The most persuasive externalities combine many generators with many recipients. These many-to-many cases include a number of new problems which have arisen in the 1980s, most noticeably the increasing concentration of greenhouse gases (carbon dioxide, methane, nitrous oxide), ozone depletion, and biodiversity losses. They can be called global mutual externalities. . . . Measurement problems are much more pressing with multiple pollution generators. Their identification can itself pose difficulties and detailed emissions data is typically costly to collect.

Helm & Pearce, *supra* note 60, at 5.

[83] *See* Arnold W. Reitze, Jr. & Barry Needleman, *Control of Air Pollution from Mobile Sources Through Inspection and Maintenance Programs*, 30 HARV. J. ON LEGIS. 409 (1993).

[84] Council Regulation 880/92 of 23 March 1992 on a Community Eco-label Award Scheme, 1992 O.J. (L 99) 1. The Eco-label is awarded only to products that satisfy ecological criteria within specified product groups based on a cradle-to-grave environmental impact assessment of the product, the environmental "cleanliness" of the technology used to make the product, and the "maximized" length of the product's useful life. *Id.* art. 5, at 2. The technical difficulties of this kind of analysis are considerable. In particular, the cradle-to-grave or "life cycle" analysis sounds good, but proves extremely complicated in practice. *See, e.g.*, U.S. ENVIRONMENTAL PROTECTION AGENCY, THE USE OF LIFE CYCLE ASSESSMENT IN ENVIRONMENTAL LABELLING (1993) (discussing technical difficulties of life cycle assessment); Jamie A. Grodsky, *Certified Green: The Law and Future of Environmental Labelling*, 10 YALE J. ON REG. 147, 218-26 (1993) (discussing some of the technical problems with life-cycle analysis and concluding that a less ambitious "multiple-attribute" method may provide a practical alternative); *see also* Committee on Antitrust and Trade Regulation, Ass'n of the Bar of City of N.Y., *Private Certification of Manufacturer's Environmental Claims*, 48 REC. 25, 29-30 (Jan.-Feb. 1993) [hereinafter *Private Certification of Environmental Claims*] (discussing controversy over life cycle analysis); Hannah

Eco-label is controversial,[85] and development of its criteria for different products has been slow.[86] A few EU Member States have failed even to set up the necessary administrative support for the Eco-label scheme.[87] Nonetheless, the Eco-label may gain in strength and recognition over time. Other government-sponsored labels include Germany's "Blue Angel," Canada's "Environmental Choice," Japan's "Eco-Mark," and Scandinavian countries' "White Swan." (See Figure 2). The German Blue Angel is particularly well-established.[88] If the EU's Eco-label works, it may eventually preempt other European labels.[89]

Holmes, *The Green Police: In the Environmental Holy War, Who Can Tell the Good Guys From the Bad Guys?*, GARBAGE, Sept.-Oct. 1991, at 44 (same).

[85] For example, the Body Shop objects to the allowance of animal testing on "certified green" products, while other manufacturers claim that environmentalists have too much influence in the setting of the product standards. Peter Knight, *Eco-label Still Not Sticking—The EC's Green Badge Scheme Is in Disarray*, FIN. TIMES, June 16, 1993, at 16.

[86] Development of criteria for the first product group, washing machines and dishwashers, were not completed for more than two years after the Eco-label regulation was adopted. *See* Elizabeth Nelson, *Ecolabelling*, 1 ENV'T LIABILITY 16, 19 (1993). Major manufacturers have been uncertain about applying for certification. *See* Knight, *supra* note 85, at 16.

[87] Ireland and Portugal are the laggards. *See* Knight, *supra* note 85, at 16. Delay in national implementation of EU-level environmental legislation has been endemic. *See* Isabelle Martin, *The Limitations to the Implementation of a Uniform Environmental Policy in the European Union*, 9 CONN. J. INT'L L. 675, 698 (noting that "[l]ate implementation of EC environmental directives by member states" is "frequent").

[88] Over 3600 Blue Angel products are certified in sixty-six different product categories. Ciannat M. Howett, Note, *The "Green Labelling" Phenomenon: Problems and Trends in the Regulation of Environmental Product Claims*, 11 VA. ENVTL. L.J. 401, 458 (1992). The German Blue Angel, begun in 1978, is also the oldest of the environmental labelling programs. A decade later, it was joined in 1988 by Canada's Environmental Choice program and in 1989 by Japan's EcoMark and the Nordic Council's White Swan. Australia, India, Korea, New Zealand, and Singapore adopted environmental labels in the early 1990s. The Netherlands adopted its Stichting Milieukeur environmental award and France its NF-Environnement certification program in 1992. U.S. ENVIRONMENTAL PROTECTION AGENCY, STATUS REPORT ON THE USE OF ENVIRONMENTAL LABELS WORLDWIDE 41 (1993); Grodsky, *supra* note 84, at 205-06.

[89] Although it allows "existing or future independent award schemes to continue to exist," the Eco-label regulation hopes "to create the conditions for ultimately establishing an effective single environmental label in the [European] [C]ommunity." Council Regulation 880/92, Preamble, 1992 O.J. (L 99) 1, 1. Some European diplomats believe that Germany may be persuaded to drop its Blue Angel label when the Eco-label scheme comes up for review in 1997. Howett, *supra* note 88, at 458. However, given the slow pace of the development of criteria for EU Eco-labels, see *supra* note 86, it is unlikely that the Eco-label will displace the Blue Angel for at least several years, if then. Still, some advocates have predicted that up to 10-15% of products in particular groups may eventually qualify for Eco-labels. *See* Nelson, *supra* note 86, at 17.

FIGURE 1
THE EUROPEAN UNION'S ECO-LABEL

Source: U.S. ENVIRONMENTAL PROTECTION AGENCY, STATUS REPORT ON THE USE OF ENVIRONMENTAL LABELS WORLDWIDE 97 (1993).

A government-sponsored environmental label has not yet emerged in the United States.[90] Instead, two non-profit organizations compete in the market for recognition: Green Seal and Scientific Certification Systems (formerly Green Cross) (again, see Figure 2).[91]

[90] A bill for an "Eco Label Act" was introduced to Congress in 1990, proposing a program to be run by the EPA, but it failed to gain sufficient interest. *See* Grodsky, *supra* note 84, at 207 (citing S. 3218, 101st Cong., 2d Sess. (1990)). A state bill for a California label also floundered. *Id.* (citing A.B. 3030, Cal. Assembly, 1989-90 Reg. Sess. (1990)).

[91] Green Seal was started in 1990. Scientific Certification Systems began its Green Cross in 1989 and verifies manufacturers' claims about products, providing the information in a standard form. *See* Grodsky, *supra* note 84, at 208-09. Owing to criticism about potential conflicts of interest for a for-profit concern, Scientific Certification Systems has recently applied for tax exempt status. *See* U.S. ENVIRONMENTAL PROTECTION AGENCY, *supra* note 88, at 144.

Like the EU's Eco-label, Green Seal sets general standards for products based on an assessment of multiple environmental attributes. Grodsky, *supra* note 84, at 208-09; *see also* U.S. ENVIRONMENTAL PROTECTION AGENCY, *supra* note 88, at 73. To date, Green Seal has set standards for forty-five different product categories and has awarded its label to fifty-four products. Casey Bukro, *"Green" Goods Still Grab Green; Rising Consumer Demand Grows from Earth*

FIGURE 2

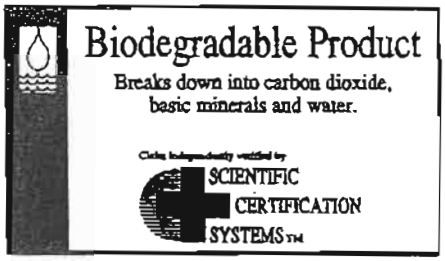
ENVIRONMENTAL LABELS AROUND THE WORLD

Canada's Environmental Choice

Sweden's Good Environmental Choice

New Zealand's Environmental Choice

Germany's Blue Angel



U.S. Scientific Certification Systems' Green Cross

Singapore's Green Label

Netherlands' Stichting Milieukeur

U.S. Green Seal

Japan's Ecomark

Nordic Council's White Swan

Source: ENVIRONMENTAL PROTECTION AGENCY, STATUS REPORT ON THE USE OF ENVIRONMENTAL LABELS WORLDWIDE 43, 49, 55, 61, 71, 77, 81, 103, 127 (1993).

Given that the market for green products in the United States appears to be expanding,[92] competition between the two labels is heating up.[93]

Another kind of environmental labelling is mandatory environmental warnings on harmful products. Short of prohibiting environmentally unfriendly products—such as banning the sale of air conditioners that use ozone-depleting chemicals—government can employ environmental labels "negatively" by requiring certain products to carry environmental warnings similar to those on cigarette

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Day Seed, CHI. TRIB., Apr. 22, 1994, (Business), at 1; Joel Makower, *GreenAudit Setting the Standard for Businesses*, HOUS. CHRON., June 5, 1994, (Lifestyle), at 6. Green Seals have been awarded to such products as General Electric's long-lasting light bulbs, Clivus Multrum's waterless composting toilets, and Cato Oil's recycled-oil lubricants. Eve M. Kahn, *Making the Grade*, N.Y. TIMES, Nov. 14, 1993, § 9, at 10. Green Seal has strong ties to environmental groups and has its testing done by Underwriters Laboratories, Inc., which is famous for its certification of electrical products. Green Seal emphasizes that it does not perform life cycle analysis, but instead issues standards for various product groups and subsets each particular product to an "environmental impact evaluation." *See Private Certification of Environmental Claims*, *supra* note 84, at 30-31; *see also* U.S. ENVIRONMENTAL PROTECTION AGENCY, *supra* note 88, at 72-75.

Scientific Certification Systems issues what it calls an "Environmental Report Card" to any paying client, and the report cards may be used for advertising (although some manufacturers may choose not to publicize their grades). U.S. ENVIRONMENTAL PROTECTION AGENCY, *supra* note 88, at 143-49; Kahn, *supra*. Perhaps a dozen products have been issued report cards, although Scientific Certification Systems has also "certified" more than five hundred specific environmental claims about products (for example, biodegradability, recycled content, and energy efficiency). *See* U.S. ENVIRONMENTAL PROTECTION AGENCY, *supra* note 88, at 128, 144; John J. Fried, *The "Green" Label Becomes a Coveted Endorsement*, PHILA. INQUIRER, Feb. 28, 1993, at C1 (reporting that Scientific Certification Systems "put its OK on several hundred products" in a few months). Scientific Certification Systems uses a version of life cycle analysis and has drawn fire from environmentalists for that reason, as well as for failing adequately to police use of its labels. *Private Certification of Environmental Claims*, *supra* note 84, at 29-30.

For a comparison of the two competing American environmental labels, finding Scientific Certification Systems' Report Card "fundamentally flawed" and Green Seal potentially beneficial, see Roger D. Wynne, *The Emperor's New Eco-Logos?* 14 VA. ENVTL. L.J. 51 (1994).

92 One study estimates the "green" product market at $121.5 billion in 1993 and projects an increase to $154 billion by 1997. Bukro, *supra* note 91, at 1. Gallup surveys found that more than 75% of American consumers say they take environmental factors into account when making purchases. Art Kleiner, *What Does It Mean to Be Green?*, HARV. BUS. REV., July-Aug. 1991, at 39. *But see* Kevin Goldman, *"Green" Campaigns Don't Always Pay Off, Survey Finds*, WALL ST. J., Apr. 11, 1994, at B8 (describing experiences with environmental advertising); Valerie Reitman, *"Green" Product Sales Seem To Be Wilting*, WALL ST. J., May 18, 1992, at B1 (discussing "fickle" nature of consumer interest in environmentally friendly products). One difficulty lies in consumer confusion about what environmental labels mean and whether they can be trusted. *See, e.g.*, U.S. ENVIRONMENTAL PROTECTION AGENCY, *supra* note 88, at 4.

93 John M. Church, *A Market Solution to Green Marketing: Some Lessons from the Economics of Information*, 79 MINN. L. REV. 245, 290 (1994) (observing that "Scientific Certification and Green Seal actively compete against each other"); *see also* Joel Makower, *"Green" Seals: Label Them Confusing*, HOUS. CHRON., June 20, 1993, (Lifestyle), at 5; *Green Cross v. Green Seal: Dueling Eco-labels*, 56 CONSUMER REP. 689 (1991). Given that both Green Seal and Scientific Certification Systems are private organizations and not government-sponsored, they may also face questions of potential antitrust violations. *See Private Certification of Environmental Claims*, *supra* note 84, at 41-57, 65-67.

packages.[94] For example, severely toxic pesticides marketed in the United States must warn: "This Pesticide Is Toxic To Wildlife."[95] Other programs designed to improve the level of consumer information about environmental qualities of products include mandatory fuel economy labels for new cars[96] and "Energy Guide" labels for some kinds of new appliances.[97] The European Union has also standardized the labelling of environmentally hazardous substances.[98]

The second, less ambitious, and more traditional form of environmental marketing regulation polices the accuracy of advertising and marketing claims. Instead of sponsoring positive or negative labels, this approach assumes that companies will make claims about their products' environmental qualities to appeal to consumers. Rather than trying to identify the "best" or most environmentally friendly products, or stigmatizing the "worst," this approach limits itself to assuring that environmental claims are not false or misleading.[99] At the federal level in the United States, this responsibility is given to the Federal Trade Commission (FTC).[100] In 1992, the FTC released *Guides for the Use of Environmental Marketing Claims*,[101] and it has

94 A warning label for ozone-depleting chemicals is required, although EPA has streamlined its regulations given the planned phase-out of all ozone-depleting chemicals by 2000. Protection of Stratospheric Ozone, 58 Fed. Reg. 4768 (1993) (to be codified at 40 C.F.R. pt. 82) (concerning ban of nonessential products releasing class I and II ozone-depleting chemicals); Protection of Stratospheric Ozone, Labelling, 58 Fed. Reg. 8136 (1993) (to be codified at 40 C.F.R. pt. 82) (concerning labelling of ozone-depleting chemicals before phase-out); *see* U.S. ENVIRONMENTAL PROTECTION AGENCY, *supra* note 88, at 172-73.

95 *See* U.S. ENVIRONMENTAL PROTECTION AGENCY, *supra* note 88, at 155. Similarly, the state of Vermont requires the labeling of hazardous household products in a program designed to educate consumers about everyday hazards and to reduce use of environmentally hazardous products. *Id.* at 167-69. Products included are cleaning products, automobile and machine maintenance products, hobby and repair products, and a miscellaneous category that includes shoe polish, certain aerosols, and butane lighters. *Id.* at 168.

96 *Id.* at 179-81.

97 *Id.* at 175-78. This requirement was first adopted for household refrigerators, freezers, water heaters, washers, driers, furnaces, air conditioners, and heat pumps under the Energy Policy and Conservation Act of 1975. Additional product categories, including certain fluorescent lamps, showerheads, faucets, and urinals were included under the Energy Policy Act of 1992. *Id.* at 176.

98 Council Directive 88/379, 188 O.J.(L 87).

99 This approach has the advantage of focusing on the nature of various kinds of information reaching consumers, rather than trying to sift various kinds of information, and coming to conclusions about it. A focus on making sure information is not "false" or "misleading" may allow more room for flexibility, learning, and innovation in the system than regulation focused on making either/or decisions about environmental quality of products in general, as is the case with environmental labels. *Cf.* Church, *supra* note 93, at 254-55, 271-324 (arguing that economic and legal analysis favors regulation of the truthfulness of environmental claims in advertising but disfavors government-sponsored environmental labels).

100 Federal Trade Commission Act, 15 U.S.C. §§ 41-77 (1988).

101 16 C.F.R. § 260 (1994). The guides are not enforceable rules or regulations, but purport instead to provide a "safe harbor" for environmental marketing, at least with respect to the likelihood of an FTC enforcement action. *Id.* § 260.2-.3. In addition to a statement of general

brought a number of false advertising cases in the environmental context.[102] However, the effectiveness of FTC enforcement in environmental marketing is questionable.[103]

III. A THEORY OF REFLEXIVE ENVIRONMENTAL LAW

From the basic patterns of conventional environmental regulation, I turn now to develop a theory of reflexive environmental law. This Part advances a theory of reflexive environmental law as an "ideal type" within two matrices.[104] (See Figure 3).

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principles, *id.* § 260.6-.7(a), the guide gives specific recommendations with respect to the use of the following materials: "degradable / biodegradable / photodegradable," "compostable," "recyclable," "recycled content," the amount use of a resource has been "reduced," "refillable," and "ozone safe and ozone friendly." *Id.* § 260.7(a)-(h).

102 *See, e.g.*, *In re* Mr. Coffee, Inc., No. 912-3036, 1993 FTC LEXIS 62 (Feb. 18, 1993) (consent order concerning misrepresentation of "chlorine-free" coffee filters made of "recycled" paper); *In re* North Am. Plastics Corp., No. 902-3184, 1993 FTC LEXIS 61 (Jan. 14, 1993) (consent order concerning misrepresentation of "EnviroGard" trash bags as "biodegradable"); *In re* Mobil Oil Corp., No. 902-3111, 1992 FTC LEXIS 187 (June 9, 1992) (consent order concerning misrepresentation of "Hefty" trash bags as "degradable").

States may sue under so-called "little FTC acts," namely, the Uniform Trade Practices and Consumer Protection Act which has been adopted by all fifty states. Several high-profile multistate cases have challenged certain environmental marketing claims, but the cases are sporadic. *See* Church, *supra* note 93, at 304-07.

Private actions may also occasionally be brought for false or misleading advertising under the Lanham Act. 15 U.S.C. § 1125 (1994); *see, e.g.*, Performance Indus. v. Koos, Inc., 1990 U.S. Dist. LEXIS 14031 (E.D. Pa. Oct. 17, 1990) (granting a preliminary injunction against de-icing salt which was claimed to be "environmentally safe"). For discussion of the possibility of private actions under the Lanham Act to challenge environmental marketing claims, see Church, *supra* note 93, at 307-11.

103 *See* David F. Welsh, Note, *Environmental Marketing and Federal Preemption of State Law: Eliminating the "Gray" Behind the "Green"*, 81 CAL. L. REV. 991, 1002-12 (1993) (describing lax enforcement by FTC of environmental cases). One observer counts only 25 environmental marketing cases brought by the FTC, and all of them settled. Bukro, *supra* note 89; *see also* Roger D. Wynne, Note, *Defining "Green": Toward Regulation of Environmental Marketing Claims*, 24 U. MICH. J.L. REF. 785 (1991) (discussing problems in current approaches to regulating environmental claims). Federal legislation to strengthen environmental marketing regulation has been proposed but not passed. Environmental Claims Marketing Act, S. 615 and H.R. 1408, 102d Cong., 1st Sess. (1991), *cited in Private Certification of Environmental Claims*, *supra* note 84, at 35 & n.29. A number of state statutes have filled the legal vacuum by regulating various aspects of environmental marketing claims, but they are erratic in their coverage and sometimes conflict. *See* Welsh, *supra*, at 1001-05 (describing conflicting state statutes and arguing persuasively for federal intervention).

104 By "ideal type" I mean to suggest that reflexive law may be considered as a useful theoretical category of law, as compared with other "types" of law, which are distinguished on the basis of methodological approach. This does not mean that different "types" of law may not share common attributes of "law" as conceived at a higher level of generality. *See, e.g.*, H.L.A. HART, THE CONCEPT OF LAW (1961); JEFFREY G. MURPHY & JULES L. COLEMAN, PHILOSOPHY OF LAW: AN INTRODUCTION TO JURISPRUDENCE 1-66 (1990). It also does not mean that different "types" or methods of legal regulation cannot be usefully combined in actual practice. I argue only that it is useful conceptually to think of a distinct category of "reflexive environmental law."

FIGURE 3
IDEAL TYPES OF LEGAL REGULATION

Ideal Type A	General Description	Environmental Law Examples	Ideal Type B
Formal Law	Emphasis on rule-oriented resolution of private disputes	Nuisance law; rights of ownership of the natural environment	Market-Based Regulation
Substantive Law	Emphasis on administrative, bureaucratic regulation of social problems	Pollution-control statutes (e.g., Clean Air Act, Clean Water Act)	Command-and-Control Regulation
Reflexive Law	Emphasis on influencing institutional structures and decisionmaking processes	Eco-Management and Audit Scheme	Reflexive Regulation

Source: Adapted from Gunther Teubner, *Substantive and Reflexive Elements in Modern Law*, 17 LAW & SOC'Y REV. 239, 257 tbl. 1 (1983).

First, reflexive environmental law presents an alternative to conventional methods of command-and-control and market-based regulation. It differs from conventional methods in several respects.

(1) Reflexive environmental law is a self-critical legal theory in the sense that it recognizes the importance of cognitive and administrative limits of direct legal regulation of environmental problems. Command-and-control is particularly prone to blindness in this respect. Environmental problems change as society develops and as more is learned about particular environmental issues. The relatively static approaches of conventional regulation become increasingly problematic as environmental problems grow more and more severe and understandings of them grow more and more complex. Market-based regulation often suffers from similar constraints. Some market-based methods rely on command-and-control to set overall goals. Enthusiasts of market-based methods also often underestimate the technical difficulties of extending concepts of "property," "permits," and "trading" to the elusive subject matter of the natural environment.[105]

(2) Both command-and control and most market-based approaches rely on scientific learning about the environment to affect

On the theory of ideal types, see MAX WEBER, THE METHODOLOGY OF THE SOCIAL SCIENCES 91-112 (Edward A. Shils & Henry A. Finch trans. & eds., 1949).

105 *See supra* subpart II.B and *infra* subpart IV.A.

regulation at the level of regulation itself.[106] Neither attempts to employ regulation to engender learning (other than through government-sponsored grants for environmental research) and problem-solving primarily at the level of the regulated entities.

(3) A distinguishing feature of reflexive environmental law is that it aims to enlist intermediate social institutions—between "the state" and "the market"—in the tasks of environmental protection. Social understanding must inform this focus on institutions.[107] The basic idea is to encourage internal self-critical reflection within institutions about their environmental performance. The primary regulatory method employed by reflexive environmental law is therefore *procedural*; it aims to set up *processes* that encourage institutional self-reflective thinking and learning about environmental effects.

A second matrix distinguishes reflexive environmental law from the historical ideal types of law to which market-based and command-and-control methods roughly correspond, namely, the "formal" and "substantive" types of law identified by Max Weber. (Again, see Figure 3). It is in this context that legal theorists working in the Weberian tradition of social theory, most notably Gunther Teubner, first developed the idea of "reflexive law."[108]

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106 *Cf.* Lindsay Farmer & Gunther Teubner, *Ecological Self-Organization, in* ENVIRONMENTAL LAW AND ECOLOGICAL RESPONSIBILITY, *supra* note 13, at 4 (criticizing conventional environmental legal strategies that "place too much confidence in science").

107 Philip Selznick, *Self-Regulation and the Theory of Institutions*, in ENVIRONMENTAL LAW AND ECOLOGICAL RESPONSIBILITY, *supra* note 13, at 396-402; *see also* PHILIP SELZNICK, THE MORAL COMMONWEALTH 229-354 (1992) (setting forth a theory of the "moral institution").

108 For the original development of the idea of reflexive law, see Teubner, *Reflexive Elements*, *supra* note 13. The idea is further developed in GUNTHER TEUBNER, LAW AS AN AUTOPOIETIC SYSTEM (Zenon Bankowski ed., Anne Bankowski & Ruth Alder trans., 1993); Gunther Teubner, *Social Order from Legislative Noise? Autopoietic Closure as a Problem for Legal Regulation, in* STATE, LAW, AND ECONOMY AS AUTOPOIETIC SYSTEMS: REGULATION AND AUTONOMY IN A NEW PERSPECTIVE 609 (Gunther Teubner ed., 1992) [hereinafter Teubner, *Social Order*]; and Gunther Teubner, *After Legal Instrumentalism?*, *in* DILEMMAS OF LAW IN THE WELFARE STATE 299 (Gunther Teubner ed., 1986). Teubner has applied his theory to the context of corporate law, recommending a "proceduralization" of fiduciary duties and other reforms aimed to institutionalize corporate social responsibility. Gunther Teubner, *Corporate Fiduciary Duties and Their Beneficiaries: A Functional Approach to the Legal Institutionalization of Corporate Responsibility, in* CORPORATE GOVERNANCE AND DIRECTORS' LIABILITIES: LEGAL, ECONOMIC AND SOCIOLOGICAL ANALYSES ON CORPORATE SOCIAL RESPONSIBILITY 149-77 (Klaus J. Hopt & Gunther Teubner eds., 1985). More recently, he has begun also to apply his theories to environmental issues. *See* Farmer & Teubner, *supra* note 106; Gunther Teubner, *The Invisible Cupola: From Causal to Collective Attribution in Ecological Liability, in* ENVIRONMENTAL LAW AND ECOLOGICAL RESPONSIBILITY, *supra* note 13, at 17-47.

The social theorist Helmut Willke is to some extent a fellow traveler of Teubner's. *See* Helmut Willke, *Societal Guidance Through Law?*, *in* STATE, LAW, AND ECONOMY AS AUTOPOIETIC SYSTEMS: REGULATION AND AUTONOMY IN A NEW PERSPECTIVE 353 (Gunther Teubner ed., 1992) [hereinafter Willke, *Societal Guidance Through Law?*]; Helmut Willke, *Three Legal Types of Legal Structure: The Conditional, the Purposive and the Relational Program, in* DILEMMAS OF LAW IN THE WELFARE STATE 280 (Gunther Teubner ed., 1985). An early collaborative

According to Teubner, reflexive law arises in modern legal systems in response to various kinds of social pressure. Expanding on evolutionary legal theories of Phillipe Nonet and Philip Selznick on one hand[109] and Niklas Luhmann and Jürgen Habermas on the other,[110] Teubner argues that law develops historically according to what might be considered three ideal types.[111]

Following Weber, Teubner argues that "formal law" develops first. Formal law focuses on establishing basic rules by which private parties orient their affairs and resolve disputes.[112] For example, the common law of property recognizes certain legal "rights" of individual owners, and courts resolve any disputes that arise among them. Under formal law, the role of legal institutions is primarily that of an umpire.[113]

With the development of modern society and social complexity, formal law alone cannot meet growing social needs. A new type of "substantive law" is associated with the rise of the regulatory state.

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work between the two is Gunther Teubner & Helmut Willke, *Kontext und Autonomie: Gesellschaftliche Selbststeuerung durch reflexives Recht*, 5 ZEITSCHRIFT FÜR RECHTSSOZIOLOGIE 4 (1984).

109 The primary source examined by Teubner is PHILLIPE NONET & PHILIP SELZNICK, LAW AND SOCIETY IN TRANSITION: TOWARD RESPONSIVE LAW (1978).

110 Teubner's reliance on Habermas and especially Luhmann is extensive. *See* Teubner, *Reflexive Elements*, *supra* note 13, at 282-83 (providing English and German language sources).

111 My use of "ideal types" departs from Teubner's theory. Ideal types suggest a more fluid theory, allowing for the coexistence of different forms of law in modern society. *See supra* note 104 (discussing ideal types). Teubner tends at times, perhaps following Luhmann too closely, to insist that because of modern social development, all law must become reflexive. *E.g.*, Teubner, *Reflexive Elements*, *supra* note 13, at 272 ("Centralized social integration is effectively ruled out today and cannot be achieved by legal, economic, moral, or scientific mechanisms. A decentralized mode of integration is inevitable . . . ."). By instead conceiving reflexive law as an ideal type, I am reserving judgment on Teubner's broader diagnosis concerning the overall evolution of law. I am nonetheless arguing that reflexive law is *at least* an ideal type that should be more seriously considered as an approach to environmental law.

112 Teubner, *Reflexive Elements*, *supra* note 13, at 240 (formal law involves establishment of "a body of universal rules" and "relies on a body of legal professionals who employ peculiarly legal reasoning to resolve specific conflicts").

113 I follow Teubner's usage of "formal law," but not without some hesitation. The meaning of formal law as used here should not be confused with jurisprudential debates concerning the viability of "formalism," which refers to issues of statutory interpretation. *See, e.g.*, Frederick Schauer, *Formalism*, 97 YALE L.J. 509 (1988). I considered referring instead to "private law" rather than "formal law." Formal law is associated with the idea of giving private rights to individuals and emphasizing private dispute resolution. However, this usage would lead to possible confusion over the "public/private distinction." *See, e.g.*, Symposium, *The Public/Private Distinction*, 130 U. PA. L. REV. 1289 (1982); *see also* Louis M. Seidman, *Public Principle and Private Choice*, 96 YALE L.J. 1006 (1987); Joan Williams, *The Development of the Public/Private Distinction in American Law*, 64 TEX. L. REV. 225 (1985) (book review). Distinguishing "public" and "private" approaches in environmental law is especially treacherous. *See, e.g.*, Rose, *supra* note 53, at 8-9 ("The public/private divide, taken alone, misses the substantive content of . . . various techniques or strategies . . . ."). I therefore decided to stick with the term "formal law" even though it is not perfect.

Substantive law is used instrumentally for "purposive, goal-oriented intervention."[114] Because modern substantive law aims for "specific goals in concrete situations," it tends to be "more general and open-ended" yet at the same time "more particularistic" than formal law.[115] For example, substantive law is heavily administrative: Legislatures write statutes delegating broad authority to administrative agencies to adopt and enforce expansive and finely detailed regulations.[116] Substantive law focuses on social regulation through public administration.[117]

The growth of environmental law illustrates the distinction between formal and substantive law. A formal law, the law of nuisance, has long been used to resolve particular disputes.[118] Formal principles of nuisance law have proven remarkably stable over time.[119] But the very stability of nuisance law and its singular focus on litigated disputes raise problems. Although useful within its scope, nuisance law cannot easily address large environmental issues, such as widespread air and water pollution.[120] Because courts deciding private nuisance cases are limited to disputes involving a relatively small number of

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114 Teubner, *Reflexive Elements*, *supra* note 13, at 240 (citation omitted).

115 *Id.*

116 Moreover, even "administrative law" can develop in an increasingly "substantive" direction. Professor Elliott observes, for example, that "the center of gravity has shifted away from the broad, overarching generalizations of the administrative law of the 1960s toward more particularistic statutory and policy objectives. This phenomenon is not unique to administrative law; it occurs in many bodies of law as they mature." E. Donald Elliott, *The Dis-Integration of Administrative Law: A Comment on Shapiro*, 92 YALE L.J. 1523, 1532 (1983) (footnote omitted).

117 Like "formal law," *see supra* note 113, the term "substantive law" is imperfect and somewhat misleading. The alternative ideal types of formal and reflexive law also have "substance" to them. Substantive law instead means that law is used instrumentally in an attempt to regulate the "substance" of social interactions directly. As an alternative to potential confusion in using the term "substantive" law, one theorist of reflexive law refers instead to the dichotomy of "regulatory vs. reflexive law." Eckard Rehbinder, *Reflexive Law and Practice*, *in* STATE, LAW, AND ECONOMY, *supra* note 108, at 579-88. However, this distinction is even more confusing because it suggests that reflexive law cannot have a "regulatory" effect. Yet another alternative would be to refer to "public law" as opposed to the "private law" orientation of formal law. Substantive law involves the traditional kind of "public" law embodied in many environmental statutes. However, as noted above, this usage is imprecise and threatens to lead into jurisprudential thickets of the public/private distinction. *See supra* note 113 (discussing public/private distinction).

118 Note again that I am using "formal law" here in its ideal typical sense. I do not mean that nuisance law is "formalistic." *See supra* note 113. As common law, it is flexible with respect to different factual nuances and allows reference to equitable arguments within its "formal" legal structure.

119 Conspicuous to nuisance law is "its prodigious lack of change, its remarkable stasis, while the cultures served by this species of common law themselves underwent major social changes." 1 RODGERS, *supra* note 40, at 3. In fact, nuisance law may be considered the first environmental law. And it has existed for several centuries. It is the historical "fulcrum of what is called today environmental law." *Id.* at 29.

120 A classic case illustrating the point is Boomer v. Atlantic Cement Co., 257 N.E.2d 870 (N.Y. 1970).

parties, they ordinarily have no occasion to consider broader environmental policy problems that affect a large section of the general population.[121] To be sure, procedural reforms, such as allowing class actions, can expand the scope of litigation to address larger social problems, but they are not adequate to address very large and diffuse ones. The limitations of "formal" nuisance law therefore contribute to a systemic need for "substantive" environmental statutes. In contrast with nuisance law, substantive environmental law does not rely on courts to resolve disputes roughly in accordance with a body of common law principles. Substantive environmental law is more aggressively instrumental. It intervenes directly in social processes deemed to cause environmental harm through statutes and delegation of legal authority to specialized agencies.

At this point, it is useful to compare the ideal types of formal and substantive law with the command-and-control and market-based ideal types of the first matrix I am using to distinguish reflexive law. (Again, see Figure 3). On one hand, command-and-control corresponds to the Weberian category of substantive law. What may be called substantive command-and-control statutes are "general and open-ended" in the sense that they often delegate broad legal authority to agencies to adopt and enforce regulations to achieve broadly defined purposes. At the same time, substantive command-and-control is often also "particularistic" in the sense that its statutes and regulations are finely detailed and complex. On the other hand, market-based regulation tends toward the model of formal law. The goal of market-based methods of environmental regulation is to expand the scope of property rights underlying, for example, nuisance law. Once legal property rights are expanded to include the content of environmental issues (for example, pollution rights, pollution permits, or elephants), a self-regulatory market is created with formal rights to be enforced in court or by agencies in cases of disagreement.

Social pressure for both the "re-formalization" of law in various market-based regulatory methods and the advent of a new type of reflexive law trace to difficulties incurred by increasing reliance on substantive command-and-control. Recourse to an expanding body of substantive law is not exceptional to the environmental context. Modern societies employ an increasingly large corpus of substantive law to address a large number of social problems.[122] Expansion of substan-

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121 The classic expression of the "commons" problem is Garrett Hardin, *The Tragedy of the Commons*, 162 SCI. 1243 (1968). *See also* Rose, *supra* note 53.

122 Teubner, *supra* note 45, at 6 (quoting John H. Barton, *Behind the Legal Explosion*, 27 STAN. L. REV. 567, 567 (1975)) (describing a "legal explosion" in "the enormous quantitative growth of norms and standards," particularly in "those areas of law which cover the world of industry, labor, and social solidarity—labor law, company law, antitrust law and social security law").

tive law is not always bad,[123] and much substantive environmental law is surely warranted.[124] While substantive law may instrumentally solve some social problems, however, its continuing expansion creates others. As more and more rules and regulations endeavor to solve increasingly complex social issues, the very magnitude of the substantive law itself becomes a problem.

One can diagnose at least two kinds of systemic problems for a modern society relying extensively on substantive law.[125] One systemic problem is juridification.[126] The sheer amount of substantive law begins to impose operational difficulties on the legal system. This occurs when "the complexity of socio-economic processes" reach "the cognitive limits of our mechanisms of political-legal control."[127] Substantive law reaches cognitive limits when modern society grows "simply too dense, complex, and potentially contradictory to be adequately accounted for in the kinds of interventionist control mechanisms that have been created."[128] These cognitive limits refer to those of the human actors within the legal system, including lawyers, judges, administrators, legislators, and even academics, as well as to the system as a whole.[129]

A second systemic problem concerns not cognitive operational difficulties, but normative ones. The expansion of substantive command-and-control occurs by (1) legislating increasing numbers of detailed statutes and, at the same time, (2) delegating increasing discretion to administrative agencies. This legal expansion increases the separation of lawmaking from the democratic procedures that contribute to the legitimacy of the system.[130] At least two normative issues are involved.

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123 Marc Galanter is a staunch defender of the increase in the amount of law in post-industrial societies. *See, e.g.*, Marc Galanter, *Law Abounding: Legislation Around the North Atlantic*, 55 MOD. L. REV. 1 (1992).

124 *See, e.g.*, Latin, *supra* note 33, at 1267 (discussing success of conventional environmental regulation).

125 It may overstate the matter to call these problems "crises." *See* Teubner, *Reflexive Elements*, *supra* note 13, at 239, 268. Teubner follows Habermas in this usage. *E.g.*, JÜRGEN HABERMAS, LEGITIMATION CRISIS (Thomas McCarthy trans., 1975). Arguably, one should reserve the word for concrete emergencies, such as in "Cuban missile crisis."

126 *See supra* text accompanying notes 45-58 (discussing juridification).

127 Teubner, *Reflexive Elements*, *supra* note 13, at 268 (referring to this problem as a "rationality crisis").

128 *Id.*

129 Teubner refers to a breakdown in "system rationality," which involves the limits to "the capacity of the legal order to respond to the control problems of society at large . . . ." *Id.* at 252.

130 Here, I am expanding and elaborating on the idea of "legitimacy crisis" as expressed by Teubner and Habermas. *See, e.g.*, Teubner, *Reflexive Elements*, *supra* note 13, at 267-68; Jürgen Habermas, *Law and Morality* (K. Baynes trans.), *in* 8 THE TANNER LECTURES ON HUMAN VALUES (S. McMurrin ed., 1988). I have elsewhere elaborated a theory of the requirement of the systemic legitimacy for law. Eric W. Orts, *Systemic Legitimacy and Positive Law: A Comment on Hart and Habermas*, 6 RATIO JURIS 245 (1993).

First, increasing amounts of legislation become more and more difficult to review and harmonize. As yet another statute is passed to address each new real or perceived environmental crisis, legislators have no time to reconsider old statutes or to reassess the relative risks dealt with by different statutes. The result is what Carol Rose creatively calls "the herky-jerky character of our environmental legislation."[131] The trouble with this jumble of statutes is that legislatures become unable to oversee and coordinate the multitude of statutes they have passed. The default position leaves courts, agencies, and litigants bewildered with statutes and regulations.[132]

A second normative issue concerns reliance on administrative delegation. As substantive law faces increasing pressure to expand in order to address increasingly complex and technical problems, temptations mount to assign administrative agencies greater discretion to make and enforce the law. This strategy raises well-known questions of democratic legitimacy because it results in administrative agencies exercising legislative power. Administrative delegation unbinds substantive law from the legitimating democratic procedures of legislation. Reform of administrative law may recommend asserting closer judicial review of administrative decisions and enhancing public participation in administrative lawmaking. These reforms would lessen, but not eliminate, the general normative problem.[133]

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131 Rose, *supra* note 64, at 1026.

132 *Cf.* Clayton P. Gillette & James E. Krier, *Risk, Courts, and Agencies*, 138 U. PA. L. REV. 1027 (1990) (assuming that the only institutions capable of assessing relative public and private environmental risks are courts and agencies, not legislatures).

133 *See, e.g.*, Robert B. Reich, *Public Administration and Public Deliberation: An Interpretive Essay*, 94 YALE L.J. 1617 (1985) (arguing greater public participation in administrative law can help to eliminate the legitimacy deficit); Edward L. Rubin, *Law and Legislation in the Administrative State*, 89 COLUM. L. REV. 369 (1989) (suggesting innovative ways modern legislation and administrative regulation can take into account normative considerations); Mark Seidenfeld, *A Civic Republican Justification for the Bureaucratic State*, 105 HARV. L. REV. 1512 (1992) (arguing for legal reforms based on civic republican political theory to legitimate the administrative state); Martin Shapiro, *Administrative Discretion: The Next Stage*, 92 YALE L.J. 1487 (1983) (arguing for some judicial mechanisms of controlling administrative discretion as against technocratic models of administrative authority); Richard B. Stewart, *The Reformation of American Administrative Law*, 88 HARV. L. REV. 1669 (1975) (providing an extensive discussion of the legitimation problems of administrative law); Peter L. Strauss, *Sunstein, Statutes, and the Common Law—Reconciling Markets, the Communal Impulse, and the Mammoth State*, 89 MICH. L. REV. 907, 935 (1991) ("Turning away from legislative politics and a view of courts as integrators of the legal order permits a centralization of effective authority for government that should seem particularly troublesome in a democracy characterized by enormous government."). *But see* Susan Rose-Ackerman, *American Administrative Law Under Siege: Is Germany a Model?*, 107 HARV. L. REV. 1279, 1279-80 (1994) (arguments that the administrative system is in crisis are "overstated" and administrative delegation is "justified" if "administrative procedures are open and accountable"); Cass R. Sunstein, *Law and Administration After* Chevron, 90 COLUM. L. REV. 2071 (1990) (providing a defense for the principle of judicial deference to administrative agencies in many circumstances). This is not the place to consider in depth the "crisis" of admin-

What causes these systemic difficulties of cognitive limitation and normative legitimacy in modern law? Reflexive legal theory answers this question through an analysis of an underlying social transformation. In this view, the cognitive and normative problems of substantive law result from burdens placed on the legal system by an increasing "differentiation" of society. This is the basic sociological insight that allows the next theoretical step: a third ideal type of reflexive law.

A number of social theorists recognize that modern society becomes more complex as it differentiates.[134] "Differentiation" refers to the development of different semi-autonomous "spheres" or "systems" within society. As Gunther Teubner writes,

> Different lines of thought about modern society converge on [an] important point. A general discourse on society is, more than ever before, confronted with a "dissociation of its rules systems" [Lyotard], a multitude of "language games" [Wittengenstein], and a plurality of "semiotic groups" [Jackson]. Sociologists characterize modernity as the "separation of spheres" [Selznick], the differentiation of the "subsystems of society" [Parsons], the "operational closure of autopoiesis" [Luhmann], and the plurality of "forms of discourse and negotiation" [Habermas].[135]

The different spheres of society include specialized realms of law, politics, market-economy, science, religion, schools, family life, and others. Each develops a specialized "logic" or "discourse" of its own.

The differentiation of society not only increases social complexity, it "decenters" the legal and political systems. This is an essential point. "The differentiation of specialized discourses within society precludes a simple hierarchical model of rulers and ruled."[136] Therefore, the "subsystems of society" attain "considerable relative auton-

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istrative law created in part by the expansion of substantive law. It is sufficient for my purposes here simply to point out the general issue.

134 *See, e.g.*, Teubner, *Reflexive Elements*, *supra* note 13, at 263 (citing especially Niklas Luhmann's social theory). This basic sociological insight is not new. It lies, in various forms, at the origins of sociological theory. *See* EMILE DURKEIM, THE DIVISION OF LABOR IN SOCIETY (George Simpson trans., 1933); TALCOTT PARSONS, THE SOCIAL SYSTEM (1954).

135 Gunther Teubner, *The "State" of Private Networks: The Emerging Legal Regime of Polycorporatism in Germany*, 1993 B.Y.U. L. REV. 553, 556 (footnotes and citations omitted). *See also* MICHAEL WALZER, SPHERES OF JUSTICE: A DEFENSE OF PLURALISM AND EQUALITY (1983) (recognizing different "spheres" of society); DANILO ZOLO, DEMOCRACY AND COMPLEXITY: A REALIST APPROACH 4-6 (David McKie trans., 1992) (describing increasing social complexity in terms of differentiation).

136 Teubner, *supra* note 135, at 556 (arguing that "the hierarchy of state versus individual is irreversibly replaced by the heterarchy of different spheres of society"). As discussed in a footnote below concerning the "evolutionary" nature of Teubner's theory, *infra* note 148, I am not firmly convinced the "decentered" basis of modern society is "irreversible." One can imagine "devolution" into a society when the state once again forced itself to the "center." An example would be a modern tyranny of machine guns and electronic surveillance without the effective buffering institutions of economic markets, schools, religion, or family. *See* Orts, *supra* note 130, at 270-72 (providing an outline of a theory of modern tyranny).

omy from each other and from the central integrating institutions: state and law."[137]

This insight with respect to the place of law in modern society bears emphasizing because many conventional legal theories assume the supremacy of the political system, with the legal system as its accessory. Conventional reform strategies look to government to use law directly as its instrument to address social problems and to achieve social change. The hubris of this approach appears even in the titles of certain well-known jurisprudential works. But dreams of *Law's Empire*[138] often prove false in the modern world, reflecting the overachieving ambitions of legal theory, rather than a full understanding of social complexity.[139] Once a society grows significantly complex, a strategy of "law's imperialism" no longer works very well.[140] As Lawrence Rosen points out, legal theorists are often baffled by "a conceit that law is always at the center of whatever knowledge of society and polity is worth possessing."[141] Some legal theorists overlook

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137 Willke, *Societal Guidance Through Law?*, *supra* note 108, at 354.

138 RONALD DWORKIN, LAW'S EMPIRE (1986).

139 *Id.* Professor Dworkin writes, for example, that

> What is law? Now I offer a different kind of answer. Law is not exhausted by any catalogue of rules or principles, each with its own dominion over some discrete theater of behavior. Nor by any roster of officials and their powers each over part of our lives. Law's empire is defined by attitude, not territory or power or process.

Id. at 413. This view leads Dworkin to privilege law as compared to other social systems, including semi-autonomous systems of politics, economy, science, religion, and others. The origin of Dworkin's mistake derives at least in part from his overemphasis on "the internal point of view" of lawyers and legal academics looking at the legal system from within the legal system. *E.g.*, *id.* at 13-14. Although Dworkin's emphasis on the "internal" (reflexive!) processes of law is important in understanding the operations of any legal system, he errs in failing to recognize that "the external point of view" is just as essential. H.L.A. Hart's theory concerning the "internal/external" distinction is more balanced in this respect. *See* HART, *supra* note 104. Dworkin's emphasis on the "internal" point of view leads him to overestimate law's power in modern society. The irony is that a more restrained view of law's place in society may result in more effective legal strategies that would enhance its influence. *See, e.g.*, Teubner, *After Legal Instrumentalism?*, *supra* note 108, at 300-08.

140 *See* Orts, *supra* note 130, at 272-74 (developing an idea of "law's imperialism").

141 Lawrence Rosen, *A Consumer's Guide to Law and the Social Sciences*, 100 YALE L.J. 531, 531 (1990). Rosen concludes, somewhat despondently, that

> [G]ood social theory is unlikely to emerge from the context of a law school environment because if one begins and ends with law as the critical feature of a cultural issue, the nature of the connections involved will almost always be distorted . . . . Legal scholars purport to be doing basic research yet distort that—as pure research—each time they presuppose the centrality of law. The sociology of legal knowledge—including everything from professional training and expectations to the absence of peer review publications—plays a role in this pattern. The result, however, should not be a diminution of respect for the legal scholar's practical thought or an increase in lawyers' "Ph.D. envy." Rather, it should yield a clearer sense of the way labor has come to be divided between law scholar and social scientist and should encourage greater freedom for each, as university faculty, to follow leads, even if they render their own discipline momentarily secondary. Only then may a more realistic set of research objectives be formulated and more realistic uses be made of social science . . . .

Id. at 543-44.

the fact that other institutions of modern society have become too dispersed and powerful on their own for even the considerable forces of law and government easily to subjugate them.

The increasing differentiation of society sets the stage for the advent of a new type of law. Reflexive law presents an alternative to mechanically increasing the substance of law to "cover" the complex details of the problem to be regulated.[142] For complex social problems, including many environmental ones, the expansion of substantive law generates problems of its own. It leads to cognitive problems associated with difficulties in processing a heavily detailed mass of law and normative problems in administering a large body of substantive law. Reflexive law recognizes limits on law imposed by increasing social complexity. Instead of comprehensive regulation, "reflexive law restricts legal performance to more indirect, more abstract forms of social control."[143] It involves a "process-oriented structuring of institutions and of organizing of participation."[144] Reflexive law forsakes direct regulation and focuses instead on how law can rationally structure processes and procedures—both of the legal system itself and other social systems—in view of the complexity of society and its problems.[145]

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142 *Cf.* Roscoe Pound, *Mechanical Jurisprudence*, 8 COLUM. L. REV. 605 (1907):

> In periods of legal development through juristic speculation and judicial decision, we have a jurisprudence of ends in fact, even if in form it is a jurisprudence of conceptions. . . . Whenever such a period has come to an end, when its work has been done and its legal theories have come to maturity, the jurisprudence of conceptions tends to decay. Conceptions are fixed. The premises are no longer to be examined. Everything is reduced to a simple deduction from them. Principles cease to have importance. The law becomes a body of rules. This is the condition against which sociologists now protest, and protest rightly.

Id. at 611-12. Of course, Pound's target was a different legal ideal type, namely, "formal law." The models of substantive law of the modern administrative state developed after his time. Pound's basic insight, however, remains important. The point is that the processes of law, and thinking about law, can become ossified and the methods of an older era can "lose touch with reality" due to a tendency to "screen out social reality." Morton J. Horowitz, *Foreword: The Constitution of Change: Legal Fundamentality without Fundamentalism*, 107 HARV. L. REV. 32, 53 (1993) (discussing Pound's theory in connection with the tendency of courts to proceed "mechanically").

143 Teubner, *Reflexive Elements*, *supra* note 13, at 274.

144 *Id.* at 251.

145 Again, this does not mean that reflexive law is without content. Some critics of theories of reflexive law have argued that all law is in some sense "substantive" and that pleas for a more "procedural" law are therefore meaningless or at least contradictory. *See, e.g.*, Erhard Blankenburg, *The Poverty of Evolutionism: A Critique of Teubner's Case for "Reflexive Law"*, 18 LAW & SOC'Y REV. 273 (1984). But as Teubner has responded, referring to the "proceduralization" of law is easily misunderstood. A reflexive legal theory does not recommend that legislators do without substantive legal norms. Instead, reflexive theory focuses on the limitations imposed on law by the "far-reaching" differentiation of society. Teubner, *Social Order*, *supra* note 108, at 610-11. Rather than attempting to direct behavior through detailed sets of rules, reflexive law limits itself to channeling decisionmaking processes and social communications.

It is not necessary for my purposes to see society as evolving toward ever increasing complexity or to conclude that reflexive law "may emerge as the dominant form of post-modern law."[146] First, it is not at all clear what "post-modern law" means.[147] Second and more importantly, the claim that society is evolving toward greater complexity is open to empirical question.[148] It is instead sufficient to recognize that "socially adequate complexity" has developed for an ideal type of reflexive law to make sense.[149] Given conditions of social complexity including the phenomenon of social differentiation, one may inquire in each particular area of law whether reflexive strategies would be preferable to others. From this perspective, modern law may usefully be conceived as a mixture of ideal types: formal/market-based, substantive/command-and-control, and reflexive. (Again, see Figure 3).[150]

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146 Teubner, *Reflexive Elements*, *supra* note 13, at 246.

147 I am skeptical of "post-modernism" in law and in general. *See, e.g.*, JÜRGEN HABERMAS, THE PHILOSOPHICAL DISCOURSE OF MODERNITY: TWELVE LECTURES 2-5 (Frederick G. Lawrence trans., 1987); *cf. also* JÜRGEN HABERMAS, THE NEW CONSERVATISM 5-21 (Shierry W. Nicholson ed. & trans., 1989) (discussing "modern" and "postmodern" architecture). Post-modernists believe that contemporary society has somehow gone beyond "modern." A larger historical view suggests otherwise. *See, e.g.*, ERIC HOBSBAWM, THE AGE OF EXTREMES: A HISTORY OF THE WORLD, 1914-1991, at 516-18 (1994). Exercises in "post-modern law" are nevertheless a growth industry. *See, e.g.*, Stephen M. Feldman, *Diagnosing Power: Postmodernism in Legal Scholarship and Judicial Practice (With an Emphasis on the* Teague *Rule Against New Rules in Habeas Corpus Cases)*, 88 Nw. U. L. REV. 1046, 1046 n.2, 1051-52 n.22 (1994) (collecting examples).

148 The future of society may evolve toward less complexity in various ways. To take an extreme example, it is possible that ecological disaster will reduce human society to a much less "complex" existence. Or consider the new electronic information technology. It may make social life more complex, or perhaps it will make things simpler. *Cf.* Nathan Rosenberg, *Inventions: Their Unfathomable Future*, N.Y. TIMES, Aug. 7, 1994, at F9 ("[I]nnovation forecasting is hugely complex. Only the optimistic and the naive would think some intellectual paradigm could put it all in order.").

For criticism of theories of reflexive law on grounds of its use of the idea of social evolution, see Blankenberg, *supra* note 145. For general critique of evolutionary legal theories, see Robert W. Gordon, *Critical Legal Histories*, 36 STAN. L. REV. 57 (1984); Sally F. Moore, *Legal Systems of the World*, *in* LAW AND THE SOCIAL SCIENCES 11 (Leon Lipson & Stanton Wheeler eds., 1986). Teubner responds to this criticism by emphasizing that the evolution of legal systems involves the evolutionary development of "*mechanisms* of development" rather than "*direction*." TEUBNER, LAW AS AN AUTOPOIETIC SYSTEM, *supra* note 108, at 48 (emphasis in original). He describes his "evolutionary" theory as opposed to "evolutionist" functionalist theories that view social change as going in a certain inevitable direction (*i.e.*, towards "higher" forms of society). *Id.* at 48-52. Teubner claims his theory is not teleological, but rather a theory of "blind evolution." *Id.* at 47-63.

149 Teubner follows Luhmann in emphasizing the importance of the concept of "socially adequate complexity," which describes the "complex environment of functionally differentiated, semi-autonomous subsystems" and the interactive relationship of law as one of these subsystems within the system of subsystems. Teubner, *Reflexive Elements*, *supra* note 13, at 246.

150 I do not claim that the ideal types formal/market-based and substantive/command-and-control are fully co-extensive. As discussed below, *see infra* subpart IV.A, some market-based

Recognizing operational and normative difficulties in an ever-expanding substantive law, reflexive law lowers its sights. Rather than trying to regulate a social problem as a whole, reflexive law aims to enlist other social institutions to treat the issue. Reflexive legal strategies look to influence the processes of intermediary institutions, such as government agencies and companies, rather than to regulate social behavior directly.

Reflexive law attempts to provide solutions to the gridlock of modern law. Reflexive solutions offload some of the weight of social regulation from the legal system to other social actors. This is accomplished by *proceduralization.* Rather than detailed pronouncements of acceptable behavior, the law adopts procedures for regulated entities to follow. The procedures are adopted with a design in mind to encourage thinking and behavior in the right direction.

To illustrate, consider the development of modern tax law. Today's highly detailed tax laws are a triumph of substantive law. However, a reflexive element appears when one looks at enforcement strategies. The complexity of millions of taxpayers means the prolix substantive law cannot be directly enforced. The reflexive solution is a disclosure or reporting system requiring every taxpayer to file a form with the Internal Revenue Service. Of course, the IRS cannot monitor the accuracy of each return; the complexity of the system makes the prospect of comprehensive review of millions of returns as absurd as direct collection. Instead, the reflexive system relies to a great extent on the honesty and trustworthiness of individual taxpayers, combined with a more or less randomly introduced element of fear of strict enforcement, which is often reserved for questionable cases. Modern tax law in this way consists of a mix of different ideal types of law. It includes a complex body of substantive law (the tax code) as well as a reflexive element (tax returns).

The tax payment example also illustrates how different social "spheres" or "systems" may perceive the same action differently. Filing and paying taxes is first a legal act required of adult citizens and other legal "persons" like corporations. Second, taxes are political; they are used to support a political state, its personnel, and its programs. Third, tax payments are obviously economic. Fourth, the policies of tax law affect other social systems, for example, the family (exemptions for dependents) and religion (exemption from the tax

methods of environmental regulation have reflexive aspects. Market-based approaches, such as pollution charges and pollution permit trading, rely also on command-and-control methods to set overall environmental goals while using the formal definition of "rights" to achieve those ends efficiently through the establishment of markets. What I have called the Pigouvian and permit trading types of market-based regulation are therefore hybrids of the formal and substantive types. Coasian methods of market-based regulation are more purely formal. Most, if not all, command-and-control methods are consistent with the substantive ideal type.

system). Indirect influences of the tax system on many areas of society, such as the family and religion, are reflexive in the sense that the legal requirements encourage an attitude of self-reference and self-reflection of persons and social institutions outside the legal system. Reflexive law does not give orders directly; it does not micro-regulate.

Reflexive law, then, is self-referential in two ways.[151] It involves a self-referential critique of the processes of the legal system itself, and it aims to encourage the structure of self-referential processes in other social institutions.

First, reflexive law recognizes the cognitive and normative limitations of a legal system operating in a complex modern society. Reflexive law is self-critical law.[152] A reflexive attitude appreciates law's limits.[153] As the social theorist Pierre Bourdieu writes, "[i]t is important to ascertain the social conditions—and the limits—of the law's quasi-magical power."[154] The moving parts of modern society run according to very different systemic languages, including finance and accounting in business, the mathematical and inductive standards of verifiable truth in science, and trust and love in intimate relationships.[155] Understanding that the legal system is only one of a number of differentiated social "spheres" or "systems" puts reflexive legal theory in a better position than traditional theories to retain a sense of the possibilities and limitations of law reform. Because substantive reform strategies often proceed on the implicit assumption that law can force change on society, they often miss their mark by misunderstanding the ability of other social systems to respond.[156]

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151 As Teubner writes, reflexive law has "a dual character." Teubner, *Social Order*, *supra* note 108, at 612.

152 Elsewhere, I have described the capacity to reflect critically on the actual empirical operations of the legal system and assess them in light of legal ideals as "critical legality." Orts, *supra* note 130, at 252-53.

153 This worldview results from "empirical analyses of the historical positions of law in society." Teubner, *Social Order*, *supra* note 108, at 612. *See supra* text accompanying notes 134-37 (discussing social differentiation). *Cf. also* Richard Janda, *Law's Limits*, 63 S. CAL. L. REV. 727 (1990) (discussing limitations of legal theory in another context).

154 Pierre Bourdieu, *The Force of Law: Toward a Sociology of the Juridical Field*, 38 HASTINGS L.J. 805, 839 (1987).

155 *See supra* text accompanying notes 134-35 (discussing different social "discourses"). *Cf.* NIKLAS LUHMANN, THE DIFFERENTIATION OF SOCIETY (Stephen Holmes & Charles Larmore trans., 1982); NIKLAS LUHMANN, LOVE AS PASSION: THE CODIFICATION OF INTIMACY (Jeremy Gaines & Doris L. Jones trans., 1986); NIKLAS LUHMANN, A SOCIETAL THEORY OF LAW (Martin Albrow ed., Elizabeth Kay & Martin Albrow trans., 1985); NIKLAS LUHMANN, TRUST AND POWER (Howard Davis et al. trans., Tom Burns & Gianfranco Poggi eds., 1979). Luhmann, however, insists on social "codes" somewhat more strongly than my looser use of different "languages."

156 Recall the example of controlling mobile sources of air pollution. *See supra* text accompanying notes 39-44. Technological control of pollution emissions of new vehicles seemed like a good idea, but this legal reform failed to take full account of how other social systems would react. The substantive reform of mandated command-and-control technology ignored the

A second lesson of reflexive legal theory is that choice of the best legal strategy in any particular case depends on the circumstances of each particular legal issue.[157] The ideal type of reflexive law provides a source of alternative strategies that may prove helpful in addressing complex social problems. A recognition of law's relatively weaker position in the face of cognitive and normative limitations of substantive reform suggests alternative reflexive strategies that concentrate on how to structure the self-referential and self-critical capacities of *other* social systems. The second aspect of reflexive law focuses on how law, given its limits, may nonetheless effectively advance social reform.[158]

One reflexive strategy is for law to provide "societal guidance" rather than pursuing the overly ambitious substantive strategy of "so-

broader systemic imperatives: the economic system drove automobile companies to make and sell more cars, and "systems" of everyday private life continued to foster increasing use of automobiles for work, home life, and recreation. What was lacking was a systemic solution to these issues—such as effectively promoting public transportation.

157 Teubner, *Social Order*, *supra* note 108, at 612.

158 Some theorists have been skeptical of this sort of reflexive regulation. They claim social complexity dooms even this sort of strategy from having a beneficial or predictable effect. In particular, Niklas Luhmann is skeptical of the possibility that a reflexive legal system can "regulate" with respect to other social systems. Niklas Luhmann, *Some Problems with Reflexive Law*, *in* STATE, LAW, AND ECONOMY AS AUTOPOIETIC SYSTEMS, *supra* note 108, at 389-415. *See also* Gotthard Bechmann, *Reflexive Law: A New Theory-Paradigm for Legal Science?*, *in* STATE, LAW, AND ECONOMY AS AUTOPOIETIC SYSTEMS, *supra* note 108, at 417-34 (arguing that a theory of reflexive law, by referring to itself, "would then hardly be a control theory or even a control instrument whose application could influence other societal sub-systems into self-reflexion"). Others, however, have advanced reflexive strategies of reform that are careful to take into account the limited "control" capacity of law with respect to other social systems. *See* Teubner, *Social Order*, *supra* note 108; Willke, *Social Guidance Through Law?*, *supra* note 108. Because I do not believe differentiated social systems are as hermetically sealed by "binary codes" (*e.g.*, legal/illegal) as does Luhmann, I do not think his objections withstand the responses given by the reflexive legal theorists, Teubner and Willke.

I should also note the omission of a more recent overarching theme in Teubner's legal theory: the idea of "autopoiesis." Although I accept and endorse the idea of reflexive law, with its grounding in an understanding of the differentiation and fragmenting of modern society, I do not enter into the technical thickets of systems theory and debates about autopoiesis. In general, autopoiesis refers to the extent to which various social systems—again, law, economy, politics—are self-reproducing, self-maintaining, self-organizing, self-regulating, and self-observing. *See, e.g.*, TEUBNER, LAW AS AN AUTOPOIETIC SYSTEM, *supra* note 108, at 19-24 (distinguishing these various forms of "self-reference"). Ignoring, perhaps unfairly, much of the technical jargon and arguments in the legal theories of autopoiesis (for example, "hypercycles" and the "materiality continuum"), I simply agree with the more fundamental observation that law—as a legal system—has become in modern societies to a significant extent independent of other social systems and institutions. *Id.* at 40 (citing ALAN WATSON, THE EVOLUTION OF LAW 119 (1985)). At the same time, other social systems—politics, economy, science—have also developed a certain degree of autonomy. For Teubner's autopoietic theory, see sources cited *supra* note 108. For further discussion of the theory of autopoiesis, see, *e.g.*, NIKLAS LUHMANN, A SOCIETAL THEORY OF LAW, *supra* note 155; Arthur J. Jacobson, *Autopoietic Law: The New Science of Niklas Luhmann*, 87 MICH. L. REV. 1647 (1989); Niklas Luhmann, *Law as a Social System*, 83 NW. U. L. REV. 136 (1989); Symposium, *Closed Systems and Open Justice: The Legal Sociology of Niklas Luhmann*, 13 CARDOZO L. REV. 1419 (1992).

cial planning."[159] In contrast to comprehensive planning, a strategy of societal guidance aims to structure the decisionmaking processes of "autonomous, self-guiding" subsystems, such as institutions in the economy.[160] This kind of reflexive legal reform will not be easy given the "Babylonian confusion of differently specialized tongues" in a differentiated society.[161] However, social differentiation and the importance of the environment leaves little choice but to try.[162]

Another reflexive strategy recommends reform through "communication via organization."[163] This strategy aims to channel communications within the organizational structure of social institutions. This procedural approach to legal reform "confines itself to making available organizational forms, procedures, and competences for relationships within and between organizations."[164]

In whatever form, reflexive strategies of law reform emphasize the role law plays in structuring the "rules of the game" for other institutions. The procedural approach of reflexive law means that regulators cannot control the precise nature or direction of the change that will result from a particular strategy. Reflexive law is characteristically unpredictable, a quality which may disconcert those who cherish "control."[165] Perhaps with some psychological cost to those who pre-

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159 Willke, *Societal Guidance Through Law?*, *supra* note 108, at 366-84.

160 Willke writes, for example, that in comparison with social planning,

> Guidance is less ambitious. Its goal is to arrange a framework for societal change which conditions the relations between partially autonomous, self-guiding subsystems as acting units. Guidance can be defined as a form of organizing the conditionalities of partially autonomous parts of a differentiated system which permits the integration of the system on an emergent level of action. In other words, guidance aims at a capacity of an acting unit for present decision making which takes into account future necessities, prerequisites or possibilities of the system—e.g., a society—as a whole.

Id. at 372.

161 *Id.* at 411-12.

162 Biological as opposed to social evolution on Earth doesn't necessarily have to include human beings in the future. It is even possible that human intelligence is "an environmental abnormality" and that "a law of evolution is that intelligence usually extinguishes itself." Edward O. Wilson, *Is Humanity Suicidal?*, N.Y. TIMES, May 30, 1993, (Magazine), at 24, 26 (*quoted in* James E. Krier, *The End of the World News*, 27 LOY. L.A. L. REV. 851, 860 (1994)). *But see id.* at 27 (*quoted in* Krier, *supra*, at 861) ("We are smart enough and have time enough to avoid an environmental catastrophe of civilization-threatening dimensions."). Given current patterns of growth and technological change in human society, legal intervention of some kind is essential. As Willke writes,

> By now, practically each developed subsystem—be this economy, technology, military, science, health system, traffic system, agriculture, energy production or a dozen other ones—are in a position to generate almost global disaster simply by following their extremely specialized evolutionary path. Who or what is to stop them?

Willke, *Societal Guidance*, *supra* note 108, at 365.

163 Teubner, *Social Order*, *supra* note 108, at 640-42.

164 *Id.* at 642.

165 *See* Teubner, *Reflexive Elements*, *supra* note 13, at 255 ("Under a regime of reflexive law, the legal control of social action is indirect and abstract, for the legal system only determines the organizational and procedural premises of future action."); Teubner, *Social Order*, *supra* note

fer a grander role for law, however, some complex problems demand a reflexive approach that is less certain, but more realistic.

To illustrate what a reflexive law reform strategy might involve in environmental law, consider again the example of the tax system. Taxes support a governmental apparatus to address certain social needs, such as to provide a common defense, to police crime, to build roads, and to resolve disputes. A reflexive element of the tax system is requiring the filing of returns, that is, *disclosure*. Now imagine using the model of the tax system for disclosure of environmental issues. A reflexive environmental law might require each citizen to report the "environmental impact" of the individual or family in the past year. The statement might be short, or it might be very detailed. Questions might include the following:

> "How much electricity did you use during the year?"
> "Do you recycle household waste? If so, what types of material do you recycle?"
> "How many cars do you own? Do you commute to work? If so, do you drive or take public transportation? If you drive, how many miles? How many days a week do you make the trip?"

The point is not to recommend this reform as a practical matter (although some people might like the idea of a voluntary program of this sort). Any reform derived from the hated practice of paying taxes is unlikely to generate much excitement. The point is to illustrate how a reflexive environmental law might work. Reflexive environmental disclosure would focus on setting up a system of social communication. The reflexive aim is not to constrain or dictate behavior, but rather to provide mechanisms or structures to increase the amount of self-reflection and social communication concerning serious environmental issues—in this case, an internal self-critical reflection about one's personal environmental habits.

IV. The Emergence of Reflexive Elements in Current Environmental Law

A scheme of self-reporting for large industrial companies analogous to the individual self-reporting of environmental impact described above is not a far-fetched idea. Part V of this Article examines a working version of this kind of system in the form of Europe's Eco-Management and Audit Scheme. Before proceeding with that analysis, however, it is worth considering the reflexive aspects of other current environmental laws. This Part considers the reflexive aspects of conventional market-based environmental regulation, the National Environmental Policy Act, enforcement policies of adminis-

108, at 625 ("Only 'blind' processes of co-evolution of law and regulated subsystem are possible, in principle uncontrollable by the legal system.").

trative agencies giving credit for environmental auditing, and voluntary programs the EPA has experimented with in recent years.[166]

A. Reflexive Aspects of Market-Based Environmental Regulation

When considering the variety of conventional market-based environmental laws discussed above,[167] it becomes clear that some are more reflexive than others. They differ according to the way in which the legal system interacts with the economic system in each approach. Compared to command-and-control regulations, market-based environmental regulations are more often in harmony with the vision of reflexive law advanced here.[168]

The Pigouvian approach of environmental taxes or charges imposes an economic calculation for polluting activities.[169] Because this method of regulation encourages internal self-reflective decisionmaking on the part of actors in the economic system, it has a reflexive aspect. But the Pigouvian method achieves this result in a curious way: the legal system substitutes its economic judgments for those of the economic system. In this sense, the legal system is "playing economics," and it is a game that may prove dangerous.

The interaction between law and economics in Pigouvian environmental regulation occurs as follows. The legal system sets itself up—instrumentally—as the arbiter of the "price" of environmental pollution. In employing a Pigouvian approach, the legal system attempts to affect the economic system by translating "external" environmental harm into "internal" economic costs. At the same time, this approach imposes different kinds of costs on the legal system, which is charged with complicated tasks of price setting, overseeing an artificially created market, and observing the environmental effect of the ongoing system in order to adjust prices accordingly, that is, lowering the price when there is "too little" pollution and raising the price when there is "too much." As pointed out above, governments find this price-setting function difficult.[170] Political and legal systems are

166 This list of current reflexive environmental laws is not meant to be exclusive.

167 *See supra* subpart II.B.

168 *Cf.* Teubner, *Social Order*, *supra* note 108.

> In the regulatory debate, "regulatory failures" are frequently attributed to a "mismatch" between regulatory instruments (e.g., "command and control" norms) and the internal logic of the regulated area, e.g., orientations to economic utility, and corresponding regulatory instruments, appropriate to the field, are called for, e.g., transferable pollution rights.

Id. at 617 (citing, *e.g.*, STEPHEN G. BREYER, REGULATION AND ITS REFORM (1982)); Richard Stewart, *Regulation and the Crisis of Legalization in the United States*, *in* LAW AS AN INSTRUMENT OF ECONOMIC POLICY: COMPARATIVE AND CRITICAL APPROACHES 97 (Terrence Daintith ed., 1987). Teubner goes on, however, to criticize the "economistic" approach to legal regulation as failing to take into account the relative autonomy of competing social systems, notably in this context the legal and economic systems. Teubner, *Social Order*, *supra* note 108, at 618-22.

169 *See supra* text accompanying notes 65-69 (discussing modern Pigouvian approach).

170 *See supra* notes 68-69 and accompanying text.

not well-adapted to the task of setting efficient prices, which is done more effectively by the economic system. As for the economic system, businesses look at Pigouvian taxes or charges just like they do any other legally imposed costs.

Despite its difficulties, the Pigouvian method of regulation often has efficiency advantages over traditional command-and-control techniques. But it is properly seen as a market-based variant of substantive command-and-control. If widely employed, Pigouvian taxes, charges, and subsidies run the significant risk of overburdening the legal system just as command-and-control has done.[171] It is not the traditional "legal" kind of burden, but rather an "economic" one. The legal system is likely to be particularly unskilled at handling the large economic job of setting correct prices.

In contrast, the Coasian economic approach to environmental regulation suggests a quite different model.[172] The Coasian approach argues for solving public environmental problems, which arise in the absence of the private legal controls of formal law, by "privatizing" the problem, rather than by developing new methods of public regulation.[173] It is therefore properly described in terms of legal ideal types as a "formal" rather than a substantive or reflexive approach. A Coasian strategy of reform aims to address "public" environmental problems by incorporating them into the "private" economic system.[174] As discussed above, the idea may prove useful in certain instances, but a number of environmental problems elude a formal Coasian strategy.[175] Air, for example, is just too shifty to try to enclose or trace in terms of ownership; it "does not come in marketable packages."[176] In any event, whatever the most effective strategy may be for any particular case, Coasian solutions do not qualify as reflex-

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171 In addition, of course, Pigouvian systems can fail to set the "optimal" rate of pollution tax or charge to achieve the "right" amount of control. In other words, over- and under-regulation are perennial worries in a Pigouvian scheme.

172 *See supra* text accompanying notes 70-76 (discussing Coasian economic approach).

173 *See* discussion of nuisance law and the origin of environmental statutes and "substantive" law *supra* text accompanying notes 118-21 (discussing nuisance law as an example of "formal" law).

174 Again, I recognize dangers of employing the "public/private distinction." *See supra* notes 113, 117. For my purposes, "private" or "formal" strategies of legal regulation may be distinguished from "public" or "substantive" regulation, but this distinction refers only to whether the choice of type of law relies primarily on (1) the allocation of private "rights" and private dispute-resolution mechanisms or (2) public laws creating general obligations that rely on administrative agencies and other government agencies for enforcement. In this respect, reflexive law probably fits better in the "public" law category with respect to the "law" establishing it, although it also aims to structure the "private" realm of the communications and discourses that occur, for example, in "private" businesses.

175 *See supra* text accompanying notes 70-76 (describing Coasian approach).

176 Krier, *supra* note 28, at 430.

ive. They look back to simpler times when the establishment of formal rights could solve most, if not all, of society's problems.[177]

Unlike Coasian formal solutions, market-based adjustments of command-and-control regulations retain the features of the underlying substantive purposes of environmental statutes.[178] Market-based tradeable-permit regulations also induce a degree of reflection within regulated entities. Unlike Pigouvian taxes, the command-and-control basis of the system compels a bottom line of environmental performance. (There is always the option in a Pigouvian scheme of paying the extra charge if the pure economics of the decision warrants.) Unlike traditional command-and-control regulation, tradeable permits encourage reflection about relative costs of compliance and therefore create incentives within regulated entities for inventing technologies to improve environmental performance. Market-based, tradeable-permit systems thus have advantages of both command-and-control and Pigouvian regulation; in fact, they are a hybrid of the two. Because tradeable permits encourage internal self-reflection concerning not only costs of compliance but also ingenuity in environmental performance, they have a reflexive aspect.[179]

Finally, perhaps the most reflexive of the market-based environmental laws are environmental marketing regulations.[180] Environmental labels ambitiously attempt to encourage companies to make products in a manner judged environmentally sound. The goal is to create economic incentives through inducing consumer demand for these products. Environmental labels look to change the economic system indirectly by appealing to the values of everyday consumers.[181] Naturally, the success of this kind of regulation depends in part on whether the governmental or private organizations that set up the system employ trustworthy processes to judge accurately the environmental soundness of products. As the European Eco-label experiment demonstrates, this expertise is not easily gained.[182] In addition, the success of labels depends on the degree of market demand

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177 This does not mean that Coasian approaches may not provide helpful solutions in appropriate contexts.

178 This third type of market-based environmental regulation is discussed *supra* text accompanying notes 77-83.

179 *Cf.* Teubner, *Social Order*, *supra* note 108, at 617 (recognizing "transferable pollution rights" as in some degree reflexive). In addition, to the extent that a tradeable permit is a property right, permit-trading adopts a bit of the Coasian approach.

180 *See supra* text accompanying notes 84-103 (discussing environmental marketing regulation).

181 Arguably, environmental labels also create a Coasian property right in the label itself. Still, the underlying effect is to encourage internal reflexive processes in businesses to compete for this "right." In the case of private environmental labelling, the property right in the label remains with the certifying organization. *See, e.g.*, U.S. ENVIRONMENTAL PROTECTION AGENCY, *supra* note 88, at 74 (stating that Green Seal retains ownership of its logo).

182 *See supra* notes 84-86 and accompanying text.

for the products, which derives in part from how much consumers understand, trust, and believe in the importance of environmental labels and what they represent.[183] If most consumers prefer to continue making purchases on a least cost basis, environmental labels will not achieve the desired effect. Nevertheless, by attempting to generate internal self-reflective processes within businesses, as well as expanding social communication about environmental products among consumers, environmental labels qualify as strongly reflexive.

Regulation of the truthfulness of environmental marketing and advertising also has reflexive aspects. The standards of enforcement are typically legal—"false" and "misleading" are standard fare, for example, in securities regulation—but like environmental labelling this kind of regulation aims to improve the accuracy of environmental claims made by sellers in the marketplace. Assuming consumers value "true" environmental claims, law can play an important role in the process. However, in the absence of effective regulatory oversight, consumers will be likely to grow cynical and to ignore all environmental marketing claims because they have no reliable information to distinguish among them.[184] If the law of environmental marketing can overcome this difficulty, its reflexive aspect appears in how it accesses the self-referential processes of consumers and the businesses that make consumer products.

B. The National Environmental Policy Act

One of the first major environmental statutes passed in the United States was neither market-based nor command-and-control. The National Environmental Policy Act (NEPA)[185] requires federal agencies to prepare and disclose environmental impact statements before taking actions "significantly affecting the quality of the human environment."[186] Whether an action has a "significant" environmental effect is not always easily determined, although regulations provide some guidance.[187] Similarly, disputes arise concerning what exactly an

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183 U.S. ENVIRONMENTAL PROTECTION AGENCY, *supra* note 88, at 4. Consumer skepticism about environmental labels may also result from a failure in establishing consistent and trustworthy standards. *Id.* at 6.

184 A study by EPA in 1993 indicated growing consumer skepticism about environmental claims and labels in advertising. U.S. ENVIRONMENTAL PROTECTION AGENCY, EVALUATION OF ENVIRONMENTAL MARKETING TERMS IN THE U.S. (1993). For an example of the cynicism created by the current poorly regulated marketplace concerning environmental claims, see Michael Rubiner, *Buy Me*, N.Y. TIMES, July 31, 1994, § 6 (Magazine), at 46 (making fun of various exorbitant environmental appeals and other political claims in product advertising).

185 42 U.S.C. §§ 4321-4370 (1988).

186 *Id.* § 4332(2)(c).

187 *See, e.g.*, 40 C.F.R. § 1508.4 (1994) (providing for "categorical exclusions"); 40 C.F.R. § 1507.3(b)(2)(i) (1994) (listing agency actions that almost always require environmental impact statements); 40 C.F.R. § 1508.27(b)(10) (1994) (addressing relevance of whether other environ-

"environmental impact" means.[188] In general, NEPA forces agencies to adopt internal procedures to assess the environmental damage their decisions could have. In this respect, by acting as "a procedural mechanism" that attempts to "ensure well-informed, careful decision-making" by federal agencies, NEPA is properly considered to have reflexive properties.[189]

The reflexive scope of NEPA, however, is quite limited. By its terms, the statute applies only to *agency* actions.[190] Although NEPA also contains sweeping language,[191] most of it is "noble, vague, aspirational, and unenforceable."[192] NEPA is therefore limited to encouraging reflexive processes within the federal and, through copycat "little NEPAs," state bureaucracies.[193]

NEPA is properly considered a reflexive *administrative* law because it only governs administrative decisions. In this capacity, NEPA and the little NEPAs have proven an uncertain success. Arguments in favor of NEPA stress that it aims "to provoke thought and promote open and well-informed decisionmaking."[194] The Supreme Court is "almost certain" the procedural requirements of an environmental impact statement "affect the agency's substantive decision."[195] But other

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mental statutes would be violated); 40 C.F.R. § 1501.4(b)-(c), § 1508.9(a)(1) (1994) (noting that close cases require a preliminary "environmental assessment" to determine whether an environmental impact statement is needed). Regulatory direction, however, does not eliminate uncertainty. As Judge Friendly concluded in some frustration, "significant" effect lies somewhere in between "not trivial" and "momentous." Hanly v. Kleindienst, 471 F.2d 823, 837 (2d Cir. 1972) (Friendly, J., dissenting).

188 *See, e.g.*, Metropolitan Edison Co. v. People Against Nuclear Energy, 460 U.S. 766, 772 (1983) (holding that damage to "psychological health" was a cognizable "environmental impact" under NEPA only if proximately caused by an event "in the physical environment—the world around us so to speak").

189 Herz, *supra* note 13, at 1668, 1689-93 (categorizing NEPA as a reflexive law).

190 *See, e.g.*, Public Citizen v. United States Trade Representative, 5 F.3d 549, 554 (D.C. Cir. 1993) (Randolph, J., concurring) ("NEPA's impact statement requirement applies only to federal agencies. Members of Congress, who alone introduce bills and offer amendments, are not covered. Neither are private individuals, corporations, labor unions, citizen groups or other organizations, all of which frequently avail themselves of their First Amendment right to petition the government.").

191 For example:

> The Congress . . . declares that it is the continuing policy of the Federal Government, in cooperation with State and local governments, and other concerned public and private organizations, to use all practicable means and measures, including financial and technical assistance, in a manner calculated to foster and promote the general welfare, to create and maintain the conditions under which [humanity] and nature can exist in productive harmony, and fulfill the social, economic, and other requirements of present and future generations of Americans.

42 U.S.C. § 4331(a) (1988).

192 Herz, *supra* note 13, at 1677.

193 FRANK P. GRAD, ENVIRONMENTAL LAW 1181-85 (3d ed. 1985) (describing "little NEPAs" adopted by states).

194 Herz, *supra* note 13, at 1684.

195 Robertson v. Methow Valley Citizens Council, 490 U.S. 332, 350 (1989).

observers are not so sure, suggesting that agencies often jump through NEPA's procedural hoops only after they have reached a decision.[196] If this "defensive" attitude toward NEPA prevails, then the "long, often boilerplate, discussions" of environmental impact statements, which often amount to thousands of pages, contribute to overburdening administrative law.[197] If the critics are right, the ironic result from the perspective of reflexive legal theory is that NEPA's procedures have only succeeded in furthering environmental juridification.[198]

NEPA's reflexive processes do not extend to the legal system in general. NEPA reaches only the administrative apparatus, which swells with the responsibility of more and more decisions under more and more substantive law. Reflexive procedures added around the edges of a morass of substantive law are unlikely to yield systemic change. But consider the much broader effect NEPA would have if it mandated environmental impact statements for all *legislative* acts.[199]

I do not mean to take a position in the ongoing debate over whether NEPA has been effective or not.[200] My point is rather that

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196 *See, e.g.*, Herz, *supra* note 13, at 1700 n.151 (discussing "central concern" about whether the NEPA process "precedes and informs the agency decision or follows and justifies it"); Comment, *The National Environmental Policy Act: How It Is Working, How It Should Work*, 4 ENVTL. L. REP. (Envtl. L. Inst.) ¶ 10.003 (1974). For recent discussion of experience with NEPA, see *Symposium on NEPA at Twenty*, 20 ENVTL. L. 447 (1990).

197 Herz, *supra* note 13, at 1700, 1713. The extreme example is the eight-thousand page environmental impact statement for the proposed superconducting supercollider. *Id.* at 1713 n.203.

198 *See supra* text accompanying notes 45-58 (discussing environmental juridification).

199 In theory, NEPA applies to proposals for legislative actions, but only if initiated by agencies. 42 U.S.C. § 4332(2)(c) (1988). However, this provision has been left unenforced, because the requirement is easily circumvented, *e.g.*, by having the President or a member of Congress "propose" the favored legislation. *See* Herz, *supra* note 13, at 1688 n.92 (citing Ian M. Kirschner, Note, *NEPA's Forgotten Clause: Impact Statement for Legislative Proposals*, 58 B.U. L. REV. 560 (1978)). *But see* Public Citizen v. United States Trade Representative, 5 F.3d 549 (D.C. Cir. 1993) (suggesting viability of legislative environmental impact statement even though rejecting application to NAFTA issue); Joseph Mendelson III & Andrew Kimbrell, *The Legislative Environmental Impact Statement*, 23 ENVTL. L. REP. (Envtl. L. Inst.) ¶ 10.653 (1993) (recommending steps toward revitalization of legislative environmental impact statements).

200 One leading critic of NEPA has since mellowed in his assessment. *Compare* Joseph L. Sax, *The (Unhappy) Truth About NEPA*, 26 OKLA. L. REV. 239, 239 (1973) [hereinafter Sax, *The (Unhappy) Truth*] ("I know of no solid evidence to support the belief that requiring articulation, detailed findings or reasoned opinions enhances the integrity or propriety of the administrative decisions. I think the emphasis on the redemptive quality of procedural reform is about nine parts myth and one part coconut oil.") *with* Joseph L. Sax, *More Than Just a Passing Fad*, 19 U. MICH. J.L. REF. 797, 804 n.28 (1986) ("I now recognize that I underestimated the influence of NEPA's 'soft law' elements."). *See also Symposium on NEPA at Twenty*, *supra* note 196. Although NEPA has juridifying tendencies, it may genuinely accomplish its goal of internalizing environmental considerations in agency decisionmaking. One indication of success is the increased presence of environmental professionals in administrative bureaucracies, which suggests (but does not prove) they actually contribute to substantive deliberations. Herz, *supra* note 13, at 1711-12. It is also possible that these environmental professionals act mostly to rationalize decisions made on other grounds. *See, e.g.*, Sax, *The (Unhappy) Truth*, *supra*, at 239-40 (doubting the "expert, 'boring-from-within,' theory"). Empirical evidence on this issue is difficult to

because NEPA is limited to administrative law, its reflexive effect is constrained by the corresponding growth of the substantive law underlying it.[201] Another limitation of NEPA as a reflexive model is that it is not only restricted to administrative law, but also to the larger legal and political systems. NEPA's public participation provisions may encourage reflexive practices within citizens' groups and other "affected parties."[202] But NEPA is embedded in a broader substantive legal framework and administrative bureaucracy. NEPA's efficacy in terms of changing the thinking in social systems other than law is therefore doubtful. The reflexive lesson of NEPA is problematic.

C. Enforcement Policies and Sentencing Standards in Environmental Law

Another area of environmental law and policy with reflexive elements appears in the standards and policies employed by officials charged with enforcing environmental laws. Unlike NEPA's governmental focus, these standards and policies are meant to provide incentives for what might be called "good environmental behavior."

Environmental enforcement policies and standards in the United States come in at least three major forms: EPA's environmental auditing policy statements, guidelines promulgated internally by the EPA and the Department of Justice (DOJ) that govern discretion in the prosecution of environmental crimes, and the newly proposed environmental sentencing guidelines currently under consideration by the U.S. Sentencing Commission.

1. Environmental Auditing Policy.—In 1986 the EPA adopted an *Environmental Auditing Policy Statement*.[203] The policy aimed to encourage the adoption of "environmental auditing programs to help ensure the adequacy of internal systems to achieve, maintain and

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obtain because the impact of NEPA is difficult to quantify. Herz, *supra* note 13, at 1704. NEPA's requirement of public comment on environmental impact statements may help to combat the democratic deficit in administrative law. 40 C.F.R. § 1503.1 (1993) (requiring disclosure of draft environmental impact statements and inviting "comments from the public, affirmatively soliciting comments from those persons or organizations who may be interested or affected"); 40 C.F.R. § 1503.4 (1993) (requiring response to comments in final environmental impact statement). *See supra* note 133 and accompanying text (discussing legitimacy deficit in administrative law).

201 Michael Herz correctly classifies NEPA as having a reflexive nature, but he appears to overlook the limitation of its scope. Herz, *supra* note 13, at 1689-93. Moreover, his distinction between "reflexive law" and "autonomous law" misapprehends Teubner's theory. Law can only be "reflexive" if it is, at least to a significant extent, "autonomous." A legal theorist who believes law cannot be autonomous to any significant degree is left only with models of "formal" and "substantive" law.

202 *See supra* note 200.

203 Environmental Auditing Policy Statement, 51 Fed. Reg. 25,004 (1986); *see also* Restatement of Policies Related to Environmental Auditing, 59 Fed. Reg. 38,455 (1994).

monitor compliance" with environmental regulations.[204] In addition to this type of "compliance audit," the EPA encouraged the use of "management audits," which assess efforts to establish "sound environmental management practices to improve environmental performance."[205] The EPA expressed a preference for a hands-off attitude, noting that it "does not intend to dictate or interfere with the environmental management practices" of businesses and stating that "auditing should remain a voluntary activity."[206]

Although the EPA's 1986 policy statement expressed a favorable attitude toward environmental auditing, it provided uncertain incentives. It did not engender widespread trust by businesses. Because EPA did not give a clear statement of when environmental auditing would be protected from discovery, it left businesses to determine for themselves the relative costs and benefits of environmental auditing. Responses to this ambiguous policy predictably cut both ways. Although many businesses went forward with extensive environmental auditing programs,[207] others followed the more cautious advice of

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204 Environmental Auditing Policy Statement, *supra* note 203, at 25,006.

205 *Id.* The distinction between compliance and management audits is pervasive in the United States. One source defines the difference between them as follows:

> Compliance audits focus on existing and potential environmental hazards, releases, and discharges for the purposes of (1) complying with environmental laws and regulations, (2) identifying nonregulatory risks, including potential liability associated with toxic tort actions, off-site disposal, or citizen suits, (3) evaluating the need to remediate existing environmental conditions and the methods used to do so, and (4) assessing the corporation's or facility's vulnerability to environmental enforcement proceedings.
>
> Management audits evaluate a corporation's or facility's management systems or procedures for (1) identifying environmental noncompliance, (2) assessing environmental risks, (3) informing the corporation's decisionmakers of such risks, (4) designing and implementing measures to prevent environmental violations and mitigate nonregulatory environmental hazards. A comprehensive management audit will review the organization, structure, and placement of the environmental oversight functions; will evaluate the adequacy of existing statements of the company's environmental mission, goals, and objectives; and will consider the adequacy of current planning and control mechanisms to ensure that environmental criteria are adequately considered in evaluating both individual and organizational performance. It also entails developing operating procedures, training manuals, preventative maintenance programs, proactive planning, and total quality management enhancements to convert high-minded policy statements into a pervasive corporate culture of environmental stewardship.

Terrell E. Hunt & Timothy A. Wilkens, *Environmental Audits and Enforcement Policy*, 16 HARV. ENVTL. L. REV. 365, 366 nn.7-8 (1992). *See, e.g.*, Restatement of Policies Related to Environmental Auditing, *supra* note 203, at 38,458 (making similar distinction between "compliance" and "management" audits).

206 Environmental Auditing Policy Statement, *supra* note 203, at 25,007; *see also* Restatement of Policies Relating to Environmental Auditing, *supra* note 203, at 38,456 (quoting 1986 policy).

207 Hunt & Wilkens, *supra* note 205, at 365 & n.3 (noting that "many corporate managers are using environmental audits to make candid, comprehensive evaluations of their facilities, operations, management procedures, and other internal risk management and liability control functions" and citing growth of "[t]he environmental auditing-consulting business"); *see also* Michael Herz, *Environmental Auditing and Environmental Management: The Implicit and Explicit Federal Regulatory Mandate*, 12 CARDOZO L. REV. 1241, 1242 (1992) ("[T]here now exist an Institute for Environmental Auditing, an Environmental Auditing Roundtable, a half-dozen book-

many commentators, particularly defense attorneys, who warned that environmental auditing may hand evidence of environmental violations to regulators (including prosecutors) on a silver platter.[208] Several cases in which the government used information gathered in environmental audits against companies confirmed this defensive concern,[209] although some commentators doubt the good faith of the particular companies involved in these cases.[210] It is fair to conclude that the EPA's 1986 auditing policy gave "little reason for an entity that was not already predisposed to conduct an audit."[211]

In response to criticism, the EPA released in April 1995 a new *Voluntary Environmental Self-Policing and Self-Disclosing Interim Policy Statement*.[212] The new policy attempts to establish meaningful incentives for companies to adopt environmental auditing programs. Specifically, the EPA represents that it will not seek punitive or gravity-based civil penalties against businesses for violations of federal en-

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length treatments of the subject, and a constantly growing cadre of professional auditors. It seems that another seminar, conference, or how-to-session is held every week").

208 One group of practitioners concluded,

> While ostensibly encouraging audits, [EPA's] Policy Statement provides no assurance that the results would not be used against the defendant, nor that the existence of the auditing would create any defense or limitation on liability, nor that the audits would be protected from disclosure at EPA's discretion for use in criminal prosecution.

JED S. RAKOFF ET AL., CORPORATE SENTENCING GUIDELINES: COMPLIANCE AND MITIGATION § 8.02[1] (1994); *see also* Hunt & Wilkens, *supra* note 205, at 370 (stating that "lawyers recommend extreme discretion and caution in the use of environmental audits"); Robert W. Darnell, Note, *Environmental Criminal Enforcement and Corporate Environmental Auditing*, 31 AM. CRIM. L. REV. 123, 124 (1993) ("Executives are now hesitant to authorize audits that the government could, under federal environmental auditing policy, use as a roadmap for establishing knowledge in a criminal prosecution."). A 1992 survey of corporate general counsel found that 37% of companies had never undertaken a formal survey of environmental compliance, and 16% admitted to having altered environmental auditing procedures owing to "concern with whether the violations they find could be used against them." Marianne Lavelle, *More Lawyers Expect to Urge Their Clients to Examine Compliance*, NAT'L L.J., Mar. 16, 1992, at S6.

209 United States v. Dexter Corp., 132 F.R.D. 8 (D. Conn. 1990) (denying "self-evaluative" privilege for documents relating to alleged Clean Water Act violations); United States v. Chevron U.S.A. Inc., No. 88-6681, 1989 U.S. Dist. LEXIS 12267 (E.D. Pa. Oct. 16, 1989) (denying attorney-client privilege for internal environmental audits of Chevron's oil refinery in Philadelphia in context of discovery request relating to air emissions of benzene). In another well-known but unreported case, United States v. Weyerhaeuser Co., No. CR90-298S (W.D. Wash. Nov. 21, 1990), internal environmental audits were used to support a criminal prosecution for Clean Water Act violations. *See, e.g.*, Patrick J. Ennis, Note, *Environmental Audits: Protective Shields or Smoking Guns?*, 42 WASH. U. J. URB. & CONTEMP. L. 389, 391-93 (1992). *But see* Reichhold Chemicals, Inc. v. Textron, Inc., 157 F.R.D. 522 (N.D. Fla. 1994) (recognizing environmental self-evaluative privilege).

210 *See, e.g.*, Darnell, *supra* note 208, at 134 & nn. 48-49 (arguing that in the *Weyerhaeuser* and *Dexter* cases companies had delayed responses to internal discoveries of noncompliance); Lavelle, *supra* note 211, at A23 (discussing differing views of *Weyerhaeuser*).

211 George Van Cleve, *The Changing Intersection of Environmental Auditing, Environmental Law and Enforcement Policy*, 12 CARDOZO L. REV. 1215, 1223 (1992).

212 Voluntary Environmental Self-Policing and Self-Disclosing Interim Policy Statement, 60 Fed. Reg. 16,875 (1995).

vironmental laws if they meet seven conditions: (1) voluntary self-policing, (2) voluntary disclosure of violations, (3) prompt correction of violations, (4) remediation of any substantial or imminent endangerment to human health or the natural environment, (5) remediation of the violation and prevention of repeat violations, (6) no lack of preventative measures in the first place, and (7) cooperation with the EPA.[213] Although it is too soon to tell whether this new policy will provide effective incentives to encourage environmental auditing, it seems to provide a significant step in the right direction. The new policy's emphasis on "*self*-policing" and "*self*-disclosure" fits with an emerging model of *reflexive* environmental regulation.

2. *Environmental Prosecution Policy.*—In the area of criminal enforcement of environmental law, the EPA and DOJ have issued "guidances" concerning the exercise of discretion in investigation and prosecution. On January 12, 1994, EPA's Director of Criminal Enforcement issued a guidance stating that

> EPA policy strongly encourages self-monitoring, self-disclosure, and self-correction. When self-auditing has been conducted (followed up by prompt remediation of the non-compliance and any resulting harm) and full, complete disclosure has occurred, the company's constructive activities should be considered as mitigating factors in EPA's exercise of investigative discretion. Therefore, a violation that is voluntarily revealed and fully and promptly remediated as part of a corporation's systematic and comprehensive self-evaluation program generally will not be a candidate for the expenditure of scarce criminal resources.[214]

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213 *Id.* at 16,877. Meeting all seven of the conditions eliminates gravity-based penalties, with two important exceptions: criminal violations and violations deemed to involve "an imminent and substantial endangerment, or serious actual harm, to human health or the environment." In these two exceptional cases, only a 75% reduction in penalties will be allowed for companies fully complying with the new policy. Meeting "most but not all" of the seven conditions also allows a 75% reduction in civil penalties, but with the same two exceptions. *Id.* Many of the details of the interim policy remain to be worked out in practice and in further elaboration of the policy. However, there is one disturbing disclaimer, which reads as follows:

> This interim policy statement is not final agency action, but is intended solely as guidance. It is not intended, nor can it be relied upon, to create any rights enforceable by any party in litigation with the United States. EPA officials decide to follow the guidance provided in this interim policy or to act at variance with the guidance based on analysis of case-specific facts and circumstances. Application of this policy to the facts of any individual case is at the sole discretion of EPA and is not subject to review by any court . . . . EPA reserves the right to change this interim policy at any time without public notice.

Id. at 16,879. This sounds like the EPA will follow its new policy, unless it does not want to. If so, then the new policy does not provide the level of assurance that many businesses may need.

214 U.S. EPA Director of Criminal Enforcement, The Exercise of Investigative Discretion, *quoted in* Restatement of Policies Relating to Environmental Auditing, *supra* note 203, at 38,458-59. *See also* Mary Adler, *EPA Criminal Enforcement: Factors for Opening a Probe*, BUS. CRIMES BULL., July 1994, at 6 (describing policy of EPA's Office of Criminal Enforcement as focusing on two factors of "significant environmental harm" and "culpable conduct" when deciding whether to open a criminal investigation).

However, what the EPA gave in terms of policy discretion, it also took away. "Corporate culpability may be indicated," the guidance also emphasized, "when a company performs an environmental compliance or management audit, and then knowingly fails to promptly remedy the non-compliance and correct any harm done."[215] In this situation, an audit could supply a sufficient reason for the Office of Criminal Enforcement to open a criminal investigation. While the EPA encouraged companies to adopt internal audits as a shield, it held out the possibility of using them as a sword.

Similarly, the Department of Justice had previously issued a guidance for prosecutorial discretion in criminal environmental cases.[216] Circulated in 1991, the DOJ's guidance set forth its policy "to encourage self-auditing, self-policing, and voluntary disclosure of environmental violations by the regulated community by indicating that these activities are viewed as mitigating factors" in the exercise of its prosecutorial discretion.[217] Yet again, however, a federal agency was reluctant to give up too much. The DOJ's guidance effectively ensured that a company's attempt to win favorable prosecutorial discretion would at the same time waive any evidentiary privilege that may otherwise obtain.[218] In addition, the guidance stated clearly that the

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215 *See* Nathan A. Fischbach & Paul S. Rosezweig, *EPA Finally Is Giving Guidance on Its Probes*, NAT'L L.J., Aug. 22, 1994, at A21.

216 U.S. DEP'T OF JUSTICE, FACTORS IN DECISIONS ON CRIMINAL PROSECUTIONS FOR ENVIRONMENTAL VIOLATIONS IN THE CONTEXT OF SIGNIFICANT VOLUNTARY COMPLIANCE OR DISCLOSURE EFFORT BY THE VIOLATOR [hereinafter DOJ GUIDANCE], *quoted in* Restatement of Policies Relating to Environmental Auditing, *supra* note 203, at 38,458. Note that the EPA's criminal enforcement policy refers to the earlier "investigative" stage of a criminal case. The Justice Department is notified only once sufficient evidence of an environmental crime has been gathered, and the DOJ Guidance applies to the prosecutorial discretion available at this later stage of a case.

217 *Id.*

218 Hunt & Wilkens, *supra* note 205, at 397. In fact, evidentiary privileges are not generally available for environmental audits. Various commentators have discussed ways by which internal environmental audits can supposedly be kept privileged. *See, e.g.*, *id.*, at 375-92; James W. Moorman & Laurence S. Kirsch, *Environmental Compliance Assessments: Why Do Them, How to Do Them, and How Not To Do Them*, 26 WAKE FOREST L. REV. 97 (1991); Mary E. Kry & Gail L. Vanelli, *Today's Criminal Environmental Enforcement Program: Why You May Be Vulnerable and Why You Should Guard Against Prosecution Through an Environmental Audit*, 16 COLUM. J. ENVTL. L. 227 (1991). However, courts have usually refused to recognize a privilege for environmental audits. *See supra* note 209 (listing cases holding that attorney-client and self-evaluative privileges not available for environmental audits); *see also* State *ex rel.* Celebrezze v. CECLOS Int'l, Inc., 583 N.E.2d 1118, 1120-21 (Ohio App. 1990) (denying claim of self-critical privilege for internal environmental audits in hazardous waste context because company might thereby "skirt obligations created by law"). But at least one recent case has recognized a "self-critical analysis" privilege for environmental audits. Reichhold Chemicals, Inc. v. Textron, Inc., 157 F.R.D. 522 (N.D. Fla. 1994). Some protection may also remain for discussions about environmental audits, if they occur within the scope of the attorney-client privilege, but the underlying "facts" uncovered by audits are usually not privileged. RAKOFF ET AL., *supra* note 208, § 8.07.

DOJ did not in any event relinquish discretion to prosecute, even in the presence of a state-of-the-art environmental auditing system.[219]

Like EPA's original auditing policy, these policies concerning prosecutorial discretion put businesses in a quandary. To "do the right thing" a business should adopt expansive environmental auditing and management systems. But because the EPA and DOJ desired to retain the power to get every possible document in case of a violation, assiduous auditing sometimes made a business more vulnerable to enforcement actions than if no policy were adopted and no potentially damaging documents were created.

Again, the EPA's new 1995 *Voluntary Environmental Self-Policing and Self-Disclosing Interim Policy Statement* attempts to remedy the contradiction between saying that environmental audits are encouraged and then using them punitively. If a business meets the key conditions outlined under the new policy, then the EPA states that it will refer to the DOJ for criminal prosecution only those cases that involve "(1) a prevalent corporate management philosophy or practice that concealed or condoned environmental violations; (2) high-level corporate officials' or managers' conscious involvement in or willful blindness to the violations; or (3) serious actual harm to human health or the environment."[220] Apparently, the EPA retains the authority to decide whether any of the criteria apply, and the third one

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The best argument for reform in the evidence area may be to recognize an emerging "self-critical analysis" privilege for environmental audits, relying on the "public policy" argument advocated here of encouraging reflexive processes. *Reichhold Chemicals v. Textron*, *supra*, recognizes this privilege. However, I would not advocate broad adoption of this reform unless a comprehensive environmental management and auditing system similar to the one outlined below in Part VI was adopted. For discussion of the emerging self-critical analysis privilege, see Note, *Making Sense of Rules of Privilege under the Structural (Il)logic of the Federal Rules of Evidence*, 105 HARV. L. REV. 1339, 1351-54 (1992) (criticizing self-critical analysis privilege but leaving open the possibility of an approach that might include environmental audits under Federal Rule of Evidence 407's protection of subsequent remedial measures); Note, *The Privilege of Self-Critical Analysis*, 96 HARV. L. REV. 1083 (1983) (providing general discussion of the privilege). *See also* Jennifer Arlen, *Shielding Audits Will Aggravate Pollution Problems*, NAT'L L.J., Oct. 3, 1994, at A23 (criticizing the privilege); Peter A. Gish, *The Self-Critical Analysis Privilege and Environmental Audit Reports*, 25 ENVTL. L. 72, 75 (1995) (arguing that federal courts are "unlikely to afford protection under the self-critical analysis privilege to environmental audit reports"). The Supreme Court has not generally been receptive to the self-critical analysis privilege. *Cf.* University of Pennsylvania v. EEOC, 493 U.S. 182 (1990) (denying evidentiary privilege to peer review materials in context of sexual discrimination claim in academic tenure review).

219 RAKOFF ET AL., *supra* note 208, § 8.02[2] ("Unfortunately, like the EPA Policy Statement, the Department of Justice Guidance Document also fails to give any meaningful assurance that the *results* of any compliance program would not be used against the company in a criminal prosecution."); Hunt & Wilkens, *supra* note 205, at 399-400 (citing DOJ Guidance, at 14).

220 Voluntary Environmental Self-Policing and Self-Disclosing Interim Policy Statement, *supra* note 212, at 16,878. For the seven conditions required for applicability, see *supra* text accompanying note 213.

concerning "serious actual harm" seems especially open to interpretation. In addition, the new interim policy states that "EPA will not request a voluntary environmental audit report to trigger a civil or criminal investigation."[221] These provisions provide important incentives for businesses to perform environmental audits without fearing they will be routinely used against them.

3. Environmental Sentencing Guidelines.—Unlike broad statements of policy, the new environmental sentencing guidelines for organizations propose a legally enforceable standard to encourage adoption of environmental auditing and management practices.[222] The "stick" used is a big one because *sentencing* guidelines refer only to criminal convictions. Considerable controversy surrounds the appropriateness and effectiveness of relying on criminal enforcement of environmental law.[223] With criminal prosecutions for environmental infractions becoming more common, however, incentives provided under the guidelines will very likely prove important.[224]

The present federal sentencing guidelines for organizations do not encompass environmental violations.[225] However, new environ-

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221 Voluntary Environmental Self-Policing and Self-Disclosing Interim Policy Statement, *supra* note 212, at 16,878. In the criminal context as well, the very broad qualification given in the interim policy statement gives reason for concern about its realiability. *See supra* note 213.

222 U.S. SENTENCING COMMISSION ADVISORY PANEL, FINAL DRAFT ENVIRONMENTAL GUIDELINES (Nov. 1993) [hereinafter ENVIRONMENTAL SENTENCING GUIDELINES].

223 *Compare, e.g.*, Dick Thornburgh, *Criminal Enforcement of Environmental Laws—A National Priority*, 59 GEO. WASH. L. REV. 775, 776-80 (1991) (describing "[c]riminal enforcement of environmental laws" as "a national priority" in "the war against environmental crime") *with* Mark A. Cohen, *Environmental Crime and Punishment: Legal/Economic Theory and Empirical Evidence on Enforcement of Federal Environmental Statutes*, 82 J. CRIM. L. & CRIMINOLOGY 1054, 1102-04 (1992) (arguing that federal sentencing guidelines in particular contribute to "overcriminalizing" environmental law) *and* Judson W. Starr et al., *Prosecuting Pollution*, LEGAL TIMES, May 31, 1993, at 6 (criticizing emphasis on "body count" in criminal prosecutions as skewing purposes of environmental regulation). One lawyer at EPA succinctly stated the rationale supporting increased emphasis on criminal deterrence: "Incarceration is the one cost of business you can't pass along to the consumer." Marianne Lavelle, *Guidelines Get Tepid Reception: Defining Environmental Crimes*, NAT'L L.J., Aug. 26, 1991, at 3 (quoting Joseph G. Block, an environmental prosecutor with the Justice Department). A counterargument is that increased reliance on criminal penalties only encourages a defensive response from business, rather than a more flexible approach to environmental issues. For a discussion of how environmental law might more effectively integrate criminal law, see Richard J. Lazarus, *Assimilating Environmental Protection into Legal Rules and the Problem with Environmental Crime*, 27 LOY. L.A. L. REV. 867 (1994).

224 Evidence of convictions of organizations for environmental crimes is somewhat scant. But the build-up of federal environmental prosecutors is likely to increase the numbers of prosecutions of organizations as well as individuals. *See supra* note 30 (discussing increasing criminal cases and numbers of prosecutors for environmental crimes).

225 U.S. Sentencing Commission Guidelines Manual § 8C2.1 (1993); *see also* RAKOFF ET AL., *supra* note 208, at 8-4.

mental sentencing guidelines, which as of this writing are under review by the U.S. Sentencing Commission, will soon fill this lacuna.[226]

Application of sentencing guidelines—which are binding on federal courts—is technically complicated.[227] Without giving a complete description, it is sufficient to observe that environmental management and auditing, which travel in the guidelines under the rubric of "environmental compliance programs," have significant consequences.[228] To qualify under the proposed standards, an environmental compliance program must involve a commitment of resources and a "management process" that is reasonably calculated "to achieve and maintain compliance with environmental requirements."[229] This factor concerning compliance programs has two effects.

First, the presence of an environmental compliance program counts significantly as a mitigating factor. Technically, proof of a compliance program reduces the sentencing "offense level" by up to eight levels. As a practical matter, this means, for example, that a crime with a maximum penalty of $500,000 (common for a single count of an environmental felony) could be reduced by sixty-five percent to $175,000.[230] Multiple counts multiply the differential effect.

Second, absence of a qualifying compliance program counts as an aggravating factor.[231] Technically, lack of a compliance program results in a four-level increase in the sentencing index. Again as a prac-

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226 *See* John C. Coffee, Jr., *Environmental Crime and Punishment*, N.Y. L.J., Feb. 3, 1994, at 5. The U.S. Sentencing Commission, after reviewing and possibly revising the final draft, must send its final proposed version to Congress for approval. One commissioner estimated the process could take until late 1995. *Environment: Draft Sentencing Guidelines For Environmental Crimes Available*, Daily Rep. Executives (BNA), Dec. 17, 1993, at A241, *available in* LEXIS, Nexis Library, DREXEC File.

227 For an overview of the proposed environmental sentencing guidelines, see Coffee, *supra* note 226. For general background on how the sentencing guidelines work, see RAKOFF ET AL., *supra* note 208; Ilene H. Nagel & Winthrop M. Swenson, *The Federal Sentencing Guidelines for Corporations: Their Development, Theoretical Underpinnings, and Some Thoughts About Their Future*, 71 WASH. U. L.Q. 205 (1993); Dan K. Webb et al., *Understanding and Avoiding Corporate and Executive Criminal Liability*, 49 BUS. LAW. 617 (1994). *See also* Symposium, *Sentencing of the Corporation*, 71 B.U. L. REV. 189 (1991).

228 ENVIRONMENTAL SENTENCING GUIDELINES, *supra* note 222, § 9C1.2(a) (describing mitigating and aggravating effects of environmental "compliance programs").

229 *Id.*

230 Technically, the example assumes a base sentencing offense level of 22, which gives the judge discretion to assess a penalty of from 80% to 100% of the maximum, to a level of 14, which gives the judge discretion to assess a penalty of 35% to 55% of the maximum. ENVIRONMENTAL SENTENCING GUIDELINES, *supra* note 222; *see also* Coffee, *supra* note 226, at 6.

231 In this respect, the proposed environmental sentencing guidelines differ from the "non-environmental" sentencing guidelines for organizations, which allow the presence of a compliance program to count as mitigation, but do not penalize failure to have a compliance program. This has been one ground of criticism of the environmental guidelines. *See, e.g.*, RAKOFF, *supra* note 208, at 12 (arguing that counting absence of compliance program as aggravating factor is an unjustified "substantial deviation" from non-environmental guidelines).

tical matter, this could mean, for example, that the "band" of the judge's sentencing discretion for a crime with a statutory penalty of $500,000 would move upward from sixty to eighty percent of the maximum to eighty to one hundred percent.[232] Again, multiple counts increase the stakes.

Also, the offense level significantly increases under the sentencing guidelines if executives, defined as "substantial authority personnel," either personally participated in a crime or "recklessly tolerated conditions or circumstances that created or perpetuated a significant risk that criminal behavior of the same general type [as the crime charged] would occur or continue."[233] This factor, in combination with the effect of compliance programs, will provide a strong incentive for many companies to adopt environmental management and auditing systems that satisfy the guidelines.[234]

The rationale informing the guidelines is well-meant: Give automatic credit to companies that adopt environmental management and auditing practices in "good faith." But if companies adopt compliance programs *only* because they want to get the benefit of "credits" if they get caught, the motivation behind the adoption of a compliance program may mute its effect. Companies may prove more likely to adopt defensive programs oriented toward proving a satisfactory compliance program to the legal system, rather than developing more honest and open systems to review environmental performance in all its complexity.[235]

Taken together, the new environmental sentencing guidelines for organizations and federal policies concerning environmental auditing have reflexive aspects to the extent they provide incentives for companies to adopt internal review processes that take the environment into account. A substantial shortcoming, however, is a tendency to encourage an attitude of defensive reflexion. In other words, if a busi-

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232 This example is based on a level 18 offense being raised to level 22. ENVIRONMENTAL SENTENCING GUIDELINES, *supra* note 222; *see also* Coffee, *supra* note 226, at 6.

233 ENVIRONMENTAL SENTENCING GUIDELINES, *supra* note 222, § 9C1.1(a) (discussing factor of "management involvement"); *see also* Coffee, *supra* note 226, at 7.

234 The sentencing guidelines are not yet law, but as one member of the advisory committee responsible for drafting them has noted, "one thing is certain: . . . undoubtedly after much lobbying and material modifications—environmental sentencing guidelines applicable to organizations will become mandatory." John C. Coffee, Jr., *Environmental Sentencing Guidelines for Organizations: The Impacts and Issues*, BUS. CRIMES BULL., July 1994, at 1. For a critique of the approach taken by the proposed environmental sentencing guidelines for organizations, see Jed S. Rakoff, *The Ideology of Environmental Sentencing Guidelines*, N.Y. L.J., Sept. 9, 1993, at 3 (pointing out perceived flaws in the final draft).

235 How to measure environmental performance of a company is an issue high on the agenda for enlightened businesses. *See, e.g.*, Noah Walley & Bradley Whitehead, *It's Not Easy Being Green*, HARV. BUS. REV. May-June 1994, at 46; Thomas W. White, *Measure for Measure*, ENVTL. FORUM, July-Aug. 1994, at 16; *The Challenge of Going Green*, HARV. BUS. REV. July-Aug. 1994, at 37.

ness adopts an internal compliance program geared primarily toward how the legal system—especially prosecutors—will perceive the business's practices, a guarded and cautious review process will likely result. This prospect is in contrast to what a more fully reflexive management and auditing system would look like: a proactive, self-critical approach to environmental issues, rather than a defensive focus on what the command-and-control legal system views as important.

D. Voluntary Government-Sponsored Programs

A final category of current law that may be considered more positively reflexive than sentencing guidelines and enforcement policies includes some of the voluntary environmental programs established recently by the EPA. The Pollution Prevention Act of 1990[236] establishes a national policy of pollution prevention and charges EPA with establishing a number of voluntary programs aimed to promote it.[237]

The Industrial Toxics Project or the "33/50" program, for example, invited companies to volunteer to participate in reducing emissions of seventeen toxic chemicals. The nickname 33/50 derived from the goals set: thirty-three percent reduction in emissions by 1992 (measured from baseline data from the Toxics Release Inventory in 1988) and fifty percent by 1995.[238]

The program has proven controversial. The EPA invited six hundred large companies to participate, identifying likely candidates from amounts of emissions reported; but less than three hundred volunteered, and even fewer backed their commitments with quantified data.[239] The EPA then expanded the program and invited several thousand more companies, but the response was even worse. Less than five hundred more companies signed on, with only half of them

236 42 U.S.C. §§ 13101-09 (1994).

237 *Id.*; Pollution Prevention Strategy, 56 Fed. Reg. 7849 (1991). For an overview of the provisions of the Pollution Prevention Act, see, *e.g.*, Stephen M. Johnson, *From Reaction to Proaction: The 1990 Pollution Prevention Act*, 17 COLUM. J. ENVTL. L. 153 (1992).

238 Bert Black & David H. Hollander, Jr., *Forced Volunteerism: The New Regulatory Push to Prevent Pollution*, 16 CHEM. REG. REP. (BNA) 1996 (Jan. 22, 1993). The 17 chemicals were benzene, cadmium, carbon tetrachloride, chloroform, chromium, cyanide and hydrogen cyanide, lead, mercury, methylene chloride, methyl ethyl ketone, methyl isobutyl ketone, nickel, tetrachloroethylene, toluene, trichloroethylene, 1,1,1-trichloroethane, and xylenes. *Id.* at app. I.

239 Pamela A. D'Angelo, *Reilly's Corporate Volunteerism Campaign Marred by Skepticism*, 22 ENVTL. L. REP. (BNA) 2682 (Apr. 3, 1992). The 600 companies accounted for 80% of all chemical releases reported to EPA under the Emergency Planning and Community Right-to-Know Act (EPCRA), 42 U.S.C. §§ 11001-11050 (1994). Black & Hollander, *supra* note 238, at 37.

supplying quantified data.[240] As of March 1994, the EPA had invited over 8000 companies, but only 1200 had agreed to participate.[241]

Environmental groups claim with some justification that a pollution reduction program with only a fifteen percent rate of participation demonstrates the weakness of volunteer programs.[242] One public interest group found that eighty-three percent of participating companies had already begun pollution-reduction programs before agreeing to join the program.[243] The group concluded that the 33/50 program is "pollution prevention in name only."[244]

Other assessments have not been as negative. The EPA expresses a belief that the program had produced better results than traditional regulatory methods could have accomplished.[245] The agency remains relatively happy with the program, and the interim goal of thirty-three percent reductions by 1992 was exceeded: A full forty percent reduction was achieved from 1988 levels and participating companies say they are on target for fifty percent reductions by 1995.[246] Participating companies generally "feel good" and have "good things to say" about the 33/50 program.[247] Some have advocated expanding the volunteer approach to other areas.[248]

Other voluntary programs include "Green Lights," begun in 1991, which encourages businesses to install energy-efficient lighting. By March 1992, according to EPA, over four hundred companies had joined, resulting in reduction of air pollution from power plants equivalent to removing one-and-a-half million cars from the road.[249] "Energy Star" is another EPA program designed to encourage the development of energy-saving computers.[250] As of June 1993, seventy

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240 D'Angelo, *supra* note 239.

241 Seema Arona & Timothy N. Carson, *A Voluntary Approach to Environmental Regulation: The 33/50 Program*, RESOURCES, Summer 1994, at 6, 7.

242 *Report Says Relatively Few Companies Join Voluntary Effort to Cut Chemical Emissions*, 23 ENVTL. L. REP. (BNA) 1507 (Oct. 2, 1992).

243 *Voluntary Pollution Prevention Program Labelled 'Sham' By Environmental Group*, 25 ENVTL. L. REP. (BNA) 280 (June 10, 1994).

244 *Id.* at 281 (quoting Ed Hopkins, Environmental Director for Citizen Action).

245 *See* Michael S. Baram, *Multinational Corporations, Private Codes, and Technology Transfer for Sustainable Development*, 24 ENVTL. L. REP. (BNA) 33, 49 n.56 (1994).

246 Arona & Carson, *supra* note 241, at 7.

247 D'Angelo, *supra* note 239.

248 *See, e.g., Effluent Control Program Should Use 33/50 as Model, Industry Official Says*, 23 ENVTL. L. REP. (BNA) 2681 (Feb. 12, 1993) (discussing proposals for incorporating voluntary elements into effluent guidelines). In this light, it is puzzling to see a recent attack on the scope of the Toxics Release Inventory program. *See* John H. Cushman, Jr., *Efficient Pollution Rule under Attack*, N.Y. TIMES, June 28, 1995, at A16 (describing success of Toxic Release Inventory in achieving voluntary reductions in chemical emissions and an initiative in Congress to curb the EPA's expansion of the program).

249 Black and Hollander, *supra* note 238, at 38.

250 Recently, all federal agencies were required to purchase only EPA-approved Energy Star computers, monitors, and printers. Energy Star equipment has low-power standby features. En-

companies accounting for sixty percent of U.S. computer sales and eighty percent of laser printer sales had signed up.[251] Most recently, in July 1994, the EPA unveiled a new "WasteWi$e" volunteer program to promote reduction, reuse, and recycling of waste.[252] Two hundred eighty companies are charter members, although again many of them had substantial recycling and waste minimizing programs already in place.[253]

Taken as a whole, these voluntary programs are probably more beneficial than the defensive compliance programs encouraged by sentencing standards and federal enforcement policies because they have the virtue of encouraging businesses to "do good" proactively. The positive approach of voluntary programs also contrasts sharply with the punitive nature of most command-and-control regulations. Simply as a matter of basic human psychology, most people prefer to feel positively about their work. Environmental managers are probably more effective when approaching environmental issues creatively than when they are charged with a job that has been called, with some basis in legal reality, the "designated jailee."[254]

At the same time, a critical flaw of voluntary programs is that they have been piecemeal. One company declined to join EPA's 33/50 program in the first place, stating that

> Regrettably, our experience with EPA and other regulatory agencies with voluntary joint efforts has not always been positive or productive. Too often, we have witnessed such programs used for special agendas, with regulatory agencies giving little or no attention to technological feasibilities [sic] . . . [and] where the process itself so quickly overwhelms the substance of the program that one is no longer sure of the program's original goals.[255]

Ad hoc voluntary programs harbor the potential for misuse as publicity stunts, both by federal agencies trying to score political points and by companies trying to appear "green" in public relations campaigns.

Another difficulty with piecemeal voluntary programs lies in a failure to appreciate the systemic nature of environmental problems. Poorly subscribed voluntary programs are suspect. Without meaningful incentives to impel widespread participation, purely voluntary programs will likely have no more than a marginal impact on basic environmental problems. This failing traces to a basic flaw in the

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ergy Efficient Computer Equipment, 59 Fed. Reg. 952 (1994) (to be codified in 41 C.F.R. pts. 201-17 & 201-20).

251 U.S. ENVIRONMENTAL PROTECTION AGENCY, *supra* note 184, at 136.

252 *More than 280 Companies Join Effort to Reduce, Reuse, Recycle Waste, EPA Says*, 25 ENVTL. L. REP. (BNA) 529 (July 22, 1994).

253 *Id.*

254 *See, e.g.*, Allen, *supra* note 30, at 1 ("There are so many environmental traps and potholes that the corporate environmental manager is often called the 'designated jailee.' ").

255 D'Angelo, *supra* note 239, at 2682 (quoting letter from Phelps Dodge Corp.).

structure of the Pollution Prevention Act. It adopts the laudable goal of pollution prevention and encourages many volunteer programs. In many ways like NEPA, however, the Pollution Prevention Act is largely symbolic.[256]

Voluntary government-sponsored programs are in some important ways reflexive. They encourage businesses to adopt proactive environmental practices and to develop new environmentally beneficial technologies. But voluntary programs alone do not go far enough. Often they are one-shot deals. They do not stand up to analysis as a sustainable alterative to other forms of regulation because they have little staying power. Without a solid and enduring legal structure, voluntary programs cannot be considered a serious alternative to the current conventional regime of environmental law.

V. The European Eco-Management and Audit Scheme

The survey in Part IV suggests that many environmental laws implicitly follow the ideal type of reflexive law outlined in Part III, but they do so almost unconsciously. In other words, manifestations of reflexive law appear almost randomly, without a theory informing them. As a result, many of these partly reflexive laws risk failing to have the systemic effects their proponents may intend.[257] NEPA seems blind to broader social forces outside its administrative scope. The EPA's and DOJ's auditing policies, as well as the new environmental sentencing guidelines for organizations, lack a full sense of how they affect targeted businesses. They may well encourage defensive compliance, rather than proactive environmental management. EPA's voluntary programs are more positive, but they are sadly piecemeal and lack assurance of public accountability. I will not try to resolve all of the open questions about these illustrations; it is sufficient for purposes here to note that with all of their flaws, the reflexive properties of these approaches often represent improvements on conventional environmental law. Instead, I turn to consider in closer detail a more comprehensive experiment in reflexive environmental law: the European Eco-Management and Audit Scheme (EMAS).

The EMAS is the first of its kind. Previously, forward-thinking business groups have sponsored voluntary initiatives to encourage businesses to adhere to self-regulatory codes of environmental man-

256 Johnson, *supra* note 237, at 170; *cf.* John P. Dwyer, *The Pathology of Symbolic Legislation*, 17 Ecology L.Q. 233, 316 (1990) (criticizing much environmental legislation as usually "a political gesture" and "more symbolic than functional").

257 This phenomenon of "unconscious" environmental legislation is, unfortunately, common. Joseph Sax has written: "Most regulatory laws fail because the people who write and enforce them seem oblivious to the one matter they should most care about—the behavioral realities that govern the institutions sought to be regulated." Sax, *The (Unhappy) Truth*, *supra* note 200, at 239.

agement. A leading example is the Responsible Care program, begun by the Canadian chemical industry in 1986, adopted by the Chemical Manufacturers Association in the United States in 1988, and now embraced by most of the industry worldwide.[258] Another important statement of environmental management principles is the Business Charter for Sustainable Development, first promulgated by the International Chamber of Commerce in 1991.[259] Agenda 21, the international compact adopted at the Earth Summit in Rio de Janeiro in 1992, specifically endorses both of these approaches.[260] A number of other groups present variations on the same theme. They include the Canadian National Round Table on the Environment and the Economy, the Japanese Federation of Economic Organizations

258 *See* Baram, *supra* note 245, at 47-49 (describing Responsible Care program as one of "the most advanced new codes of environmental conduct"); *see also* Paul Abrahams, *Survey of Chemicals and the Environment*, FIN. TIMES, June 18, 1993, § III, at I. Ninety percent of U.S. chemical companies, which are represented in the 180-member Chemical Manufacturers Association, espouse the basic principles of the Responsible Care program. Stephen Barr, *Role for Workers in Plant Safety Debated*, N.Y. TIMES, Nov. 25, 1990, § 12NJ, at 1. In the United Kingdom, the program has been adopted by all but 3 members of the 215 member Chemical Industries Association, a group representing most chemical manufacturers. Clive Cookson, *Chemical Monitor Accepted*, FIN. TIMES, Mar. 8, 1991, § I, at 6. Forty-nine industry groups and 168 companies have embraced Responsible Care in Japan. Michiyo Nakamoto, *Survey of Chemicals and the Environment: Responsible Care in Japan*, FIN. TIMES, June 18, 1993, § III, at VI. Responsible Care programs have also been adopted by the European Chemical Industry Foundation, as well as in chemical trade associations in Australia and New Zealand. Baram, *supra* note 245, at 52.

259 *See* Nick Carter, *Charter Seeks Marriage of Market and Environment*, INDEPENDENT, Apr. 10, 1991, at 23; John Hunt, *Industry on the Warpath to Fight Greenhouse Battle*, FIN. TIMES, Apr. 17, 1991, § I, at 12. The ICC's Business Charter has the support of more than 800 leading companies in the world and more than half of the Fortune 500. Members include Dupont, ICI, Mobil, Royal Dutch/Shell, General Motors, Ford, Volvo, and Volkswagen. Mary Fagan, *Spending Against Pollution "to Double"*, INDEPENDENT, Apr. 13, 1991, at 17; Manfred Gerstenfeld, *Earth Summit Gets Down to Business Matters*, JERUSALEM TIMES, June 15, 1992 (Features); David Lascelles & John Hunt, *Survey of the Earth Summit: Big Companies Are Keen to Look Green*, FIN. TIMES, June 2, 1992, at 7.

260 Agenda 21 encourages business and industry "[t]o adopt and report on the implementation of codes of conduct promoting best environmental practice, such as the International Chamber of Commerce's Business Charter on Sustainable Development and the chemical industry's responsible care program initiative." Agenda 21, The Role of Business, § 30.01, *in* THE EARTH SUMMIT: THE UNITED NATIONS CONFERENCE ON ENVIRONMENT AND DEVELOPMENT (UNCED) 430 (Stanley P. Johnson ed., 1993). However, Agenda 21 is not legally binding. *See, e.g.*, Tullio Treves, *The Protection of the Oceans in Agenda 21 and International Environmental Law*, *in* THE ENVIRONMENT AFTER RIO: INTERNATIONAL LAW AND ECONOMICS 161-62 (Luigi Campiglio et al. eds., 1994) [hereinafter THE ENVIRONMENT AFTER RIO] ("Agenda 21 is not a treaty and consequently is not binding under international law."). However, some believe that statements in Agenda 21 may serve to confirm emerging principles of customary international law. *See, e.g.*, Alexandre Kiss, *The Rio Declaration on Environment and Development*, in THE ENVIRONMENT AFTER RIO, *supra*, 55-64 (arguing that some portions of the Rio Declaration adopted at the Earth Summit confirm certain principles of customary international law).

(*Keidanren*), and petroleum industry associations.[261] Along similar lines, but with controversial additions of third-party participation and a requirement of public disclosure, the nonprofit Coalition for Environmentally Responsible Economies (CERES) offers to businesses a flexible and increasingly influential approach known as the Valdez or CERES Principles.[262] As of the summer of 1994, CERES had eighty-one signatories, including well-known "environmental" companies such as Ben & Jerry's, Body Shop, Calvert Social Investment Fund, Domino's Pizza, Smith & Hawken, Tom's of Maine, and Working Assets.[263] In February 1993, Sun Company, the twelfth largest oil company in the United States, became the first Fortune 500 company to adopt a negotiated version of the CERES Principles.[264] General Motors followed suit in February 1994 to become the first very large corporation to sign a version of the principles.[265] Before the EMAS regulation, however, a governmental regulation had never sought explicitly to encourage the adoption and practice of environmental management and auditing in a comprehensive and detailed manner.[266]

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261 These and other examples are collected in NSF, A Guideline for a Voluntary Environmental Management System: Discussion Draft (version 5.0, April 1993), app. A (copy on file with author).

262 For discussion of the original Valdez Principles, see *Can the Valdez Principles Green Corporate America?*, ENVTL. F., Mar.-Apr. 1990, at 30. *See also* Daniel H. Pink, *The Valdez Principles: Is What's Good for America Good for General Motors?*, 8 YALE L. & POL'Y REV. 180 (1990); J. Andy Smith, III, *The CERES Principles: A Voluntary Code for Corporate Environmental Responsibility*, 18 YALE J. INT'L L. 307 (1993); Valerie A. Zondorak, *A New Face in Corporate Environmental Responsibility: The Valdez Principles*, 18 B.C. ENVTL. AFF. L. REV. 457 (1991).

263 *CERES Companies: Eighty-one Strong!*, ON PRINCIPLE (CERES, Boston, Mass.), Summer 1994, at 10-11 (listing companies).

264 Matthew L. Wald, *Corporate Green Warrior: Sun Oil Takes Environmental Pledge*, N.Y. TIMES, Feb. 11, 1993, at D5. Sun published its first annual CERES environmental report for 1992 in early 1994 and plans to release its 1993 report in August 1994. J. Robert Banks, *CERES and Sun: A Value-Added Relationship*, ON PRINCIPLE (CERES, Boston, Mass.), Summer 1994, at 5.

265 *G.M. Environmental Pact*, N.Y. TIMES, Feb. 4, 1994, at D2. General Motors employs 711,000 people world-wide and has more than 500 facilities. It recently issued its first CERES environmental report. Betsy Hemming, *GM Faces Up to Its Challenges*, ON PRINCIPLE (CERES), Summer 1994, at 1, 6.

266 This is not to say the EMAS regulation is entirely without precedent. A number of European states have adopted proactive environmental management laws, although not with the scope and detail of EMAS. *See, e.g.*, Commission Proposal for a Council Regulation Allowing Voluntary Participation by Companies in the Industrial Sector in a Community Eco-Audit Scheme, COM(91)459 final at 36, at 8-10 [hereinafter Eco-Audit Proposal] (discussing related laws in France, the Netherlands, the U.K., and Ireland). Also, it is interesting to note that the EC Commission appeared to find inspiration in certain regulatory practices in the United States and Canada. The Eco-Audit Proposal mentions the EPA's auditing policy, reporting requirements under the Toxic Release Inventory required under SARA, and the chemical industry's Responsible Care program. *Id.* at 5-6.

A. Description and Analysis

The overall objective of the EMAS is "to promote continuous improvements in the environmental performance of industrial activities."[267] The regulation proposes to achieve its objective through the institution of environmental management policies and programs, environmental auditing systems, and public environmental disclosure statements.[268] More precisely, the EMAS has the following basic elements: (1) voluntary participation (2) by industrial enterprises (3) in a site-based process of environmental management. The EMAS process begins with (4) an initial environmental review, which establishes (5) environmental programs for registered sites and (6) environmental management systems. The EMAS also requires (7) adoption of a company environmental policy and (8) periodic environmental audits of the management systems and environmental performance. Companies must report overall results of the environmental audits through (9) disclosure of the details of environmental performance in public statements and (10) verification of the public statements by accredited environmental specialists who register with designated regulatory bodies. A reward for participating companies is, finally, (11) an official listing as a participant in the EMAS and a corresponding right to use an emblem indicating the extent of a company's participation. This subpart discusses each of these elements in turn. (See Figure 4 which provides a schematic illustration of the intricate structure of the EMAS).

1. Voluntary Participation.—Unlike most other environmental laws of the European Union,[269] participation of businesses in the EMAS is voluntary.[270] This does not mean EU Member States may neglect to set up the mechanisms necessary for the EMAS regulation; compliance with EMAS by *governments* is mandatory.[271] Because the EMAS is a regulation, rather than a directive, it immediately binds all EU Member States.[272] With respect to individual businesses, how-

267 Council Regulation 1836/93, art. 1(2), 1993 O.J. (L 168) 1, 2.

268 *Id.* The technical meanings of these different basic elements are discussed below.

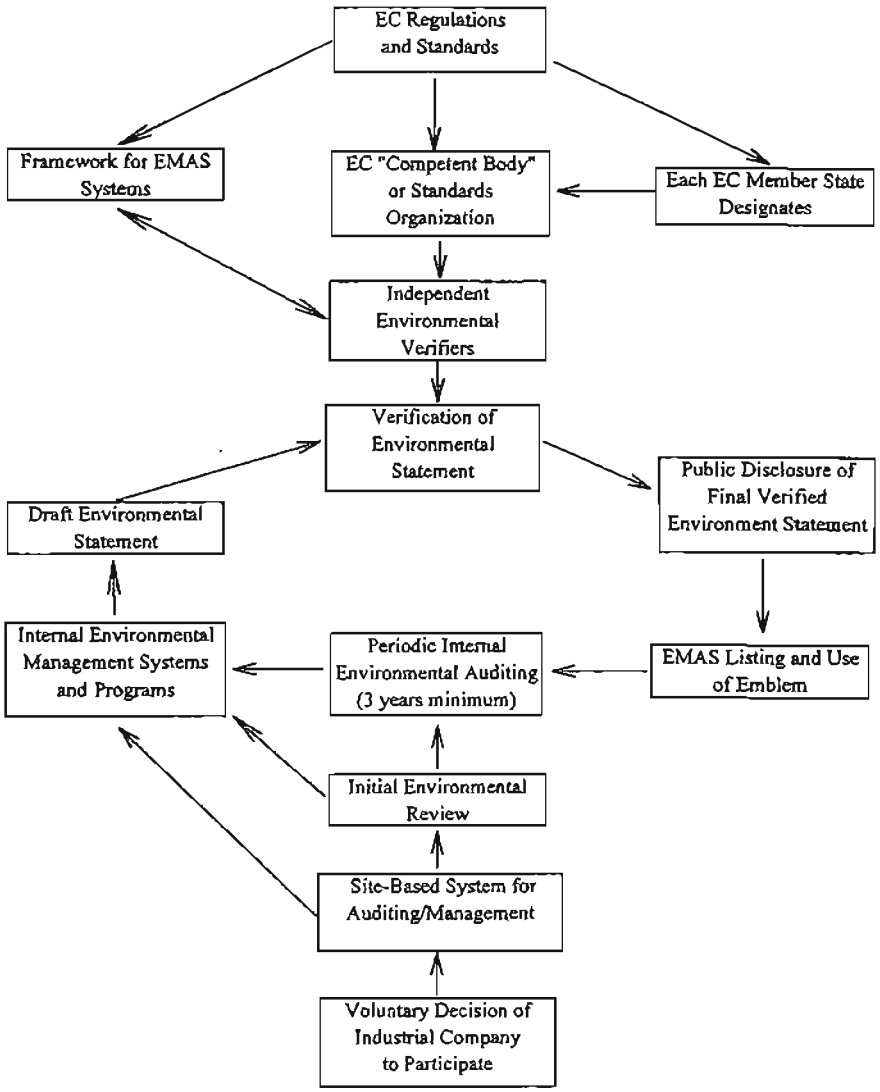
269 By 1992, the European Community had adopted 445 acts of environmental legislation, including policy programs. Martin, *supra* note 87, at 696. Technically, it is appropriate to refer in general to the "European Community" when referring to historical events prior to November 1993 and to the "European Union" after the Treaty on European Union entered into force. Marcel M.T.A. Brus et al., *Balancing National and European Competence in Environmental Law*, 9 CONN. J. INT'L L. 633, 633 n.1 (1994). I follow this practice, although the passage of the EMAS on the cusp of this transition makes the usage somewhat problematic. When references to the "European Community" may cause confusion, I refer instead to the "European Union."

270 Council Regulation 1836/93, art. 1(1), 1993 O.J. (L 168) 1, 2.

271 EU Member States must, for example, set up bodies that accredit the new class of environmental verifiers created by the EMAS. *Id.* art. 6, at 4. *See infra* section V.A.10.

272 Directives and regulations are two methods of legislation in the European Union. Directives are most common in the environmental area. By 1992, there were almost 200 environmen-

FIGURE 4
THE EUROPEAN ECO-MANAGEMENT AND AUDIT SCHEME (EMAS)



ever, the EMAS shares an element of voluntarism with its market-based cousin, the Eco-label.[273] Eligible businesses may opt in to the EMAS if they wish. If they don't like the idea, they can simply ignore the regulation—at least in theory.

The voluntary nature of the scheme represents a watered down version of the original 1990 proposal for mandatory participation.[274] Lobbying pressure from targeted businesses[275] and division among

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tal directives but only forty regulations. Martin, *supra* note 87, at 696-97. Once passed, a directive requires "harmonization" of the various Member States through national legislation passed in accordance with the directive. Various levels of harmonization are possible, from "total harmonization" allowing no room for derogation to "optional" or "partial harmonization." Brus et al., *supra* note 269, at 658-60. Directives are "binding," but only "as to the result to be achieved." They "leave to the national authorities the choice of form and methods." TREATY ESTABLISHING THE EUROPEAN ECONOMIC COMMUNITY [EEC TREATY] art. 189 (as amended 1993). Regulations apply directly. Like national legislation, they "have general application" and are "binding in [their] entirety and directly applicable in all Member States." *Id.*; *see also* Rolf Wagenbaur, *Regulating the European Environment: The EC Experience*, 1992 U. CHI. LEGAL F. 17, 19.

Member States have occasionally failed to adopt national laws in compliance with an environmental directive. *See, e.g.*, JOHNSON & CORCELLE, *supra* note 4, at 9. However, the Commission has authority to bring an infringement action under Article 169 in cases of noncompliance. Cases may ultimately be brought to the European Court of Justice. EEC TREATY art. 169. It is unlikely in the case of the EMAS regulation that any Member State will fail to set up the necessary legal infrastructure to administer it, although there may be exceptions. *See, e.g.*, *supra* note 87 (discussing the failure of Ireland and Portugal to adopt regulations for the Eco-label).

For both regulations and directives, the principal sources of legal authority for environmental legislation in the European Union are found in Articles 100a and 130s of the EEC Treaty, as amended by the Single European Act in 1987 and the Treaty on European Union signed at Maastrict in 1992 and entering into force in November 1993. Article 100a is used when the purpose of legislation is to "directly effect the establishment or functioning of the common market," while Article 130s is used when the purpose is environmental protection. EEC TREATY arts. 100a, 130s (as amended 1993). *See* Bras et al., *supra* note 269, at 638-42, 644-45, 647, 652-58; Martin, *supra* note 87, at 692. Choice between the two sources of authority had been complicated, involving calculation of different procedural considerations and legal debates about whether a particular environmental topic involved establishment of the common market or not. Since the Treaty on European Union, however, it is likely that the Commission and Council will rely more heavily on environmental regulations enacted under the authority of Article 130s, given that regulations are self-executing and therefore promise greater effectiveness. Martin, *supra* note 87, at 697-98 & n.71 (citing Eco-label and EMAS regulations as examples of "important pieces of environmental legislation" that were "enacted by regulations rather than directives").

273 Because the Eco-label is an "award," businesses must opt to apply to the competent national body administering the scheme, submitting a product for consideration. Council Regulation 880/92, art. 10, 1992 O.J. (L 99) 1, 4. Businesses not wishing to participate simply need not apply.

274 David Gardner, *EC Agrees Scheme for Voluntary Ecological Audits*, FIN. TIMES, Mar. 24, 1993, at 22.

275 *Commissions Eco-audit Proposal Calls for Multi-Step, Voluntary System*, 15 INT'L ENVTL. REP. (BNA) 32 (Jan. 29, 1992) (noting that original proposal "calling for mandatory participation in about 60 industries" had "aroused concern in industry circles").

Member States, some of which are "greener" than others,[276] best explain the voluntary nature of the final version. Even though some states may have preferred a mandatory regulation, application of the "subsidiarity" principle[277] and the unanimity requirement then prevailing for environmental legislation drove compromise to the lowest common denominator.[278]

A business with operations or significant contacts in Europe that defers voluntary participation in the EMAS, however, may soon find itself rudely surprised for several reasons. First, the regulation requires the European Commission to review the progress of the EMAS not more than five years after adoption "in light of the experience gained during its operation" and to propose to the Council of the European Union "appropriate amendments particularly concerning the scope of the scheme."[279] Because the original proposal contemplated a mandatory scheme, the scheduled renewal may reinvest the EMAS with mandatory punch in a number of possible future scenarios. If a significant number of companies decide to participate in the EMAS, for example, and the scheme runs relatively smoothly, then the Commission and Council may conclude that no significant harm would befall requiring participation. Or, if the voluntary scheme does not elicit broad participation, and environmental problems continue unabated

276 The Netherlands and Germany were the strongest supporters of the eco-management and audit concept. *Id.*

277 F.R. van der Mensbrugghe, *Subsidiarity the Prime Reason for Voluntary Ecology Audits*, FIN. TIMES, Mar. 26, 1993, at 18 (arguing that the voluntary nature of the final version of the EMAS regulation resulted from a healthy respect for the principle of "subsidiarity"). The subsidiarity principle applied originally only to environmental matters. It was added in Article 130r of the EEC Treaty by the Single European Act. EEC TREATY art. 130r (as amended 1987). The Treaty on European Union strengthens the subsidiarity principle and elevates it to fundamental constitutional status. EEC TREATY art. 3b (as amended 1993). *See also* GEORGE A. BERMANN ET AL., CASES AND MATERIALS ON EUROPEAN COMMUNITY LAW 46-47 (1993); Brus et al., *supra* note 269, at 650-51.

278 *See, e.g.*, Phillipe Sands, *European Community Environmental Law*, 100 YALE L.J. 2511, 2516 (1991) (noting how "environmental lawmaking" required "unanimous voting, resulting in protracted negotiations and watered down provisions" even after the Single European Act went into force). The Treaty on European Union has broadened the scope of legislation that may be enacted by a qualified majority of the Council. Article 130s reserves a unanimity requirement for legislation "primarily of a fiscal nature," land use planning, water resource management, and energy choices. But it otherwise authorizes environmental legislation by a qualified majority of the Council, acting through either the co-decision procedures of Article 189b or the cooperation procedures of Article 189c. EEC TREATY arts. 130s, 189b, 189c. Qualified majority voting by Member States, in other words, "can now be regarded as the standard procedure for [EU] environmental measures." Brus et al., *supra* note 269, at 652.

279 Council Regulation 1836/93, art. 20, 1993 O.J. (L 168) 1, 7. The first review and revision of the EMAS is currently scheduled for 1997-1998. Juan Xiberta, *The Eco-Management and Audit Scheme*, EUR. ENVTL. L. REV., Mar. 1994, at 85, 86.

through other regulatory methods, then the Commission and Council may decide to add "teeth" to the EMAS and make it mandatory.[280]

Second, there is a good chance that the EMAS will become mandatory in effect, if not in law. Representatives of European banks and insurers have said they may well require businesses to participate in the EMAS as a condition for extending loans or providing insurance, particularly when loans or insurance policies involve environmental risks.[281] In addition, companies that opt in to the EMAS may pressure their suppliers also to participate.[282]

Third, the European Parliament may make participation in the EMAS "an indispensable condition for a company to take part in any Community program."[283] Other EU Member States may adopt similar requirements of eligibility for government contracts.

For these reasons, participation in the EMAS may turn out to be less "voluntary" than it appears on the face of the regulation. Although the EMAS is currently structured as an explicitly voluntary scheme, events may force businesses to opt in.

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280 *E.g.*, Rozsell Hunter, *EU Eco-Management and Auditing Regulation*, 17 INT'L ENVTL. REP. (BNA) 142 (Feb. 9, 1994); *see also* Lucas & Roberts, *supra* note 26 (noting European Commission "has made it clear that EMAS will be legislated if industry does not adopt it"). *But see* RUTH HILLARY, ECO-MANAGEMENT AND AUDIT SCHEME: THE PRACTICAL GUIDE 96 (1993) (arguing that the decisiveness with which the Member States rejected the proposed mandatory scheme suggests reform in this direction is unlikely); Xiberta, *supra* note 279, at 86 (noting that European Parliament has recommended keeping EMAS voluntary for at least 10 years).

281 Several speakers made this point at a conference I attended in 1992. Eco-Audits and Environmental Assessments in the European Community, Brussels, Belgium, October 1992. One commentator notes:

> Late but significant arrivals in the world of environmental interest are banks and insurance companies. The money men, once the last dark continent as far as environmental awareness was concerned, have grasped that environmental factors can contribute to a company's profitability—or particularly the lack of it. Banks, for example, are increasingly wary of granting mortgages to petrol retailers because there may be insufficient security for their loans in the case of a pollution incident. . . . Banks are also prominent in commissioning environmental audits with the bottom line in mind. . . . Greater interest in pollution in all its senses is being taken belatedly by the Lloyd's insurance market after the disasters of asbestos and pollution related claims.

Charles Clover, *Business and the Environment: Go Green? OK (if it's profitable)*, DAILY TELEGRAPH, June 30, 1993, at 1; *see also* Anju Sanehi & Andrew Waite, *Audit to Test Green Credentials*, FIN. TIMES, Aug. 8, 1991, § I, at 31 (arguing that companies with "green credentials" such as a participant in the EMAS not only have "a marketing advantage," but are able "to keep ahead in the regulatory game, as enforcing agencies adopt a tougher stance on environmental issues").

282 Already, several British companies have begun to press suppliers for details about environmental policies. Xiberta, *supra* note 279, at 86; *see also* Hunter, *supra* note 280 ("The hope is that industrial companies will take part in this scheme voluntarily in order to avoid being placed at a competitive disadvantage. Many large manufacturers are planning to participate. Others may find they have no choice, as customers and retailers demand proof of the companies' 'environmental probity.' ").

283 *EC: Parliament Approves and Strengthens the "Environmental Audit" Regulation for Companies*, AGENCY EUR., Jan. 22, 1993, *available in* LEXIS, Europe Library, TXTWE File.

2. *Industrial Enterprises.*—Only industrial businesses may volunteer for the EMAS.[284] The regulation gives a laundry list of which businesses are included.[285] "Industry" means the following: petroleum and natural gas, mining, metal manufacturing and processing, chemicals, textiles, mechanical and electrical engineering, automobiles, machinery, food and drinks, tobacco, leather, timber and furniture, paper and printing, and rubber and plastics.[286] In addition, the EMAS applies to utilities,[287] as well as recycling, waste treatment, and disposal facilities.[288]

As originally proposed, the EMAS regulation omitted any reference to service businesses, nonprofit organizations, or governmental bodies.[289] Why the Commission originally limited EMAS in this way is uncertain. Perhaps it believed industrial businesses have greater direct impact on the environment than other organizations (which is debatable). Or perhaps the Commission thought the EMAS regulation should apply first and foremost to industrial companies because they are the types of businesses traditionally regulated through command-and-control methods. The professed reason, at least, is that "the first stage" of the EMAS experiment should focus on the industrial sector because "environmental management systems and environmental auditing are already practiced" by many industrial companies.[290]

In any event, the final version of the regulation adopted by the Council is a compromise on the question of scope of coverage. By its terms, the EMAS remains limited to industrial companies. However, an amendment allows Member States discretion to apply EMAS provisions to "sectors outside industry" including "the distributive trades and public service," but only "on an experimental basis."[291] What this

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284 Council Regulation 1836/93, art. 1(1), 1993 O.J. (L 168) 1, 2 (limiting participation to "companies peforming industrial activities"). This formulation does not limit application with respect to the legal organization of a business. "Companies" are defined in a nontechnical way to include any "organization which has overall management control over activities at a given [industrial] site." *Id.* art. 2(j), at 3.

285 This is by reference to another regulation. *Id.* art. 2(i), at 3 (citing classification of economic activities given in Council Regulation 3037/90, 1990 O.J. (L 293) 1).

286 Council Regulation 3037/90, 1990 O.J. (L 293) 1; *see also* HILLARY, *supra* note 280, app. 3, at 106-12.

287 Council Regulation 1836/93, art. 2(i), 1993 O.J. (L 168) 1, 3 (companies in "electricity, gas, steam and hot water production").

288 *Id.* (companies engaged in "recycling, treatment, destruction or disposal of solid or liquid waste").

289 Eco-Audit Proposal, *supra* note 265.

290 Council Regulation 1836/93, pmbl., 1993 O.J. (L 168) 1, 2. The fact that many industrial companies have adopted self-regulatory codes confirms this assessment. *See supra* text accompanying notes 258-66.

291 Council Regulation 1836/93, art. 14, 1993 O.J. (L 168) 1, 6. This change followed recommendations from the European Parliament to include "services and public service enterprise." *EC: Parliament Approves and Strengthens the "Environmental Audit" Regulation for Companies*, *supra* note 283.

exclusion will mean in practice is unknown. However, one may expect change in the direction of expanding the EMAS to include services, nonprofit organizations, and government. There is no good reason other than convenience to limit it to industrial companies.[292]

3. Site-Based Process.—A key feature of the EMAS regulation concerns its focus on individual industrial sites.[293] A "site" is defined broadly as "all land on which the industrial activities under the control of a company at a given location are carried out."[294] The regulation therefore does not apply to a company or business as a whole. A general company-wide environmental management system or audit is insufficient.

The site-based focus of the EMAS is best illustrated by the provisions for an EMAS emblem designed to reward participating companies.[295] The notations that must accompany display of the emblem show that a company's EMAS participation depends on the number of industrial sites enlisted. First, a company may choose to participate experimentally in the EMAS by designating only a single industrial site to participate. Even if the company has one hundred sites, this level of participation permits use of the EMAS emblem with the ap-

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[292] For example, why shouldn't large law practices, accounting firms, and banks perform environmental assessments? In most cases, the process would not be as technically difficult as that required of industrial concerns of comparable size. But benefits, such as with regard to recycling and impact on policymaking, would often be significant. *See, e.g.*, David Lascelles, *Putting Money on Efficiency: NatWest Bank Is Striving for Greater Environmental Awareness*, FIN. TIMES, July 28, 1993, at 14 (describing environmental audits and annual reports of National Westminster Bank and their environmental impact); Committee on Envtl. Law, Ass'n of the Bar of the City of New York, *Report on Law Office Use of Recycled Paper and Proposal for Voluntary Participation in a "Buy Recycled" Program*, REC., Dec. 1994, at 946 (describing potential of recycling policies of law firms). There is even more reason to extend voluntary coverage to government agencies, especially those in "industrial" businesses, such as departments or agencies with responsibilities of military defense or energy. As one critic concludes,

> [T]he requirement that an industrial activity has to be performed to register the company under the scheme appears to be unnecessary. Even though in eco-auditing there is more experience in the industrial sector there is no reason for banning companies in other sectors from taking advantage of the [EMAS] Regulation. . . . [I]f the ultimate aim of the scheme is to improve the environmental performance of the European-based companies, why restrict it to the industrial sector if there are others that also have a strong impact on the environment?

Xiberta, *supra* note 279, at 86.

[293] Council Regulation 1836/93, art. 3, 1993 O.J. (L 168) 1, 3 (The regulation "is open to companies operating a site or sites where an industrial activity is performed.").

[294] *Id.* art. 2(k), at 3. The definition goes on to say that an industrial "site" includes "any connected or associated storage of raw materials, by-products, intermediate products, end products and waste material, and any equipment and infrastructure involved in the activities, whether or not fixed." *Id.*

[295] The EMAS emblem or "graphic" is described *infra* section V.A.11.

propriate notation.[296] A second possibility is for a company to register multiple sites, again listing them according to the EMAS regulation's prescribed form.[297] Third, a company may opt in to the regulation with respect to all sites in a particular Member State or multiple Member States in Europe, noting this fact accordingly.[298] Finally, an environmentally ambitious company may register *all* of its industrial sites, allowing benefit of the use of the following notation:

> All the sites in the [EU] where we carry out our industrial activities have an environmental management system and their environmental performance is reported on to the public in accordance with the eco-management and audit scheme. (Plus optional statement regarding practices in third countries.)[299]

The last parenthetical phrase allows for a multinational company to note compliance with EMAS requirements for non-European sites as well.[300]

The site-based nature of the EMAS regulation may prove its greatest weakness. It can be criticized on several grounds. An initial criticism focuses on the complicated levels of participation just outlined. Indicating a site-based level of participation may prove an advantage in allowing well-meaning companies to experiment with opting in to the EMAS at only one site. But the variety of different notations leads one to question whether businesses, governments, and the public will be able to distinguish among various levels of participation.[301] One hopes that a logo will be adopted sooner rather than later in order to give the EMAS a recognizable symbol. If the current graded system is retained, perhaps the notation of different levels of participation should translate into different colors: yellow perhaps to indicate an experimental approach of registering only one site, but

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296 Council Regulation 1836/93, annex IV, 1993 O.J. (L 168) 17. ("This site has an environmental management system and its environmental performance is reported on to the public in accordance with the community eco-management and audit scheme. (Registration No. . . .).").

297 *Id.* ("The following sites where we carry out our industrial activities have an environmental management system and their performance is reported on to the public in accordance with the community eco-management and audit scheme . . . .") (as edited for apparent oversights in text of final regulation).

298 *Id.* ("All sites in [name(s) of the Member States(s)] where we carry out our industrial activities have an environmental management system and their environmental performance is reported on to the public in accordance with the community eco-management and audit scheme.").

299 *Id.*

300 This parenthetical statement also signals the potential conflict that the EMAS regulation may face under international law. For consideration of the international dimension of EMAS regulations, see *infra* subpart VI.C.

301 It is even possible that a European company in fact having a terrible environmental record could enlist one or two sites in the EMAS "without adopting a real environmentally conscious policy." Xiberta, *supra* note 279, at 86. This "danger" of a company promoting a "false 'green' image," *id.*, however, should be averted by the verification and public disclosure requirements discussed below. *See infra* sections V.A.9 & V.A.10.

green (of course) reserved for a company with all of its operations enlisted.

A second criticism of EMAS's site-based focus relates to the international character of modern business. Not only is the EMAS site-based, it is site-based *in Europe*. Although the fourth (greenest) level of participation permits a multinational company to claim that *all* of its sites are registered in the EMAS, including "practices in third countries,"[302] the Eurocentric approach of the EMAS poses problems. First, many management decisions are not site-based. For instance, consideration of environmental effects at the planning stage for new products may influence decisions about whether to produce items at one site or another. Consequently, the site-based focus may prove underinclusive. One also worries about possible public relations manipulation. A company might accurately claim EMAS registration for all of its operations in Europe, but employ "dirty" industrial processes overseas. In this sense, the Eurocentric flavor of the EMAS regulation tastes somewhat bitter in a time when environmental problems are increasingly global.

An argument in favor of site-based auditing is to get to the "ground-level" in terms of where pollution actually happens. This has advantages in assuring compliance with applicable regulations and encouraging analysis of each industrial site. However, the approach also assumes an old-fashioned model of business. Many businesses today have adopted extremely flexible sourcing arrangements that are information-based rather than site-based. These flexible enterprises—called "virtual corporations" by some who believe they represent the new wave of management—do not fit well in the EMAS.[303] Their industrial sites are other companies. Information-based companies might easily comply with the EMAS for the companies' own sites, and yet do substantial environmental damage. The EMAS regulation would have done better to focus on environmental policies and management practices at the level of the firm, rather than focusing myopically on industrial sites.

4. Initial Environmental Review.—When an industrial company decides to participate in the EMAS, its first step is to conduct a broad-ranging initial environmental review.[304] The "environmental review" is defined as "an initial comprehensive analysis of the environmental

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302 *See supra* text accompanying note 299.

303 *See, e.g.*, WILLIAM H. DAVIDOW, THE VIRTUAL CORPORATION: STRUCTURING AND REVITALIZING THE CORPORATION FOR THE 21ST CENTURY (1992); *see also* ROBERT B. REICH, THE WORK OF NATIONS: PREPARING OURSELVES FOR 21ST CENTURY CAPITALISM 87-97 (1991) (describing "new web of enterprises" focused on speed and flexibility of operations).

304 Council Regulation 1836/93, art. 3(a), 1993 O.J. (L 168) 1, 3.

issues, impact and performance related to the activities at a site."[305] An initial review is conducted only once for each site and once at the company level.[306] Thereafter, periodic environmental audits and the cyclical feedback mechanism of environmental management systems supersede the start-up review. (See Figure 4). Because the initial environmental review forms the basis for later systemic processes of environmental management and audits, it must recommend (1) "an environmental programme for the site" and (2) "an environmental management system applicable to all activities at the site."[307]

5. Environmental Programs.—A participating company must develop an environmental program for each site. The environmental program describes "the company's specific objectives and activities to ensure greater protection of the environment at a given site."[308] Measures to be taken to achieve the company's environmental objectives are set forth in the company's environmental policy.[309] Each site's environmental program must designate "responsibility for objectives at each function and level of the company" and state how those objectives will be achieved.[310] Specialized programs are required for "new developments" and "new or modified products, services, or processes."[311] Environmental management programs must also include appropriate deadlines for achieving environmental objectives.[312] Each site's environmental program must aim to achieve "continuous improvement of environmental performance."[313] This requirement raises difficult issues concerning how a company can measure environmental performance over time.[314]

6. Environmental Management System.—The environmental management system for each particular site includes "the organiza-

305 *Id.* art. 2(b), at 2.

306 *Id.* art. 3(b), annex I.C, at 3, 10.

307 *Id.* art. 3(c), at 3.

308 *Id.* art. 2(c), at 2.

309 Description of the company environmental policy is discussed *infra* section V.A.7. In a sense, it is logically prior to the formulation of the environmental programs and management systems, because these operational components of EMAS must accord with the company's governing policy. *See* Xiberta, *supra* note 279, at 86 (describing adoption of environmental policy statement as "first thing that a company willing to participate in the scheme has to do"). I have organized the presentation in a different order to show clearly the operational components within the site-based EMAS.

310 Council Regulation 1836/93, annex I.A.5, 1993 O.J. (L 168) 1, 8.

311 *Id.*

312 *Id.*

313 *Id.* art. 3(c), at 3.

314 At a recent conference of business leaders, the question of measuring environmental performance was one of the most important and puzzling issues raised. Environmental Leadership Forum, The Wharton School, University of Pennsylvania (June 1994); *see also supra* note 235 (discussing importance of measuring environmental performance).

tional structure, responsibilities, practices, procedures, processes and resources for determining and implementing the [company's] environmental policy."[315] The environmental management system therefore connects the detailed environmental programs drawn up for particular sites and the overall company policy that provides direction. (See Figure 4).[316]

The EMAS regulation stipulates that the environmental management system must comply with detailed requirements set forth in an Annex to the regulation.[317] These requirements include the following:

- Periodical review "at the highest appropriate management level."
- Designation of "key personnel" responsible for environmental performance.
- Education and training of "personnel, at all levels."
- Documenting and monitoring activities and results.
- Setting up procedures for "investigation and corrective action" in cases of "non-compliance."
- Establishing "internal and external" communication procedures concerning environmental practices.
- Establishing "operating procedures" designed to maintain "operational control."
- Keeping a register of "legislative, regulatory and other policy requirements."
- Keeping a register of "environmental effects" deemed "significant" at each participating site.

Although this is a very tall order, a number of large companies already have many of these kinds of procedures in place. Fitting them to the EMAS mold will probably pose no great difficulty. But for smaller businesses, the weight of these requirements may prove overwhelming. For this reason, the EMAS specifically encourages Member States to provide technical assistance to "small and medium-sized enterprises" and promises EU-level support.[318] Even with some level of governmental financial help, however, small and medium-sized businesses will likely find themselves disadvantaged if and when the EMAS becomes widely subscribed.[319]

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315 Council Regulation 1836/93, art. 2(e), 1993 O.J. (L 168) 2.

316 The environmental policy requirement is discussed in the next section.

317 Council Regulation 1836/93, art. 3(c), 1993 O.J. (L 168) 1, 3.

318 *Id.* art. 13, at 6.

319 In a different context, Professor Christopher Stone has noted that environmental regulation in general may well have the effect of putting small businesses at a disadvantage, but

> Suppose it does turn out that there are significant scale economies: if large firms are safer (or, at any rate, more law abiding) than smaller firms, we may just have to accept the decline of the small firm as one of the "costs" of achieving a cleaner, safer environment.

Christopher D. Stone, *Beyond the Transactional Audit*, 12 CARDOZO L. REV. 1337, 1338 (1991).

In addition to the potential amount of bureaucratic red tape the EMAS could generate,[320] a primary legal problem with this part of the regulation concerns what environmental effects are deemed "significant" enough to report and monitor at each site. As one commentator asks, does "significant" environmental effect mean, for instance, that the amount of carbon dioxide emitted by a site or a company should be considered in terms of its global impact?[321] How exactly does a company determine what environmental effects are "significant"? There is no clear answer. One possibility is for a company to perform an environmental risk assessment,[322] for which the technology is generally available.[323] But even with the best science, judgment calls have to be made about how small a probability or effect will be judged insignificant.

7. Company Environmental Policy.—At the initial stage of the environmental review, a company must adopt an environmental policy to govern its "overall aims and principles of action with respect to the environment."[324] The company must periodically review and alter the policy in light of the performance of the company's environmental management system and programs.[325] The "highest management level" must adopt the environmental policy, and it must be in writing.[326] The policy must include a statement in favor of "compliance with all relevant regulatory requirements regarding the environment."[327] It must also include "commitments aimed at the reasonable

320 This concern has been noted by European lawyers who are cautious about advising clients to participate in EMAS. *See, e.g., EU: Corporate Lawyers Urge Caution on Enviro Audit Scheme*, Greenwire, Mar. 10, 1994, *available in* LEXIS, Nexis Library, GRNWRE File (noting the companies should be wary that EMAS may "smack of costly red tape").

321 HILLARY, *supra* note 280, at 29. A similar issue regarding the same question of "significant environmental effect" has posed difficulty in the U.S. in NEPA cases. *See supra* note 187 and accompanying text.

322 This approach is recommended in HILLARY, *supra* note 280, at 28-32 & tbl. 3.6. Hillary recognizes that this approach will include "objective and subjective elements." *Id.* at 32. A second option offered by Hillary is to determine significance according to an equation—"significance = legislation + standards + stakeholders' views + scientific evidence + regulator's demands + public attitudes." *Id.* at 30. But this formula appears too vague to provide helpful guidance.

323 For a summary of the emerging science of risk assessment, see CARNEGIE COMMISSION ON SCIENCE, TECHNOLOGY, AND GOVERNMENT, RISK AND THE ENVIRONMENT: IMPROVING REGULATORY DECISION MAKING 76-78 (June 1993). *See also* BREYER, *supra* note 11, at 3-29. For a critique of risk assessment methodology, see Donald T. Hornstein, *Reclaiming Environmental Law: A Normative Critique of Comparative Risk Analysis*, 92 COLUM. L. REV. 562 (1992). Accurate risk assessment depends also on the underlying sciences of epidemiology and toxicology. *See* Mary L. Lyndon, *Information Economics and Chemical Toxicity: Designing Laws to Produce and Use Data*, 87 MICH. L. REV. 1795, 1796-97, 1801-09 (1987).

324 Council Regulation 1836/93, arts. 2(a), 3(a), 3(g), 1993 O.J. (L 168) 1, 2-3.

325 *Id.*

326 *Id.* annex I, at 8.

327 *Id.* art. 3(a), at 3.

continuous improvement of environmental performance, with a view to reducing environmental impacts to levels not exceeding those corresponding to *economically viable application of best available technology*."[328]

A debate emerged in the negotiation of the EMAS regulation concerning the italicized "best available technology" language. The original proposal would have held participating companies to a more exacting standard: assessment of environmental performance according to applicable legal standards and "*best available pollution abatement technologies.*"[329] The German government strongly backed this formulation, but the Council softened the language in the final version, which requires only "*economically viable*" technology, deferring to objecting states led by Great Britain.[330] The more lenient result may have the virtue of encouraging more companies to opt in to the EMAS, but "economically viable" is subject to considerable interpretation. Who is to judge what technologies are economically viable, the participating companies themselves or their reviewing, independent "verifiers"?[331]

The EMAS regulation also goes further, providing a statement of eleven basic principles of "good management practices" upon which a company must base its environmental policy.[332] The principles are as follows:

> 1. A sense of responsibility for the environment amongst employees at all levels shall be fostered.
> 2. The environmental impact of all new activities, products and processes shall be assessed in advance.
> 3. The impact of current activities on the local environment shall be assessed and monitored, and any significant impact of these activities on the environment in general shall be examined.
> 4. Measures necessary to prevent or eliminate pollution, and where this is not feasible, to reduce pollutant emissions and waste generation to the minimum and to conserve resources shall be taken, taking account of possible clean technologies.
> 5. Measures necessary to prevent accidental emissions of materials or energy shall be taken.
> 6. Monitoring procedures shall be established and applied, to check compliance with the environmental policy and, where these procedures

328 *Id.* (emphasis added).

329 Eco-Audit Proposal, *supra* note 266, annex I, at 40 (emphasis added).

330 Gardner, *supra* note 274, at 22. This debate parallels similar disagreements about "best available technology" standards in the United States. *See, e.g.*, 2 WILLIAM H. RODGERS, JR., ENVIRONMENTAL LAW 411-21, 423-24, 431-34 (1977) (describing standards under the Clean Water Act).

331 The role of the new class of independent environmental verifiers is discussed *infra* section V.A.10. *See also* fig. 4.

332 Council Regulation 1836/93, annex I.D, 1993 O.J. (L 168) 1, 11.

require measurement and testing, to establish and update records of the results.
7. Procedures and action to be pursued in the event of detection of non-compliance with its environmental policy, objectives or targets shall be established and updated.
8. Cooperation with the public authorities shall be ensured to establish and update contingency procedures to minimize the impact of any accidental discharges to the environment that nevertheless occur.
9. Information necessary to understand the environmental impact of the company's activities shall be provided to the public, and an open dialogue with the public should be pursued.
10. Appropriate advice shall be provided to customers on the relevant environmental aspects of the handling, use and disposal of products made by the company.
11. Provisions [sic—Precautions?] shall be taken to ensure that contractors working at the site on the company's behalf apply environmental standards equivalent to the company's own.[333]

Once again, these principles are ambitious. They are also sometimes vague and even contradictory. For example, good management practice no. 5, seems radically overdrawn, committing a company to taking any "necessary" measures to prevent any accident from ever occurring. It also conflicts with good management practice no. 8, which requires contingency plans with public authorities in case an accident happens "nevertheless." In addition, good management practice no. 2's idea that *all* of a company's new activities, products, and processes must be "assessed in advance" for various environmental effects is overly ambitious and probably impossible. Nevertheless, assuming that verifiers and regulators will allow a company the elbow room needed to interpret these general policy prescriptions in terms of the concrete realities of a particular business, the formulation and periodic reevaluation of an environmental policy is a wise idea.[334]

8. Internal Environmental Audits.—Once a company has adopted an environmental policy, an environmental program for each registered site, and an environmental management system, the EMAS next provides for periodic internal environmental auditing. Auditing must examine both the specific sites registered and the environmental management system.[335] The regulation allows "either auditors belonging to the company or external persons or organizations acting on

333 *Id.*

334 Most large corporations have already adopted environmental policies of one sort or another, although it is uncertain how far down into the management structure some of these policies travel in actual practice.

335 An "environmental audit" is defined as "a management tool comprising a systematic, documented, periodic and objective evaluation of the performance of the organization, management system and processes designed to protect the environment with the aim of: (i) facilitating management control of practices which may have impact on the environment; [and] (ii) assessing

its behalf" to conduct internal audits.[336] In either case, the auditor-employees or the external auditors must be technically qualified.[337] Internal auditors must also be "sufficiently independent of the activities they audit to make an objective and impartial judgment."[338] For example, an auditor-employee could not be in charge of the site audited if the position involved a conflict between economic performance-based pay and professional auditing standards. A participating company, if it is large enough, may therefore consider setting up a separate auditing group within corporate headquarters, perhaps basing employee salaries on environmental performance. Smaller firms may have to employ outside auditors to assure objectivity.

Auditing must comport with international standards and procedures.[339] The on-site auditing process includes interviews with personnel, inspection of the site, and review of written records and other data.[340] The company must state in writing the specific objectives for each audit. Because both environmental management systems and compliance with environmental regulations must be evaluated,[341] the EMAS regulation encompasses both "management audits" and "compliance audits" as they are known in the United States.[342]

Each audit must cover a comprehensive number of issues.[343] The internal auditors must produce a written report with "full, formal submission of the findings and conclusions of the audit," including a statement of "need for corrective action, where appropriate."[344] They must communicate the findings and conclusions to "top company management," and an "audit follow-up" must assure any "appropriate corrective action."[345]

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compliance with company environmental policies." Council Regulation 1836/93, art. 2(f), 1993 O.J. (L 168) 1, 2-3.

336 *Id.* art. 4(i), at 4.

337 *Id.* art. 4(1), annex II, at 4, 12. Auditors must have "sufficient training and proficiency in the specific skills of auditing" and "appropriate knowledge of the sectors and fields audited," including relevant "knowledge and experience o[f] the relevant environmental management, technical, environmental [scientific?] and regulatory issues." *Id.* annex II.C, at 12.

338 *Id.* annex II.C, at 12. Management must also make sure "appropriate resources are allocated" to pay for the audit. *Id.* annex II.D, at 12.

339 *Id.* annex II, at 12.

340 *Id.* annex II.E, at 12.

341 *Id.*

342 *See supra* note 205 and accompanying text.

343 The following issues must be addressed: (1) comprehensive environmental impact assessment, (2) energy use, (3) management of raw materials, (4) waste reduction and recycling, (5) noise pollution, (6) selection of production processes, (7) product planning and design, (8) environmental performance of supplier and contract partners, (9) accident prevention, (10) accident contingency planning, (11) education and training of employees, and (12) external information policies. Council Regulation 1836/93, art. 4(1), annex I.C, 1993 O.J. (L 168) 1, 10.

344 *Id.* annex II.F, 1993 O.J. (L 168) 1, 13.

345 *Id.* annex. II.G, at 4, 13.

With respect to frequency of audits, the EMAS provides that each site must be audited, or each "audit cycle" completed, at least every three years.[346] Within the one to three year range, top management determines auditing frequency. The original proposal suggested a rule-of-thumb according to estimates of severity: one year for sites with "high environmental impact," two years for those with "moderate impact," and three years for "low impact" sites.[347] Given the vagueness in this sort of formulation, however, the final version says simply that auditing frequency should depend on an assessment of the following four elements: nature, scale, and complexity of the activities; nature and scale of interaction with the environment; importance and urgency of the problems detected; and history of environmental problems.[348] In addition, the regulation adds flexibility in determining frequency of auditing by giving a special committee authority to establish guidelines for this part of the regulation.[349]

In summary, the nature of the auditing contemplated under the EMAS is exhaustive. Many industrial businesses already conduct rather extensive auditing, although it is not certain how many will wish to adhere to the structure and procedures of the EMAS.[350] If the auditing provisions are interpreted flexibly and with an appreciation of differences among types of industries and companies, the EMAS stands a good chance of success. There is nothing in the regulation to indicate this kind of flexibility will not develop. After all, each company, not the government, chooses its own internal auditors.

9. Public Environmental Statements.—In addition to internal environmental audits, the EMAS requires preparation and public dissemination of "environmental statements."[351] Environmental statements must accurately summarize the findings and conclusions of the more detailed internal audits, and a statement for each site must be "designed for the public and written in a concise, non-technical form."[352] The statement must include the following: a general description; an assessment of "all the significant environmental issues of relevance;" a summary of figures on emissions, waste generation, consumption of resources, and "other significant environmental aspects;" "other factors regarding environmental performance;" a description of the environmental policy, management system, and programs; the

346 *Id.* art. 4(2), annex II.H, at 4, 13.

347 Eco-Audit Proposal, *supra* note 266, annex I, at 45.

348 Council Regulation 1836/93, art. 4(2), annex II.H, 1993 O.J. (L 168) 1, 4, 13.

349 *Id.* arts. 4(2), 19, at 4, 7.

350 For various company reports on their experience with environmental auditing, see, *e.g.*, UNITED NATIONS ENVIRONMENT PROGRAM/INDUSTRY AND ENVIRONMENT OFFICE, ENVIRONMENTAL AUDITING, Technical Report Series No. 2 (1990).

351 Council Regulation 1836/93, art. 5, 1993 O.J. (L 168) 1, 4.

352 *Id.* art. 5(2), at 4.

date when the next environmental statement will be submitted; and the name of the "environmental verifier."[353]

Preparation of the public environmental statement begins the most controversial stage of the EMAS. The many steps in the EMAS discussed until this point have been internally directed within a company. Only with the requirement of an environmental statement does the public orientation of the regulation appear. Public disclosure of environmental information is the heart of the EMAS.

10. Verification.—Only after the environmental statement has been written in a first draft, after the internal environmental policy, management system, and programs have been set up, and after the internal environmental audit has been performed does the government play an active role. Because one of the central goals of EMAS is "provision of information to the public" concerning environmental activities of companies,[354] the regulation tries to assure that the information communicated is correct and not, for example, just fodder for public relations campaigns. The EMAS expects to enhance the "transparency" and "credibility" of the information communicated in public environmental statements through the process of verification.[355]

At this stage, the EMAS regulation creates a new professional occupation: "accredited environmental verifiers."[356] Part accountant, part environmental scientist, and part lawyer/regulator,[357] the environmental verifier has the job of checking to make sure a company is in "compliance" with all of the elements of the EMAS regulation.[358] In addition, the verifier must validate the "reliability of the data and information in the environmental statement" and determine "whether the statement adequately covers all the significant environmental is-

353 *Id.* art. 5(3), at 4.

354 *Id.* pmbl., at 1.

355 *Id.* pmbl., at 1-2.

356 *Id.* arts. 6, 7, at 4-5. Ruth Hillary makes the point that the verifiers, as opposed to auditors, are established by EMAS as a "new profession." HILLARY, *supra* note 280, at v. *Cf.* Symposium, *Private Accreditation in the Regulatory State*, 57 LAW & CONTEMP. PROBS. 1 (1994) (discussing this regulatory strategy primarily in the context of health care).

357 The regulation provides that an accredited verifier should be "competent in relation to the functions" within the scope of the specific task and should be trained in "environmental auditing methodologies," "management information and process," "environmental issues," "relevant legislation and standards" including the provision of the EMAS, and "relevant technical knowledge of the activity subject to verification." Council Regulation 1836/93, annex III.A 1993 O.J. (L 168) 1, 14. These requirements for expertise are extensive. They are also general to the point of vagueness. For example, what does it mean to be competent with respect to "environmental issues"?

358 *Id.* annex III.B, at 15. Again, the major elements include the environmental policy and program, the environmental management system, the initial environmental review or environmental audit, and the environmental statement. *Id.*

sues of relevance."[359] The verifier is charged to "investigate in a sound professional manner the technical validity of the environmental review or audit or other procedures carried out by the company,"[360] although the extent of this duty to investigate the integrity of underlying materials is uncertain. In the United States, with experience of a body of law finding accountants and other third-party accreditors liable for failing to perform their duties adequately, the question arises whether this new professional class of verifiers may also find themselves subject to lawsuits for negligence.[361]

The governmental role is to "accredit" the verifiers. The licensing of verifiers is designed to add credibility to the EMAS. The public, perhaps duly distrustful of companies' public relations gimmicks and the hiring of corporate mouthpieces paid to say only good things, requires assurance that the disclosed information in public statements is truthful and accurate.

Invoking the subsidiarity principle, the EMAS regulation devolves responsibility to the EU Member States to "establish a system for the accreditation of independent environmental verifiers" and to supervise them.[362] Each Member State must either designate a "competent body" for the task or "use existing accreditation institutions."[363] In order to avoid jurisdictional conflict, any verifier accredited by a Member State's competent body may verify activities in any other Member State.[364] *The Official Journal* of the EU will publish a composite list of accredited verifiers.[365] There is now a great rush of people and companies seeking to be included on this list.

A business may select any verifier from the accredited list to perform the verification. This freedom should create a market for verifi-

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359 *Id.*

360 *Id.*

361 *See* Peter H. Schuck, *Tort Liability to Those Injured By Negligent Accreditation Decisions*, 57 LAW & CONTEMP. PROBS. 185 (1994). For a critical account of the development of accountants' liability to third-parties for negligence, see John A. Siliciano, *Negligent Accounting and the Limits of Instrumental Tort Reform*, 86 MICH. L. REV. 1929 (1988). *See also* Willis W. Hagen II, *Accountants' Common Law Negligence Liability to Third Parties*, 1988 COLUM. BUS. L. REV. 181; Gary Lawson & Tamara Mattison, *A Tale of Two Professions: The Third-Party Liability of Accountants and Attorneys for Negligent Misrepresentation*, 52 OHIO ST. L.J. 1309 (1991); Travis M. Dodd, Note, *Accounting Malpractice and Contributory Negligence: Justifying Disparate Treatment Based Upon the Auditor's Unique Role*, 80 GEO. L.J. 909 (1992).

362 Council Regulation 1836/93, art. 6(1), 1993 O.J. (L 168) 1, 4. On subsidiarity, see *supra* note 277.

363 Council Regulation 1863/93, art. 6(1), 1993 O.J. (L 168) 1, 4. The 21-month grace period given for the EMAS to go into effect was due in part to a need to give time for Member States to set up the verification accrediting system. *Id.* art. 6(2), at 5 (verification systems must be fully operational in 21 months); *id.* art. 18(1), at 6 (competent bodies responsible for EMAS must be designated within 12 months of entry into force of EMAS).

364 *Id.* art. 6(7), at 5.

365 *Id.*

ers to some extent similar to the market for accountants to perform financial audits. The verifier must remain "independent and impartial" and "free of any commercial, financial or other pressures."[366] This last phrase is somewhat vague, but probably means that the verifier must remain unencumbered with financial conflicts of interest concerning relations with clients.

The verifier's review results in one of three possible outcomes. First, if the verifier determines that:

(a) the environmental policy and management system comport with EMAS requirements,
(b) the environmental program "addresses all the significant issues,"
(c) the initial environmental review or the audit is "technically satisfactory," and
(d) the environmental statement "proves accurate, sufficiently detailed and in compliance" with EMAS requirements,

then the statement is verified and published.[367] Second, if requirements (a), (b), and (c) above are met, but the verifier finds that the environmental statement must be revised in some respect, then the company's management discusses the recommended changes with the verifier, and the statement is verified when the appropriate changes in the statement are made.[368] Third, if a problem turns up in any of the substantive requirements (a), (b), or (c), then the verifier recommends changes to the environmental policy, management program, or auditing procedures. The verifier may not validate the statement until the company corrects its shortcomings and revises its public statement.[369]

Finally, the verified environmental statement is disclosed to the public. The implicit model for the EMAS is the annual report of a publicly traded company to its shareholders.[370] The regulation is vague, however, about exactly how public disclosure will take place. Presumably, the environmental statement will simply be available to

366 *Id.* annex III.A, at 14.

367 *Id.* annex III.B, at 16.

368 *Id.*

369 *Id.*

370 Even in cases where audits are found to be needed every two or three years, rather than annually, *see supra* text accompanying notes 346-49, the EMAS provides that a "simplified environmental statement shall be prepared annually in intervening years." Council Regulation 1836/93, art. 5(5), 1993 O.J. (L 168) 4. There are two exceptions. One is in the case of small or medium-sized companies when a verifier determines that given the nature and scale of the enterprise no environmental statement is needed until the next audit cycle. The second is when "there have been few significant changes since the last environmental statement." *Id.* art. 5(6), at 4.

any interested party, including shareholders, employees, governments, and others.[371]

Public disclosure of the environmental statement forms the legal linchpin of the EMAS. At the same time, it is important to note that the EMAS protects the confidentiality of underlying information and data informing the environmental statement. Both auditors and verifiers have strict duties to maintain the confidentiality of the information provided by the company in the EMAS process.[372] Indeed, much of the complexity of the EMAS system can be explained as an intricate attempt to merge confidential and open internal environmental management procedures with a more limited, but accurate, public disclosure of a company's environmental performance.

11. Listing and Graphic.—For a company that succeeds in running the gauntlet of the EMAS regulation and produces a verified environmental statement, there are two small rewards. First, the company's qualifying sites are officially registered and listed in the *Official Journal*.[373] Second, a company may use an EMAS "graphic" to proclaim its participation.[374] The original EMAS proposal provided for a logo. However, unlike the elegant Eco-label, which is a bright green-and-blue or black-and-white flower with an "E" for Europe/Environment surrounded by a circle of twelve stars,[375] the proposed Eco-audit logo, depicting a half-flower and half-gear, was quite ugly. The final regulation dropped the idea of a logo and adopted instead a simple circle of stars with "EC Eco Management and Audit Scheme" inscribed within it. (See Figure 5). The final design is still a far cry from the Eco-label, but the Council seems to recognize this deficiency, specifying that introduction of a real logo is likely when the EMAS regulation is reviewed.[376]

The graphic may not be used for advertising products or on packaging.[377] But even if an attractive EMAS logo is introduced in the

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371 In this light, the entitlement of citizens of the European Union to "freedom of access to information on the environment" is noteworthy. Council Directive 90/313 on the Freedom of Access to Information on the Environment, 1990 O.J. (L 158).

372 Council Regulation 1836/93, art. 4(7), 1993 O.J. (L 168) 1, 4 ("External auditors and accredited environmental verifiers shall not divulge, without authorization from the company management, any information or data obtained in the course of their auditing or verification activities.").

373 *Id.* art. 9, at 5.

374 *Id.* art. 10(1), at 5. Details of the notations required when using the EMAS graphic are described *supra* text accompanying notes 295-301.

375 The Eco-label regulation specifies that the logo shall be printed in two colors (i) Pantone 347 green and Pantone 279 blue, (ii) black on white, or (iii) white on black. Council Regulation 880/92, annex II, 1992 O.J. (L99) 1, 7. *See* fig. 1.

376 Council Regulation 1836/93, art. 20, 1993 O.J. (L 168) 1, 7.

377 *Id.* art. 10(3), at 5. The rationale is that use of the EMAS graphic for advertising purposes would conflict with the Eco-label regulation.

FIGURE 5
THE EVOLUTION OF THE EUROPEAN EMAS LOGO

old logo

new logo

Sources: Commission Proposal for a Council Regulation Allowing Voluntary Participation by Companies in the Industrial Sector in a Community Eco-Audit Scheme, COM(91)459 final, annex III, at 49; Council Regulation 1836/93, annex IV, 1993 O.J. (L 168) 1, 17.

future,[378] it would provide only a small incentive for participation. Instead, the success of the EMAS will more likely turn on other market and social forces: pressure from within the corporate governance process; political and economic pressure from suppliers, distributors, banks, and insurance companies; and perhaps moral pressure on top managers of large enterprises.[379] Its success will turn also on whether the EMAS is administered fairly, flexibly, and professionally.

B. The Eco-Management and Audit Scheme as Reflexive Environmental Law

What kind of environmental law is the EMAS regulation? On one hand, it seems as richly detailed as many technically complex command-and-control environmental statutes. On the other hand, with its graphic of participation and its appeal to economic common sense, the EMAS seems arguably market-based. But the EMAS is neither fish nor fowl, neither command-and-control nor market-based. It is something new. It is one of the first of a new species of reflexive environmental law.

The EMAS regulation does not fit comfortably into the major traditional categories of environmental law. Like its cousin, the Eco-label, the EMAS forthrightly attempts to use markets as well as morals to encourage environmentally responsible management. But though the EMAS relies in part on markets for its success, the primary operative mechanism in the EMAS is not market-based.[380] Instead, the crux of the EMAS is a legal strategy of disclosure. The EMAS employs disclosure to make transparent to the public that participating businesses have in fact adopted effective environmental attitudes and to reward the companies that do so. Conversely, businesses not participating in the program will signal to the public (and other businesses) a lack of environmental commitment. In this way, the EMAS's disclosure-based system generates adverse publicity to shove "backsliders" onto the trail, as well as to encourage those companies who expend the resources needed for environmental responsibility.[381]

Given that disclosure is the operative legal component of the EMAS, the regulation may be usefully compared to the federal securi-

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[378] *Id.* art. 20, at 7 (stating that when the EMAS regulation comes up for mandatory review sometime before July 1998 "the possible introduction of a logo" will be considered).

[379] The role of moral persuasion should not be underestimated. *See, e.g.*, Rose, *supra* note 64, at 1024 ("We need to think about persuasion and rhetoric in dealing with environmental matters.").

[380] In this respect, I disagree with Ruth Hillary's description of the EMAS as "a market-based tool" like the Eco-label. HILLARY, *supra* note 280, at 5. Compare the provisions of the EMAS detailed *supra* in subpart V.A. with the market-based approaches described *supra* in subparts II.B & IV.A.

[381] *See supra* text accompanying note 3.

ties laws in the United States, which have a "recurrent theme" of "disclosure, again disclosure, and still more disclosure."[382] Securities regulation is market-based in the sense that its primary goal is to assure the reliability of the capital markets. But the basic legal strategy used is a requirement of disclosure of information. Penalties are assessed when this information proves false or otherwise fraudulent. More and better information makes for more efficient markets. Both securities regulation and the EMAS are better described as "disclosure-based" or "information-based," rather than "market-based." Through public disclosure of information, the EMAS seeks to encourage companies to become not only financially, but environmentally responsible.

Unlike command-and-control statutes, the EMAS focuses on decision processes. Rather than adding to the pile of substantive environmental laws (although the EMAS is itself complicated), the EMAS is a *procedural* environmental law. It focuses on procedures that businesses use to make environmentally responsible decisions. The emphasis on process rather than substantive detail is a hallmark of reflexive law.[383]

The EMAS sets forth an intricate framework for the internally reflective processes of business. It aims to change self-referential patterns of businesses to include environmental issues systematically. The EMAS procedures are designed to encourage businesses to adopt a critical approach to their operations and management. The EMAS is reflexive because the system is designed to be recursive and self-referential. It is, to personify companies somewhat, "self-reflective."[384]

As a reflexive environmental law, the EMAS recognizes the limited place of the legal system in society and adopts a reform strategy to encourage reflective processes in the economic system. The EMAS is not just another attempt to extend the environmental law "empire" to yet another environmental problem. Admitting that other command-and-control and market-based methods of more direct legal regulation must have a continuing place, the reflexive strategy of the EMAS opens up the possibility that better business processes may produce more effective and rational results. Although the EMAS begins with the strategy of disclosure, its aim is to achieve a deeper change—to encourage businesses to take environmental issues more seriously, as a supplement and an enhancement to the motivations of financial gain.

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382 LOUIS LOSS, FUNDAMENTALS OF SECURITIES REGULATION 7 (1988).

383 *See supra* Part III.

384 The theory does not depend, however, on any particular view of "corporate personality." Because corporations are, in whatever construct, composed of people, it is people who are reflecting, albeit for business purposes. *Cf.* MARY DOUGLAS, HOW INSTITUTIONS THINK (1986).

The reflexive EMAS aims at fundamental structural change in the everyday life of business institutions. It aims at nothing less, in the end, than the transformation of business culture. Businesses must take this important step because the traditional methods of regulation are not sufficient to deal with the environmental problems of the twenty-first century. These problems are beyond the capacity of law alone to address satisfactorily.

VI. A Proposal for a Reflexive Environmental Management and Auditing System in the United States

As discussed in Part IV above, environmental law in the United States already has reflexive aspects. The traditional command-and-control model of an ever-expanding universe of substantive law, although still dominant, shows signs of transition. Competing market-based approaches reveal reflexive aspects. The practical realities of environmental enforcement policies, especially with respect to encouraging environmental self-auditing, have a reflexive character, even in the "shadow" of a mass of substantive environmental law.[385] Nothing on the level of Europe's EMAS, however, has yet been seriously considered in the United States.

Before proceeding to consider whether an "American EMAS" should be adopted, it is worth considering why this kind of proposal has not already been made. Comparing the environmental regulatory regimes of the United States and the European Union is a study in contrasts. The United States has the most highly detailed command-and-control system of environmental law in the world, and the EPA, at the center of the system, is probably the most knowledgeable and powerful agency of its kind. So effective and large is the American environmental law *ancien regime* that some have argued it poses a serious threat to American international economic competitiveness.[386] In contrast, the European Union's environmental law establishment is newer and weaker. For purposes of this Article, I treat Europe as a unified political entity.[387] However, the EU system, based on treaties among Member States that establish European governing institutions, remains structurally weaker than the federal government of the United States. Command-and-control regulation at the EU-level in Europe is therefore a much more uncertain proposition than in the

385 *Cf.* Robert H. Mnookin & Lewis Kornhauser, *Bargaining in the Shadow of the Law: The Case of Divorce*, 88 Yale L.J. 950 (1979).

386 *See, e.g.*, Richard B. Stewart, *Environmental Law and International Competitiveness*, 102 Yale L.J. 2039 (1993).

387 There are good reasons for doing so. J.H.H. Weiler, *The Transformation of Europe*, 100 Yale L.J. 2403, 2481 (1991) (describing "manifestations, both explicit and implicit, suggesting an unprecedented and triumphal resurgence and ascendancy of the unity vision of Europe").

United States. Whereas Congress can pass a law and simply hand it off to the EPA for relatively effective enforcement, there is always a chance in Europe that a Member State will ignore a new EU directive or regulation.[388] Even the recent creation of a European Environmental Agency (EEA) will do little to change this underlying structural reality.[389] The EEA will not come close to competing with EPA, except in similarity of acronym. The EEA is designed as "a coordination and dissemination center for environmental information" rather than as an enforcement authority.[390]

A first explanation of why the EMAS originated in Europe is therefore the relative weakness of the EU's legal regime. The EU's weakness may suggest corresponding weakness in the enforceability of the EMAS itself. But the relative weakness of the EU's legal institutions may also have spawned a compensatory creativity of lawmaking that translates to other contexts, including even the much stronger environmental legal regime in the United States. The relative weakness of the European Union may have put its policymakers in a better position to appreciate, perhaps serendipitously, the systemic flaws of substantive regulatory approaches.

This last point relates to a second important difference between European and American experiences in environmental law. It is fair to say the United States invented modern environmental law. The Congress wrote the book—indeed many, many books—on command-and-control. As a result of this first-mover advantage, the United States is ahead of Europe with respect to many legal command-and-control technologies. At the same time, the United States may have inherited the legacy of a first-mover disadvantage in the form of its massive substantive law.[391] The mountain of environmental law im-

388 *See, e.g.*, JOHNSON & CORCELLE, *supra* note 4, at 9 (acknowledging "certain weaknesses" in EU environmental law, including the fact that some "adopted directives are not applied by Member States, as is shown by several cases"); *see also* Martin, *supra* note 87, at 695-717 (discussing limited powers of enforcement and lack of uniformity in EU-level environmental regulation). Technically, the legal institutions of the "European Community" adopt directives and regulations, which are then followed and enforced by Member States of the "European Union." This is one area, however, where I refer in the text to the "European Union" rather than to "European Community" to avoid possible confusion. *See supra* note 269. For an overview of the role of directives and regulations in EU-level environmental law, see *supra* note 272.

389 *See* Council Regulation 1210/90 on the Establishment of the European Environmental Agency and the European Environment Information Network, 1990 O.J. (L 120) 1.

390 Dietrich Gorny, *The European Environment Agency and the Freedom of Environmental Information Directive: Potential Cornerstones of EC Environmental Law*, 14 B.C. INT'L & COMP. L. REV. 279, 279 (1991). It is possible, however, that greater enforcement power could be given to the EEA in the future, within the limits of the subsidiarity principle. Martin, *supra* note 87, at 702-03. On subsidiarity, see also *supra* note 277.

391 *See, e.g.*, Stewart, *supra* note 386, at 2087-89 (describing command-and-control approaches in the United States and noting that environmental regulation in other industrialized nations is "generally far more flexible, more cooperative, and less legalistic").

poses great inertia. It also attracts its own peculiar brand of worshippers: all manner of environmental bureaucrats, lawyers, and consultants.[392] In contrast, the European Union finds itself in a "lighter" position. As a relatively new state-like transnational entity regulating environmental issues,[393] the EU has freedom from the restrictions of a great mass of substantive environmental law. Although the body of EU environmental law is building up quickly,[394] the newness of the EU's experience in this area allows for greater flexibility. In addition, the EU has the historical advantage of being able to learn from experience by critically examining environmental regulation in the United States, as well as other countries. In this connection, one of the most interesting historical facts about the European development of the EMAS is how strongly it drew on early American discussions about requiring the disclosure of compliance audits to the EPA.[395]

Finally, legal theory may play a role. The reflexive legal theory that informs the EMAS system has a European origin.[396] In the United States, legal theorists seem often transfixed with formal or substantive legal approaches, revealing a lack of sociological sensibility. The traditionally privileged place of law in American society[397] encourages some American legal academics to adopt an imperial view of their subject.[398] In contrast, some European legal theorists have developed a more realistic view of the limits of modern law.

Differences between the legal regimes of the European Union and the United States, then, help to explain the origin of the EMAS in Europe. Historically, environmentalism and the lessons of environmental law often travelled from the United States to Europe. Perhaps

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392 *See supra* text accompanying notes 36-44 (discussing phenomena of capture and rent-seeking).

393 *See* Weiler, *supra* note 387, at 2478-83 (describing the European Community as somewhere between a unitary state-like entity and a community of nation-states linked by principles of ordinary international law); *see also* Michael S. Feeley & Peter M. Gilhuly, *Green-Law-Making: A Primer on the European Community's Environmental Legislative Process*, 24 VAND. J. TRANSNAT'L L. 653 (1991) (describing EU law as "a peculiar mix of international and domestic law") (quoting Conor Quigley, *EC Law: Litigation and the Environment*, *in* THE EUROPEAN ECONOMIC COMMUNITY: PRODUCTS LIABILITY RULES AND ENVIRONMENTAL POLICY 288 (Patrick E. Theiffry & G. Marc Whitehead eds., 1990)). *But see* Sands, *supra* note 278, at 2512 (arguing that especially in the context of environmental law the EU is only "a regional manifestation of international law").

394 More than 400 legislative and administrative texts relating to various environmental issues have been adopted in the EU. *See supra* note 269.

395 Eco-Audit Proposal, *supra* note 266, at 5-7.

396 *See supra* Part III.

397 *See, e.g.*, ALEXIS DE TOQUEVILLE, DEMOCRACY IN AMERICA 263-70 (J.P. Mayer ed. & George Lawrence trans., Anchor Books 1969) (1966) (describing American lawyers as "a somewhat privileged intellectual class" prone to "the tastes and habits of an aristocracy").

398 *See supra* notes 138-41 and accompanying text.

in the case of EMAS, however, the progressive impulse will flow in the opposite direction.

A. An Outline of an American Environmental Management and Auditing System

Having examined the European EMAS regulation in critical detail and keeping in mind differences between the environmental law regimes in Europe and the United States, this subpart outlines a proposal for an American version: an Environmental Management and Auditing System (American EMAS).[399] Two central considerations inform the proposal. First, the examination of the European EMAS in Part V reveals an overly detailed and complex structure. An effort is made to streamline the proposed American EMAS. Second, I consider how the prize asset of United States environmental law, the EPA, can best interface with the proposed reform. (A schematic diagram of the proposal is given in Figure 6).

1. A Voluntary "Environmental Leadership Program."—The European EMAS is voluntary, but it was first proposed to be mandatory.[400] A voluntary, legally structured approach has much to recommend it. The downside risk is that a voluntary EMAS, if not well-conceived, well-constructed, and well-administered, could remain a dead letter, with nobody signing up or with only a few companies joining in a piecemeal fashion similar to some EPA-sponsored voluntary programs of dubious systemic efficacy.[401] However, given the proactive approach to environmental management an EMAS hopes to inspire, there are advantages to a voluntary scheme. As in Europe, where it looks like a significant number of companies will opt in to the EMAS,[402] political and economic pressures in the United States could also persuade a critical mass of companies to join.

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399 Referring to an Environmental Management and Auditing *System* seems an improvement on Eco-Management and Audit *Scheme*. *See supra* note 23.

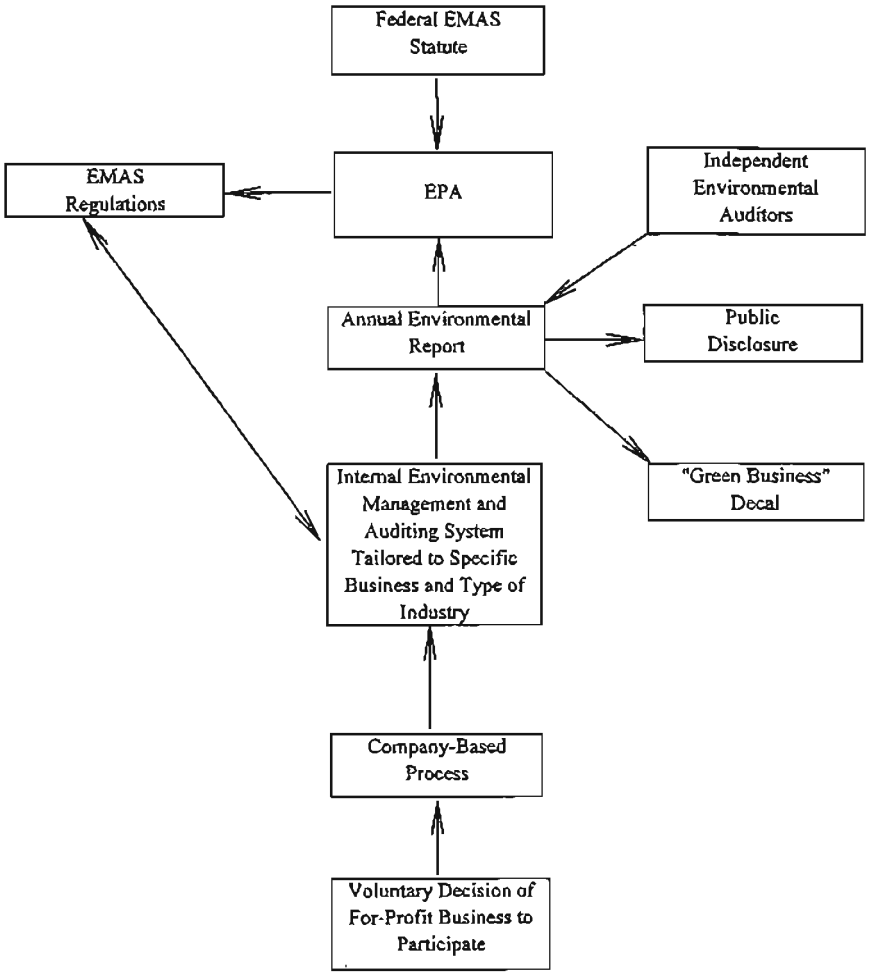
400 *See supra* note 274 and accompanying text.

401 *See supra* subpart IV.D.

402 A representative of the European Chemical Industry Council has said that he anticipated that all of the Council's members would establish systems to conform with EMAS requirements. Mike Ward, *Survey of Chemicals and the Environment*, FIN. TIMES, June 30, 1994, at II. Volvo announced that its car factory in Ghent, Belgium will register in the EMAS and comply with its provisions. *EU News in the Continental Press*, Reuter European Community Report, Jan. 18, 1995, *available in* LEXIS, News Library, Current File. The Environmental Minister in the Netherlands announced an expectation that 10,000 Dutch companies would enroll. *The Netherlands: Environmental Licensing, Enforcement will Be Linked to Firm's Management System*, Int'l Envt. Daily (BNA) Nov. 18, 1994, *available in* LEXIS, News Library, Current File. Japanese companies with operations in Europe, such as Sony, have also indicated an intention to register and comply with EMAS. Keiji Urakami, *Japanese Firms Nurturing Green Auditing Systems*, Japan Economic Newswire, Dec. 16, 1994, *available in* LEXIS, News Library, Current File.

FIGURE 6

A PROPOSAL FOR AN AMERICAN ENVIRONMENTAL MANAGEMENT AND AUDITING SYSTEM



An existing vehicle that could easily be adapted to an American EMAS proposal is the EPA's experimental Environmental Leadership Program.[403] EPA originally conceived this program as yet another voluntary program to encourage environmentally responsible management, such as the 33/50 or Green Lights programs.[404] But recently, EPA has awarded a small number of proposals for "pilot projects"

403 58 Fed. Reg. 4802 (1993).

404 These kinds of programs are discussed *supra* subpart IV.D.

which "will help EPA design a full-scale leadership program."[405] The law reform proposed here suggests that a "full-scale" program should remain voluntary, but it should widen its scope to include EMAS elements. Companies seeking recognition for "environmental leadership" should sign up for an American version of the EMAS.[406] At the same time, to encourage wide subscription, an American EMAS program should provide significant incentives to encourage companies to join.[407]

Arguably, given the gravity and intransigence of environmental problems, EMAS procedures and disclosure requirements should be made mandatory, at least for large-sized companies. The EMAS strategy is so new and untested, however, that making it mandatory seems premature. Perhaps if experience with an EMAS regulation proves successful, a broadened mandatory disclosure system could eventually replace certain aspects of the current command-and-control regime. But at the moment this remains only a dream of a possible future.

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405 59 Fed. Reg. 32,062 (1994). In April 1995, the EPA awarded twelve "pilot projects" under the Environmental Leadership Program to several utilities, six private companies, and two federal facilities. The participants are Ocean State Power, Duke Power, AZ Public Service, the Salt River Project in Phoenix, Ciba Geigy, Gilette Co., Motorola, Simpson Tacoma Kraft Co., WMX Technologies, John Roberts Co., McClellan Air Force Base, and Puget Sound Naval Shipyard. *Regulation: EPA Picks 12 for Pilot "Leadership" Program*, Greenwire, Apr. 10, 1995, *available in* LEXIS, Nexis Library, GRNWRE File. The pilot phase is scheduled to last twelve months, and the program is designed to test seven principles: "advancing the design of sophisticated environmental management systems; incorporating multimedia compliance assurance into facility management; third-party verification of performance and self-certification for reporting requirements; public measures of accountability; community involvement in setting goals and reviewing results; and mentoring programs to help small businesses find cost-effective ways to comply with the law." *Corporate Environmental Excellence Proposal Offer Alternative to Regulatory Rollback*, BUS. & THE ENV'T, Apr. 1995 [hereinafter *Corporate Environmental Excellence*]. These principles fit very well with the reflexive structure of the American EMAS proposed here.

As this Article went to press, the EPA announced another policy initiative called Regulatorly Reinvention (XL). Fifty pilot projects are contemplated, as many as six to begin in the summer of 1995. The projects will be in three areas: "industry-wide projects (XL for Sectors); facility-based projects (XL for Facilities); and government agency projects (XL for Government)." A fourth "community-based XL program" will be added at a later date. Regulatory Reinvention (XL) Pilot Projects, 60 Fed. Reg. 27,282, 27,282-83 (1995). Given that the object of this initiative is to "develop and demonstrate more flexible environmental management strategies" and to reinvent regulation to accord with them, *id.* at 27,285, there is an obvious potential parallel with the American EMAS proposed here.

406 In the long run, it may prove difficult to describe the program as "environmental leadership," since ideally one would like to see most companies opting in to the system.

407 Proposed incentives are discussed *infra* section VI.A.7. The "pilot projects" of the Environmental Leadership Program provide incentives of public recognition and a limited grace period to correct violations that may be revealed through participation in the program. *Corporate Environmental Excellence*, *supra* note 405. However, more significant and tangible incentives will likely be required to make a "full-scale" voluntary Environmental Leadership Program successful. These may develop through the new Regulatory Reinvention (XL) projects. *See supra* note 405.

2. All Types of For-Profit Enterprises.—The limitation of the European EMAS to industrial companies might make sense if the scheme were mandatory. In that case, the considerable experience of large industrial companies with environmental auditing and management may justify a distinction that excludes, for example, businesses in the service industries. But in a voluntary scheme, there is no reason to exclude any for-profit business.[408]

Extension of an American EMAS to non-profit enterprises and governmental organizations, however, is problematic. These kinds of organizations have incentive structures and internal normative conflicts different from those of business. The EMAS is designed to provide internal reflexive processes to encourage concern for the environment as a counterweight to a unidimensional focus on profit. It therefore should not be extended blithely to non-profit organizations or government. I do not mean to say that EMAS-like reflexive structures should not be devised for other organizations.[409] Government, in particular, has caused some of the worst environmental disasters known.[410] Developing viable reflexive environmental law for government and non-profit organizations, however, would differ significantly from EMAS structures designed for companies and therefore lies outside of the scope of this Article.[411]

3. Company-Based Process.—A European-style site-based EMAS is impractical in a complex global economy that changes

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408 *See supra* section V.A.2.

409 For example, the National Environmental Policy Act of 1969 seems due for a substantial overhaul. NEPA's reflexive aspects are discussed *supra* subpart IV.A. *Cf.* Philip Michael Ferester, *Revitalizing the National Environmental Policy Act: Substantive Law Adaptations from NEPA's Progeny*, 16 HARV. ENVTL. L. REV. 207, 255-69 (1992) (suggesting reform of NEPA on the basis of experience with state-law "little NEPAs"). The EPA's Environmental Leadership Program is commendable for including two military bases among the participants. In addition, the new Regulatory Reinvention programs contemplate pilot projects for government agencies. *See supra* note 405.

410 To give just two examples, consider (1) the disaster of the Rocky Flats nuclear weapons facility owned by the U.S. Department of Energy in Colorado and (2) the legacy of terrible environmental problems left in Eastern Europe by former Communist regimes. For Rocky Flats, see, *e.g.*, In re Grand Jury Proceedings (Rocky Flats Grand Jury), 813 F. Supp. 1451, 1468 (D. Colo. 1992) (sentencing memoranda in criminal environmental case provided "scathing, well-documented critiques of the Department of Energy" in its supervision of nuclear weapons facility and concluded Department was "hostile to environmental regulation" and "a poor steward of the nation's environment") (quoting sentencing memoranda). For pollution in Eastern Europe, see, *e.g.*, MURRAY FESHBACH & ALFRED FRIENDLY, JR., ECOCIDE IN THE USSR: HEALTH AND NATURE UNDER SIEGE (1992); Marlise Simons, *Upheaval in the East: Rising Iron Curtain Exposes Haunting Veil of Polluted Air*, N.Y. TIMES, Apr. 8, 1990, § 1, at 1.

411 However, to make one general point regarding possible application of reflexive law to government and non-profit organizations: Political rather than economic expediency poses the more significant environmental danger.

quickly.[412] Environmental management policies should be adopted by a participating company as a whole. Difficulties may arise in identifying what a "company" means for this purpose. Following the principle of "control" in complicated corporate structures, however, and emphasizing disclosure of details of a company's policies and operations should suffice in most cases.[413]

A company-based EMAS has the advantage of eliminating the confusing multileveled hierarchy of participation allowed under the European scheme.[414] A company instead should either opt in or opt out as a whole. An EMAS is complex enough if it includes thousands of companies. To think of an EMAS enlisting thousands and possibly millions of industrial sites begins to remind one of some of the worst command-and-control statutes.

This is not to say a company-based system should overlook relevant information concerning industrial sites. Auditing and monitoring should still apply to all of a company's operations. But an American EMAS should focus principally on the company itself and rely on company-based coordination of management and auditing systems to monitor and oversee particular sites.

A company-based EMAS also has the advantage of encouraging application of the same environmental standards throughout an organization. An EMAS should encourage uniform environmental policies, especially in the case of multinational corporations. Differential environmental standards in multinational management is currently a significant problem.[415] Policymakers must keep in mind limits to extraterritorial regulation. Companies cannot be forced under national

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412 *See supra* section V.A.3.

413 The European EMAS's definition of a "company" seems sufficient for this purpose. "Companies" are defined in a nontechnical way to include any "organization which has overall management control over activities at a given [industrial] site." Council Regulation 1836/93, art. 1(1), 1993 O.J. (L 168) art. 2(j), at 3. A clarification in the U.S. context to include any form of "business association" may be advisable.

414 *See supra* text accompanying notes 295-301 (describing site-based notations).

415 Some large corporations have committed to uniform environmental management standards in worldwide operations. *See, e.g.*, Edith Brown Weiss, *Environmentally Sustainable Competitiveness: A Comment*, 102 YALE L.J. 2123, 2135 (1993) ("Multinational companies are increasingly adopting the same environmental standards for their plants, regardless of the country in which they operate."). However, an empirical study of 98 multinational companies found that "none of the companies interviewed in this research has in place, for all aspects of environment, health, and safety, policies designed to meet the most stringent requirements in any of their countries of operation." Ann Rappaport & Margaret Flaherty, *Multinational Corporations and the Environment: Context and Challenges*, 14 INT'L ENVTL. REP. (BNA) 261, 263 (1991). Another study of 200 multinational companies found that most of them believed it would be "inappropriate for codes to require that uniform practices and technologies be used on a global scale." Baram, *supra* note 245, at 55 (citing Ronald E. Berenbeim, Corporate Ethics Practices 9 (The Conference Bd. Report No. 986) (1992)). On the difficulty with the European EMAS in this regard, see *supra* notes 302-03 and accompanying text.

laws to adopt uniform global policies.[416] But a site-based regulation slants in the opposite direction—encouraging cleaner behavior at "our" sites (in Europe or the United States) while winking at the export of dirtier operations abroad.

4. Company- and Industry-Specific Systems.—The European EMAS is overly detailed when it comes to specifications of environmental reviews, programs, management systems, and audits.[417] An American EMAS should require companies to draft an environmental policy statement, as many large industrial companies have done already. An American EMAS should also require a serious and thoughtful assessment of what kind of auditing and management system a particular company in a particular industry should establish. The considerable detail of the European EMAS does not leave enough room for variance with respect to widely different industries and businesses. An American EMAS should provide more flexibility, while demanding in return more exacting disclosure of the details of the management and auditing system a company ultimately adopts.

An American EMAS should delegate the formulation of appropriate regulations for specific industries to the regulatory experts: namely, the EPA. Although perils of administrative capture and strained legitimacy arise for this strategy,[418] requirements for published regulations and provision for judicial challenge in case of EPA denials of registration lessen these dangers. Also, an American EMAS statute or EPA regulations promulgated under it may adopt aspects of the European EMAS as a general template, but then add details and variances for specific industries and lines of business. Without trying to fill in details here, the general idea is to retain the shape and basic principles of the European EMAS, but to allow regulatory flexibility so as to achieve maximum participation by a wide spectrum of businesses.

I do not presume to look at specific industries and give examples of how the technical and business realities of different industries would lead to different environmental management and auditing standards. The EPA should address these issues in concert with companies who are leaders in developing environmental management and auditing techniques for their particular kinds of business. One policy approach that nicely fits with the idea of developing specialized EMAS standards for different industrial sectors is the EPA's new "Common Sense Initiative," which sets up teams to examine environmental regulation of six industries: iron/steel, electronics/computers,

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416 For further discussion of the international dimension, see *infra* subpart VI.C.

417 *See supra* Part V.

418 *See supra* text accompanying notes 36-38 and 131-33 (discussing problems of administrative capture and legitimacy).

metal plating/finishing, automobiles, printing, and oil refining.[419] An American EMAS could build on the Common Sense Initiative to assess the state of the art of environmental management and auditing. The EPA could adopt appropriate regulations for each sector in partnership with businesses that would be affected by following an approach of "negotiated rulemaking."[420] The wheel need not be reinvented for each type of business. But the overly detailed rules of the European EMAS are too insensitive to differences among businesses. A mid-level regulatory approach is warranted. The EPA, with input from businesses and other interested groups, is in the best position to develop governing regulations, with appropriate provisions for judicial oversight of an American EMAS process.

5. Environmental Auditors/Verifiers.—The European EMAS model of two classes of environmental audits—one by internal auditors and one by external verifiers[421]—is inefficient. Two groups of environmental auditors looking at the same data seems calculated only to make more work for auditors than they would have already under a new EMAS regulation. An American EMAS should collapse the distinction, and yet continue to insist on objective auditing and "verification" of disclosures made in public environmental statements. With respect to a large company's internal auditors, strict procedures should be set up to assure impartiality. The analogy to accountants auditing financial statements is a good one. An American EMAS needs independent environmental auditors for public credibility.

The idea that environmental auditors/verifiers must register with the government is also controversial.[422] An American EMAS should instead allow the development of self-regulation of environmental auditors. The EPA should preside over the development of self-regulatory bodies of environmental consultants and auditors, assuring that adequate standards of accreditation are adopted, followed, and enforced. Accreditation should lead ordinarily to presumptions against

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419 Recognizing that "[t]oo often our environmental activities have been compartmentalized, law by law, pollutant by pollutant," Secretary Carol Browner announced that the Common Sense Initiative will review regulations in the various industry sectors, attempt to streamline them, and report how regulations can better encourage pollution prevention and new technological solutions to environmental problems. *EPA Unveils Plan To Consolidate Rules for Certain Industries*, WALL ST. J., July 21, 1994, at A16; *see also* Browner, *supra* note 2.

420 *See* Negotiated Rulemaking Act of 1990, 5 U.S.C. §§ 561-70 (1994); *see also* Philip J. Harter, *Negotiating Regulations: A Cure for Malaise*, 71 GEO. L.J. (1982). The approach of negotiated rulemaking in partnership with business follows recent experience in Europe. For a critical assessment, see, *e.g.*, Maarten A. Hajer, *"Verinnerlijking": The Limits to a Positive Management Approach*, *in* ENVIRONMENTAL LAW AND ECOLOGICAL RESPONSIBILITY, *supra* note 13, at 167-84 (discussing Dutch experience).

421 *See supra* sections V.A.8 & V.A.10.

422 *See supra* text accompanying notes 356-66 (describing "accrediting" of environmental verifiers by governments).

the legal liability of environmental auditors, except in cases of gross negligence, recklessness, or fraud.

6. Annual Environmental Reports.—Public disclosure is the backbone of the EMAS idea.[423] Environmental management and auditing lack public credibility without reporting that is objectively verified and disclosed. Environmental reports should be made available to the public, along with annual financial reports in the case of publicly held corporations, and filed with the EPA.

Companies may resist this kind of "paradigm transition" in environmental regulation.[424] But if reflexive processes can impel creative and effective environmental management practices, and if disclosure of information about environmental management and performance can increase public trust that environmental business practices are more than public relations gimmickry, the pain of the transition may be worth the effort.

In addition to increasing public trust, annual environmental reports would increase the general level of information available concerning important environmental issues. Environmental reports would provide an integrated and centrally available source of information about environmental management and performance. Also, new ideas and approaches to environmental problems would circulate more easily in an established system of communication. Although more information is not always good,[425] there is an increasing need in the environmental area for collection and presentation of organized information and deliberative opinions about major issues. Public environmental reports would help to meet this social need.

Finally, to assure both reliable information and public trust in an American EMAS, penalties should be developed for false or misleading statements in environmental reports. For a voluntary program, penalties should be light (and certainly not criminal), but they should be included to prevent misuse of the process. One obvious and easy penalty is removal of a company from the EMAS program. A broad "good faith" exception should be formulated, with the expectation that companies adopting serious efforts to comply would not face detailed scrutiny. But some level of oversight is required. The EPA should retain jurisdiction to police the accuracy of environmental reports. A more intrusive approach would allow private rights of en-

423 *See supra* subpart V.9.

424 *Cf.* Zygmunt J.B. Plater, *From the Beginning, a Fundamental Shift of Paradigms: A Theory and Short History of Environmental Law*, 27 LOY. L.A. L. REV. 981 (1994) (describing paradigm shift from "systemic-accounting approach" to "pluralist paradigm" stressing citizen suits in environmental law).

425 *Cf.* Michael A. Fitts, *Can Ignorance Be Bliss?: Imperfect Information as a Positive Influence in Political Institutions*, 88 MICH. L. REV. 917 (1990). The advent of the information superhighway, for example, brings with it the danger of an information glut.

forcement by citizens and public interest groups for cases of misuse of the American EMAS system: private actions for what might be called *environmental fraud*.[426] However, this enforcement mechanism is probably impractical for a voluntary program. Why would any company want to subject itself to harassment by environmental groups by agreeing to enter the EMAS process in the first place? The EPA may nevertheless enlist environmentalists in helping to identify companies that may misuse the EMAS process.

7. Incentives to Participate.—Without sufficient reason for businesses to sign up for a program that would expose them to public scrutiny and incur significant costs of developing environmental management and auditing processes, any voluntary EMAS system will fail. Therefore, a number of incentives should be built in to an American EMAS to encourage participation.

First, a voluntary American EMAS should protect the confidentiality of underlying auditing reports and self-critical review of environmental performance. The reflexive processes of environmental management and auditing must be open and genuinely self-critical. A defensive reflexion obsessed with the prevention of incriminating auditing documents will not achieve the desired kind of reform.[427] Particularly in view of the tendency toward litigiousness in American society, legal protection of internal management and auditing processes is necessary.

A new federal evidentiary privilege of self-critical analysis for internal environmental management and auditing procedures would provide the needed protection and encourage participation. However, a self-critical analysis privilege should extend only to companies that sign up for the EMAS.[428] Previous proposals have been made for a self-critical analysis privilege for compliance programs to be established in accordance with the federal sentencing guidelines.[429] In addition, at least four states now recognize an evidentiary privilege for environmental audits under state statutes.[430] These laws do nothing,

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426 The parallel is private rights of action in securities regulation. *Cf.* Virginia Bankshares, Inc. v. Sandberg, 501 U.S. 1083 (1991); J.I. Case v. Borak, 377 U.S. 426 (1962).

427 *Cf. supra* text accompanying note 235 (discussing risk of defensive compliance programs in response to environmental sentencing guidelines).

428 See *supra* notes 209-10, 218 and accompanying text for description of current law and secondary sources concerning application of self-analysis privilege to environmental audits.

429 *See, e.g.*, RAKOFF ET AL., *supra* note 208, at 8-33 & n.4 (discussing proposed federal legislation). *See also* James T. O'Reilly, *Environmental Audit Privileges: The Need for Legislative Recognition*, 19 SETON HALL L. REV. 119 (1994) (arguing in favor of a federal privilege for environmental audits in conjunction with the federal sentencing guidelines for environmental crimes). A bill to establish a federal privilege for environmental audits was introduced in 1994, but it did not pass. *Id.* at 151 (citing S. 237, 102d Cong., 2d Sess. (1994)).

430 *See* Lavelle, *supra* note 223, at A1 (citing statutes in Colorado, Indiana, Kentucky, and Oregon). Several more states are considering similar statutes. *Id.* at A23 (citing proposals in

however, to assure the public of the good faith of a company's environmental commitment. Public disclosure of environmental reports would help to close this gap in trust. A quid pro quo for public disclosure should be a self-evaluative privilege for the underlying information gathered through professional environmental management and auditing practices.

An exception to the evidentiary rule of privilege would have to apply to an EPA investigation concerning the accuracy of the information provided in the public environmental reports. The idea is to exempt a company from the dilemma of turning up adverse information about their environmental practices and subjecting themselves to civil and criminal liability if they enter into an environmental management and auditing program. For "good" environmental companies that opt in to an American EMAS, the underlying information should be confidential, except to the extent that the EPA needs to see the information to confirm the accuracy of public reports of environmental performance.

Providing for confidentiality of internal EMAS processes would free corporations to examine the real environmental problems they face without constantly worrying that their deliberations may one day end up in court. Confidentiality is essential to assuring a reasonable level of participation. Companies would especially welcome a confidentiality privilege in light of increasing governmental reliance on criminal penalties.[431]

A second incentive that an American EMAS should provide involves a revision of governmental policies concerning the treatment of internal environmental auditing and management in investigations and prosecutions.[432] For companies that opt in to an American EMAS—and only for those companies—the EPA and the Justice Department should state unequivocally that underlying auditing information will not be used against participating companies, with only very limited exceptions. A new federal self-evaluative environmental privilege would reduce the need for such policy statements. But because privileges are often waived inadvertently and because disputes can

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Arizona, Illinois, New York, Ohio, Pennsylvania, and Virginia); *see also* Edward Felsenthal, *New Laws Make Companies' Self Reviews Less Accessible*, WALL ST. J., Aug. 2, 1994, at B2 (discussing state statutes); O'Reilly, *supra* note 429, at 141-46 (same). EPA has expressed disapproval of the statutes. Restatement of Policies Related to Environmental Auditing, *supra* note 203, at 38,459 ("EPA has consistently opposed this approach."); Voluntary Environmental Self-Policing and Self-Disclosing Interim Policy Statement, *supra* note 212, at 16,878 (threatening states with audit privileges with stricter federal enforcement). Of course, state statutory privileges apply only to cases brought under state law.

431 *See supra* note 30. Recall also that the European EMAS protects the confidentiality of "any information on data obtained in the course of . . . auditing on verification." *See supra* note 372 and accompanying text.

432 *See supra* subpart IV.C.

arise concerning whether particular material is covered by a privilege,[433] additional concrete assurances in the form of policy statements would give companies another reason to participate.

Third, an American EMAS should recommend revisions of the new environmental sentencing guidelines for organizations to allow automatic credits for companies that opt in. This reform should continue existing incentives for companies to adopt environmental compliance programs without the disadvantages of defensive reflexion that currently weaken the approach.[434] An American EMAS might even consider entirely exempting participating companies from criminal prosecution in exchange for possible criminal and civil liability under second-level of EMAS regulations concerning false, misleading, or omitted information in public environmental reports.[435]

FIGURE 7

Source: Green Audit Inc., 1220 Broadway, New York, N.Y.

433 *See, e.g.*, RAKOFF ET AL., *supra* note 208, at 8-34 (noting that evidentiary privileges, even when "formally established," often do not work "in the real-world of courtroom maneuvering").

434 *See supra* section IV.C.3.

435 As discussed above, violations of EMAS regulations should involve only relatively small, civil penalties. *See supra* text accompanying note 426. The suggestion of immunity from federal criminal prosecution for all environmental statutes would require an enhancement of EPA's enforcement under the proposed EMAS. Standards for disclosure of environmental information would have to be developed through EPA regulations, taking experience under the securities law into account. However, the idea of exempting large companies from environmental prosecution, whatever its intrinsic merits, is likely to be politically infeasible, given the ever-present possibility of environmental disasters and the corresponding desire of politicians and the public to hold large corporations legally responsible for them.

Finally, some sort of formal recognition of businesses participating in the program should be adopted, such as an EPA-certified "Green Business" decal. (See Figure 6). A marketable logo or emblem would help tap economic consumer interest. An American EMAS could perhaps be linked with private environmental labelling efforts.[436] Already, one American private enterprise—to some extent a spin-off of Green Seal—has devised a "Green Audit" logo that suggests this possibility. (See Figure 7). A formal Green Business or Green Audit decal provided under the auspices of an American EMAS would provide an additional incentive for companies to participate. A government-certified emblem or logo would increase public trust in the process. In addition, given the absence of a government-sponsored environmental labelling program in the United States, there seems to be no good reason to prevent a Green Business decal from being used in advertising and marketing. To deny this use, as does the European EMAS,[437] is to deny a significant incentive for businesses to participate.

With these kinds of incentives, an American EMAS would likely become widely established, especially among large industrial companies. Assuming the basic structure of the EMAS was flexible enough to accommodate existing environmental management and auditing systems, large companies would have little reason not to participate. Given the inevitable expenses involved, small companies may have more difficulty. As under the European EMAS, small businesses should be provided with technical and financial assistance.[438] With meaningful incentives in place, and with technical and financial support available to small businesses, an American EMAS would be likely to entice broad-based participation over time.

B. Should an American Environmental Management and Auditing System Be Adopted? Arguments For and Against

Having outlined my view of what an American EMAS should look like, I now consider some arguments for and against it. Five different arguments cover the following subjects: economics, process, technology, coordination, and administration.

1. The Economic Argument.—The strongest argument against adopting an American EMAS is an economic one. As seen above, the

436 *See supra* text accompanying notes 91-93 and fig. 2.

437 *See supra* section V.A.11 (discussing prohibition of use of European EMAS graphic for advertising given fear of conflict with European Eco-label products).

438 *See supra* text accompanying note 318 (discussing small business assistance under the European EMAS). One of the seven priciples informing the pilot projects for the EPA's Environmental Leadership Program also involves "mentoring" of small businesses. *See supra* note 405.

European EMAS is extraordinarily detailed,[439] and significant detail also appears in the proposed American version. The costs for a company to opt in will be significant unless it already has in place a fairly elaborate system of environmental management and auditing. In other words, start-up costs will be high. A company may have to hire outside environmental consultants. Developing an environmental management and auditing system will take precious time away from managers and employees who could have been devoted to other tasks. Hiring environmental auditors with the required technical expertise will be expensive. Producing an environmental report for public release will also be expensive. A company must hire an outside environmental auditor to verify the statements made in the report. A company would also be well-advised to ask its general counsel, and maybe an outside law firm, to look over the language in its environmental report. Printing and distribution of the report will cost money. With all of these expenses, an average business response to the EMAS may be: "That's a nice theory, but it's just too expensive."

There are at least four responses to this argument that an American EMAS would be too expensive. First, the costs for some companies that already have environmental management and auditing systems in place are not likely to be very high. The idea of environmental management and auditing is not new; both the theory and practice have been present in many large companies for decades. The only significant extra costs to these large companies of a coordinated American EMAS are those of assuring objective verification of information and the production of an environmental report. Even so, some large companies, such as Sun Company and General Motors, are already producing environmental reports under the auspices of the CERES Principles.[440] For other companies without sophisticated environmental programs, start-up costs for opting into an American EMAS may prove too high. Even if technical and financial assistance for smaller businesses is insufficient, however, a virtue of a voluntary system is to allow companies to opt out. Those companies that find an American EMAS too expensive simply do not have to sign up. If the American EMAS proves successful, public pressure may come to bear on companies that refuse to participate. If not, and if the EMAS proves too expensive, it simply will not work.

A second response might be to recommend the traditional governmental approach: appoint someone to conduct a cost-benefit analysis. Given the voluntary nature of the program, however, I would recommend that if the idea seems persuasive enough, Congress and the EPA should begin an EMAS program experimentally, with close

439 *See supra* subpart V.A.

440 *See supra* notes 262-65 and accompanying text. There is no reason why CERES could not participate under an American EMAS, perhaps as a surrogate or supplement to EPA oversight.

attention to its costs, and then study the results before deciding to proceed more broadly. In principle, it is difficult to estimate the costs and benefits of a reflexive EMAS approach. The whole idea is to change the mechanical orientation of the weighing of costs and benefits: to restructure the business enterprise, rather than to regulate it more heavily. A lesson of reflexive law is that reform must have a true sense of the limitations of the legal system. Again, if an American EMAS does not translate well into political and economic terms, then it will fail. It is not as likely to fail, however, if the EPA affords companies and other interested groups sufficient opportunity to participate in formulating the recommended EMAS standards for each business sector.

A third response is that the proposed American EMAS provides significant economic incentives to offset the costs of participating in the system. The proposed federal self-evaluative privilege and lenient enforcement policies provide significant economic incentives. Businesses opting into an American EMAS would thereby gain economic savings from eliminating some of the uncertainty and unfairness in environmental command-and-control regulation. In addition, the marketable logo or emblem of a Green Business (or something like it) provides an economic advantage in the "green consumer" market. Public relations image counts as yet another incentive for opting into an EMAS. Public relations is sometimes derided by environmentalist critics, but the benefit of a "green" business reputation is legitimate if it is deserved. An American EMAS would back up good reputations with verified environmental reports and accurate information.

Fourth, although one of the disconcerting properties of a reflexive law is its uncertain efficacy,[441] it is also true that the current system of environmental law is *not* working well enough. The prevailing command-and-control alternative is extremely expensive.[442] Conventional market-based regulations also has significant costs.[443] Reflexive law in the form of an EMAS may provide an attractive addition to the current system, which is broken. It may cost something to try a reflexive approach, especially in the short-term, when transitional costs will be greatest. However, the costs of not shifting to a more realistic legal strategy that takes into account the complexity of modern society and its ecological problems may prove even higher in the long run. Somehow, environmental regulation must encourage businesses to contribute effectively to environmental solutions. An American EMAS is one of the most probable alternatives for doing so.

From a perspective of environmental protection, the best economic argument against complying with any version of an EMAS is

441 *See supra* Part III.

442 *See supra* subpart II.A.

443 *See supra* subparts II.B & IV.A.

that a business could better spend its money on actually reducing its environmental impact through the purchase or development of improved pollution-control technologies and other environmental programs. For individual cases, where companies are committed to environmental responsibility and already invest heavily in environmental protection, this argument may be persuasive. However, not all companies are environmentally progressive, and an EMAS provides a regulatory method to address the systemic issue of environmental commitment and responsibility. Because current conventional approaches are often piecemeal, irrational, stultifying, and convoluted, a new model is needed. At least, an American EMAS suggests a promising experiment.

2. *The Process Argument.*—A second argument against adopting an American EMAS raises objections to its process orientation. Similar to arguments against NEPA,[444] this argument focuses on the absence of substantive standards in an EMAS regulation. Without specific standards, the argument continues, there are no teeth. In this view, companies cannot be trusted. If left to their own devices, they will simply write nice, flowery disclosure statements, but will go on polluting and caring little for the environment.

This argument has some force. Standards-based laws—both of command-and-control and market-based varieties—cannot be thrown out over night. But a new reflexive approach to environmental law can coexist with other forms of environmental regulation. In fact, disclosure under a reflexive environmental reporting system may increase the efficiency of enforcement under substantive statutes. In addition, a reflexive environmental law in the form of an EMAS provides other benefits of increasing dialogue and communication among various social interests—what may be called the "process virtues."

Those who think the only way to address environmental problems is to control "the polluters" will not easily buy into a reflexive scheme. But society has grown too complex and, in a certain sense, unmanageable for this simplistic view of dividing groups into the environmentally "good" and "evil."[445] Although some policymakers may not wish to admit it, they must begin to think about ways to regulate in a different, less commanding mode if they are to achieve

444 *See supra* subpart IV.B.

445 *See, e.g.*, Kenneth A. Manaster, *Ten Paradoxes of Environmental Law*, 27 LOY. L.A. L. REV. 917, 931 (1994) (decrying the tradition of "labelling different categories of participants in environmental issues as good guys or bad guys—the cowboy-hero environmental protection types wearing the white hats versus the sinister despoilers of nature and public health wearing the black hats"); *see also* Bobertz, *supra* note 57, at 718 (criticizing the tendency to look for scapegoats in environmental law "because the identified scapegoat often bears an incomplete or distorted relationship to the actual problem at hand, resulting in laws that are likewise incomplete or distorted").

meaningful success. As Laurence Tribe writes in a related context in his classic article, *Ways Not To Think About Plastic Trees*,[446]

> The framework for choice to which I believe we should initially commit ourselves must have a double aspect. Although it must be selected in light of its likely consequences, it cannot be designed simply to assure that the journey will bring us to some preconceived destination. For no such destination is describable in advance, and in no event could we expect a purely instrumental strategy to liberate us from the grip of instrumentalism and manipulation in which we feel trapped. The "way of acting" to which we commit ourselves must therefore be a process valued in large part for its intrinsic qualities rather than for its likely results. Such a conception of process as more than instrumental should not seem wholly alien. In many realms of human experience, process is intuitively and widely felt to matter in itself. . . . In the environmental area in particular, given the absence of any final system of ends which either could or should command assent, we should be capable of perceiving intrinsic significance—sanctity, if you will—in the very principles, however variable, according to which we orchestrate our relationships with one another and with the physical world of which we are a part.[447]

Even some of the strongest critics of procedural approaches to environment law see virtues in process. Joseph Sax, for example, recognizes that "legitimating public participation, and demanding openness in planning and decisionmaking, [are] indispensable to a permanent and powerful increase in environmental protection."[448] An American EMAS would extend this lesson somewhat further.

3. The Technological Argument.—Conventional environmental law, whether command-and-control or market-based, is not for the most part forward-thinking in terms of technology. Neither approach encourages thinking through potential environmental problems before they happen. In general, a command-and-control statute is enacted in response to an environmental crisis of some kind or when a particular issue is jolted to public attention by the media.[449] Often, particular pollution-control technologies or performance-standards are then mandated, leaving little room for technological innovation. Market-based regulation is more flexible, but it is usually employed either to achieve a performance-based environmental objective more efficiently than command-and-control or to expand ownership rights to the natural environment where this is technically feasible.[450] A significant advantage of a reflexive EMAS lies in its potential for encour-

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446 Laurence H. Tribe, *Ways Not to Think About Plastic Trees: New Foundations for Environmental Law*, 83 YALE L.J. 1315 (1974).

447 *Id.* at 1339.

448 Sax, *More Than Just a Passing Fad*, *supra* note 200, at 804.

449 *See supra* note 57 and accompanying text.

450 *See supra* subparts II.B. and IV.A.

aging self-reflective and self-critical environmental management that strongly encourages technological innovation. This innovation concerns not only what products to make and services to provide, but what manufacturing processes to use and what environmental resource acquisition policies to follow. An American company-based EMAS would encourage a participating business to consider the environmental effect of its operations as a whole. This holistic perspective is likely to trigger the invention of environmentally beneficial technologies.

A reflexive EMAS may also prove superior in its technological effect by offering the prospect of avoiding many environmental problems, rather than putting law in the position always of responding to the next environmental crisis, after the problem has arisen, and often too late.[451] A reflexive EMAS aims to encourage development of beneficial environmental technologies by incorporating environmental thinking at all levels and stages of business enterprise, not just "at the end of the pipe" or when a lawsuit is filed or a catastrophe happens. Human society can no longer blindly rely on economic processes to provide the technological inventiveness needed to stay ahead of potential environmental cataclysm.[452] Reflexive strategies designed to enhance social communications about the natural environment are likely to provide some help in the right direction.

4. The Coordination Argument.—An American EMAS would provide an institutional structure to help to coordinate the disconcerting jumble of environmental law. A basic problem of environmental law has always been the availability of reliable information about different problems. Scientific knowledge about various environmental issues changes constantly. A system of law that relies primarily on an expanding series of outdated statutes based on outdated information is inefficient, both economically and in terms of environmental protection. More flexible institutions are needed to develop new information and to recommend corresponding reform of environmental practices.[453]

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451 The possibility of regulation responding too late is currently present in the prospect of global climate change. Although the science is not yet certain, there is the possibility that human society's global economic processes have already overshot the carrying capacity of the planet. The point is that current legal technology is not adequate to address the kinds of environmental problems society now faces. *Cf.* Krier, *supra* note 61.

452 *See supra* text accompanying note 1. *Cf.* James E. Krier & Clayton P. Gillette, *The Uneasy Case for Technological Optimism*, 84 MICH. L. REV. 405, 427 (1985) ("[T]his is the late twentieth century, not the late eighteenth. The problematic side of modern technology is known to be troublesome in ways not recognized two hundred years ago.").

453 *See* Farber, *supra* note 39 (discussing how scientific knowledge often outpaces environmental regulation and recommending decentralized strategies of regulation that allow learning).

Reflexive environmental law aims to enlist businesses more intimately in the agenda of environmental protection. Many businesses will resist this idea. Many businesses prefer to say, "Just tell us what the law is, so we can follow it." However, human society can no longer afford to leave environmental issues to law and government. Businesses must participate more positively in providing new information, reporting new scientific findings, and coming up with new ideas and new technologies that are not only profitable, but contribute to more efficient and effective environmental protection.

The process of disclosure in public environmental reports in an American EMAS may provide the information needed for efforts to integrate pollution control. A number of scholars call for integrated pollution control to address the problem of laws simply shifting pollution from one media, such as land or water, to another, such as air.[454] Critics of plans for comprehensive integrated pollution control emphasize cognitive limitations,[455] which are similar to the kind of cognitive burdens borne by substantive law in general.[456] The focus on company-specific reporting of an EMAS, however, may provide sufficient information and flexibility for integration at a level where it is most likely to be effective: the firm. Rather than global formulas for integration of already immensely complex statutes, firm-level integrated pollution control may allow businesses to consider alternative pollution control strategies, integrate them, and justify the choices made in public reports. Technical and scientific standards for how to justify these kinds of choices and what choices will count as justifiable remain to be worked out. At least, the reflexive capacities of an EMAS hold out the possibility for progress in this direction.

Another benefit of an American EMAS involves the coordination of environmental information for investors and other interested citizens. An EMAS would enhance the ability of investors to compare companies on the basis of their environmental reports. For investors, annual environmental reports would present a new and important source of information. Reporting requirements of expected environ-

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454 *See, e.g.*, Lakshman Guruaswamy, *Integrating Thoughtways: Re-Opening of the Environmental Mind?*, 1989 WIS. L. REV. 463; *see also* Symposium, *Integrated Pollution Control*, 22 ENVTL. L. 1 (1992). In 1993, the Netherlands adopted an Environmental Management Statute that may represent an important experiment in integrated pollution control. The statute combines elements of the EMAS, including uniform provisions for environmental programs, with a proposal for an integrated permit system. *See* Brus, et al., *supra* note 269, at 667-71. A proposal for a directive on integrated pollution control has also been made at the EU-level. Proposal for a Council Directive on Integrated Pollution Prevention and Control, COM(93)423 final.

455 *E.g.*, James E. Krier & Mark Brownstein, *On Integrated Pollution Control*, 22 ENVTL. L. 119, 125 (1992) ("The trouble with [integrated pollution control] is that its underlying synopticism runs headlong into a compelling counterview that comprehensive rationality is, to put the matter flatly, 'impossible.' ").

456 *See supra* Part III.

mental costs and liabilities are recently expanding under securities law.[457] Annual environmental reports would increase the degree of scrutiny that "green investors," as well as environmental groups, could give to companies' environmental performance. This enhanced scrutiny may encourage publicly held companies to take their environmental responsibilities more seriously than they would otherwise.

Coordination in enforcement also recommends an American EMAS. For companies opting into an American EMAS, the EPA could shift gradually to a role emphasizing oversight rather than prosecution. The complexity and cost of environmental regulation call for a shift toward a *disclosure model*, rather than an *inspection model*.[458] Gains in administrative efficiency would be significant if important data concerning compliance with environmental laws were required—at least in summary form—in environmental reports. This is not a large change. Already, under federal statutes such as the Toxic Substances Control Act (TSCA)[459] and the Emergency Planning and Community Right-to-Know Act (EPCRA),[460] companies are required to report to the government a significant amount of information about their environmental practices and performance.[461] Public disclosure

457 Litigation that may result in large penalties and other environmental issues that may materially affect a decision to invest in a publicly traded company must be disclosed. For discussion of securities law requirements for disclosure of potential environmental liabilities, see John W. Bagby et al., *How Green Was My Balance Sheet?: Corporate Liability and Environmental Disclosure*, 14 VA. ENVTL. L.J. 225, 287-337 (1995); Robert H. Feller, *Environmental Disclosure and the Securities Laws*, 22 B.C. ENVTL. AFF. L. REV. 225 (1995); Elizabeth A.G. Geltman, *Disclosure of Contingent Environmental Liabilities by Public Companies Under the Federal Securities Laws*, 16 HARV. ENVTL. L. REV. 129 (1992); Richard Y. Roberts & Kurt R. Hohl, *Environmental Liability Disclosure and Staff Accounting Bulletin No. 92*, 50 BUS. LAW. 1 (1994); Perry E. Wallace, *Disclosure of Environmental Liabilities Under the Securities Laws: The Potential of Securities-Market-Based Incentives for Pollution Control*, 50 WASH. & LEE L. REV. 1093 (1993); Symposium, *Disclosure of Environmental Liability in SEC Filings, Financial Statements, and Debt Instruments*, 5 VILL. ENVTL. LJ. 315 (1994).

458 It is interesting to note that William O. Douglas considered the direct regulation of only 6000 brokers and traders under the securities laws to be "impractical, unwise, and unworkable" and believed some form of government-sanctioned self-regulation was therefore called for. Harvey L. Pitt & Karl A. Groskaufmanis, *Minimizing Corporate Civil and Criminal Liability: A Second Look at Corporate Codes of Conduct*, 78 GEO. L.J. 1559, 1577 n.96 (1990) (quoting JOEL SELIGMAN, THE TRANSFORMATION OF WALL STREET 185 (1982)). One wonders in light of the history of securities regulation how much the heavily substantive approach of contemporary environmental law owes to path dependence concerning the choices of original legal strategies rather than to deliberative choice.

459 15 U.S.C. §§ 2601-2671 (West Supp. 1994).

460 42 U.S.C. §§ 11001-11050 (West Supp. 1994); *see also* Elliott, *supra* note 116, at 1851 (describing the mandated public disclosure of the Toxic Release Inventory required under EPCRA).

461 For an overview of different information required to be disclosed to the public under different federal environmental statutes, see Bagby et al., *supra* note 457, at 231-59. The authors note, however, that even "when such disclosures are available to the public, they are often difficult to obtain" and "most disclosures are not made on a regular basis." *Id.* at 233.

of "risk management plans" of business operations and emergency procedures with respect to use of certain hazardous chemicals under Section 112(r) of the Clean Air Act Amendments of 1990[462] is another example likely to increase the transparency of environmental management practices.[463] Encouraging the self-reporting of verified environmental reports may allow the EPA to focus on assuring accurate disclosure through punishing false or misleading reporting by EMAS companies and reserving heavier penalties for substantive violations by companies that fail to participate in the EMAS system.

5. The Administrative Argument: Anti-Capture and Legitimacy.—As noted above, two perennial problems in administrative regulation are capture and legitimacy.[464] An American EMAS would provide partial solutions to both.

First, an American EMAS suggests a way out of the capture dilemma in environmental law by introducing a third party to the equation, namely, citizens and their public interest groups. Ian Ayres and John Braithwaite have recommended "empowering public interest groups" as a general solution to the capture phenomenon.[465] Rather than the two-party game that can lead to capture, this solution argues for "tripartism."[466] A three-party game is less easily fixed.

The requirement for public disclosure in the EMAS approach provides a public forum for concerned citizens, including environmental groups, to participate in the regulatory process. An EMAS empowers the public to double-check the accuracy of the reports and raise questions if they are warranted.

Enlisting public interest groups to oversee the accuracy of environmental reports has several advantages. First, it lessens the burden on the EPA to review all reports. To some extent, the EPA can rely on other groups to test their accuracy. Second, the level and quality of communication about environmental issues would increase. Public reports provide a forum for companies to explain their environmental performance not only to the EPA, but also to citizens in general. Third, an EMAS opens the regulatory process, dangerously closed

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462 42 U.S.C. § 7412(r) (West Supp. 1994).

463 *Id.*; *see also* Final Rule, List of Regulated Substances and Thresholds for Accidental Release Prevention; Requirements for Petitions Under Section 112(r) of the Clean Air Act as Amended, 59 Fed. Reg. 4478 (1994); Risk Management Programs for Chemical Accidental Release Prevention, 58 Fed. Reg. 54190 (1993) (to be codified at 40 C.F.R. pt. 86) (proposed Oct. 20, 1993).

464 *See supra* text accompanying notes 36-38 and 131-33 (discussing capture and legitimacy problems of substantive law).

465 IAN AYRES & JOHN BRAITHWAITE, RESPONSIVE REGULATION: TRANSCENDING THE DEREGULATION DEBATE 54-100 (1992).

466 *Id.* Ayres and Braithwaite's proposal for "enforced self-regulation" also shares a general similarity with the EMAS approach. *See id.* at 101-32.

when there are only two parties, to public scrutiny. Increased openness should discourage secret backroom deals that are the hallmark of administrative capture.

A more open structure for public discourse about the environment suggests that an American EMAS may also help to remedy the democratic deficit of administrative law.[467] This benefit is somewhat speculative. However, if a reflexive EMAS works well, then the immense pressure on environmental agencies to regulate substantively may lessen, as the disclosure process begins to take on more of the weight of regulation. Legitimacy issues would not disappear; modern societies are probably too complex for this ever to happen completely. But reflexive processes may help to open up the regulatory box to include more democratic participation by regulated businesses as well as public interest groups than the current administrative regime allows.

C. The International Dimension

When the global dimension is considered, it becomes even more clear that the force of business, especially that of large multinational enterprises, must be enlisted in the environmental cause. As one group of commentators notes,

> [L]ong-term global environmental menaces such as ozone depletion, climate change, and acid rain pose new, potentially incalculable dangers to human survival. . . . Massive deforestation and the continued release of industrial byproducts into the atmosphere have led to predictions of dramatic global climate change and accompanying rises in sea levels, permanent inundation of coastal plains, and widespread heat waves. . . . [A]cid rain is suspected of contaminating water supplies and fish with dangerous metals and of posing grave threats to human health.[468]

It is not overstating the situation to say the future of the human race may depend on developing an effective legal strategy to address these issues. As Vice President Gore argues, the most serious problems facing global human society in the post-Cold War era concern the environment.[469] What he may not fully recognize, however, is that the nation-state system and its emergent order that calls itself international law does not appear strong enough to tackle all the serious issues involved. International law is developing slowly, and it is an

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467 *See supra* note 133 and accompanying text.

468 Note, *Developments in the Law—International Environmental Law*, 104 HARV. L. REV. 1484, 1487-88 (1991).

469 AL GORE, EARTH IN THE BALANCE 269 (1992) ("[W]e must make the rescue of the environment the central organizing principle for civilization."). Gore argues for a "Global Marshall Plan" to address environmental issues. *Id.* at 295-360. For a critical assessment, see Robert W. Hahn, *Toward a New Environmental Paradigm*, 102 YALE L.J. 1719 (1993) (review essay).

uncertain instrument. Its success to date is not overwhelming.[470] Perhaps enlisting the considerable power, talent, and creativity of international business will also prove insufficient. As Edward O. Wilson suggests darkly, evolution may have wired human intelligence for its own self-destruction.[471] Certainly the stakes are high enough that all institutions, including business, should be pressed into service.

Reflexive environmental law has an international dimension. The International Standards Organization is developing standards for environmental management and auditing that will apply worldwide.[472] They are called the ISO 14000 series.[473] The standards may turn out to be so weak as to be virtually useless. However, current indications are that the standards will take a significant step in the right direction.[474] The immediate task then will be to create ways in which to persuade businesses to take up the challenge and to follow the new standards. EMAS regulations can provide an important regulatory link with the emerging ISO standards.[475]

Many claims for "social responsibility" have been made on business. With respect to the environment, however, the call for change is urgent given the severity of the issues. Businesses must continue to make profits, but not at the expense of further serious deterioration of the natural environment on which life depends. As Holmes Rolston writes, "the bottom line ought not to be black unless it can also be green."[476] In a word, business must become environmentally responsible.

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470 *See, e.g.*, Note, *supra* note 468 (finding considerable difficulties with current international law in effectively dealing with global environmental problems).

471 *See supra* note 162.

472 *See supra* text accompanying note 26.

473 The initial ISO 14000 standards are in draft as of this writing. International Standards Organization, Technical Committee 207, Environmental Management Systems—Specification with Guidance for Use (Sept. 28, 1994) (unpublished committee draft, on file with author); International Standards Organization, Technical Committee 207, Guide to Environmental Management Principles, Systems and Supporting Techniques (Sept. 23, 1994) (unpublished committee draft, on file with author); *see also* Lucas & Roberts, *supra* note 26 (discussing progress of drafting).

474 *See* Lucas & Roberts, *supra* note 26; *see also ISO Standards Would Encourage Compliance with Environmental Standards, Official Says*, 25 ENVTL. REP. (BNA) 283 (June 10, 1994); *Standards Group Issues Preliminary Environmental Statement: Momentum Builds Towards International Consensus*, CHEMICAL WK., Apr. 6, 1994, at 53. For further discussion of the need for international legal standards to govern the environmental activities of multinational corporations, see Robert J. Fowler, *International Environmental Standards for Transnational Corporations*, 25 ENVTL. L. 1 (1995).

475 It is expected that the ISO 14000 series will be consistent with the European EMAS, although not all aspects covered by the EMAS will be covered in the ISO standards. Lucas & Roberts, *supra* note 26.

476 HOLMES ROLSTON, III, ENVIRONMENTAL ETHICS: DUTIES TO AND VALUES IN THE NATURAL WORLD 325 (1988).

The EMAS provides a good start. The European EMAS allows explicitly for the possibility that international standards—perhaps those developed by the ISO—will count as meeting the EMAS standards.[477] This recognition of international standards holds out the possibility that reflexive EMAS regulations will reach out globally.

An American EMAS should do the same. Efforts should be made to harmonize EMAS regulations internationally (once, of course, they are adopted).[478] Perhaps ultimately an international treaty is in order. In the international context, the United States, Europe, and Japan should lead the way.[479] The United States in particular, an innovator in environmental law for so long, should step boldly into this new field of regulation.

VII. Conclusion

Humanity has created for itself a "risk society" attendant to development of an industrial society.[480] The benefits of material industrial progress achieved over the past several centuries have come with considerable costs. In addition to problems of inequalities of wealth distribution, particularly apparent in the divide between rich and poor nations, environmental risks stand prominently on the agenda of world problems. The most severe environmental problems threaten human survival as a species (not to mention other species). Less dramatically, persistent problems of environmental degradation threaten basic levels of human health and well-being.[481]

Reflexive environmental law—specifically its manifestation in the EMAS model—presents a new approach. It seeks to tie busi-

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[477] The EMAS regulation provides that

> Companies implementing national, European or international standards for environmental management systems and audits and certified, according to appropriate certification procedures, as complying with those standards shall be considered as meeting the corresponding requirements of this Regulation, provided that:
> (a) the standards and procedures are recognized by the Commission . . . [and]
> (b) the certification is undertaken by a body whose accreditation is recognized in the Member State where the site is located.

Council Regulation 1836/93, art. 12, 1993 O.J. (L 168) 1, 6.

[478] *See* Committee on Int'l Envtl. Law, Ass'n of the Bar of the City of New York, *Should Environmental Laws Be Harmonized?*, Rec., Nov. 1994, at 840, 868 ("Harmonization of environmental law is both feasible and desirable where the motivation and purpose of the effort is to achieve an environmental objective that all affected countries agree is necessary.").

[479] *Cf.* Raymond Vernon, *Behind the Scenes: How Policymaking in the European Community, Japan, and the United States Affects Gloal Negotiations; Environmental Protection*, 35 Env't 12 (1993) (discussing potential for new international environmental agreements in the context of differences in policymaking).

[480] Ulrich Beck, Risk Society: Towards a New Modernity 9 (Mark Ritter trans., 1992). The German term for "risk society" is *risikogesellschaft*.

[481] *See, e.g.*, Anthony J. McMichael, Planetary Overload: Global Environmental Change and the Health of the Human Species (1993) (examining major environmental problems in terms of effects on human health).

nesses, which are a major source of many environmental problems, more closely to environmental solutions. The EMAS aims to encourage businesses to incorporate permanent operational and decisionmaking processes to address environmental concerns. These internal processes supplement well-established financial channels of internal, self-reflective communication. Environmental auditing should accompany financial auditing; environmental accounting should supplement economic accounting.[482] The argument that businesses should single-mindedly pursue economic goals—and if society does not like it, then a law should be passed—has been swamped by the inability of the legal system to deal effectively and efficiently with a wide array of environmental issues. As a number of business leaders have come to realize, environmental issues are too serious and difficult to leave only to the imperfect instruments of substantive environmental regulation.

The EMAS regulation is an important experiment in reflexive environmental law. It provides a legal framework that encourages businesses to adopt systematic ways of thinking and operating in an environmentally responsible manner. The idea is to create a climate in which businesses voluntarily adopt procedures to encourage environmentally sound decisionmaking and to monitor environmental progress. This is not an impossible task. As Otto Hintze wrote sometime ago,

> Man does not live by bread alone. He wants to have a good conscience as he pursues his life-interests. And in pursuing them he develops his capacities to the highest extent only if in so doing he serves a higher rather than a purely egoistic purpose. Interests without such "spiritual wings" are lame; but on the other hand, ideas can win out in history only if and insofar as they are associated with real interests.[483]

This is a lesson for both business and the law.

As I have argued above, the European EMAS regulation is not perfect.[484] It is an experiment that may, because of design flaws, fail miserably. Or it may prove a success, providing a model from which other legal systems may learn. Here, I have argued that the United States should seriously consider adopting a similar reflexive environmental law: an American EMAS. Given the increasingly international nature of both the world economy and environmental problems, a reflexive solution will ultimately have to be global. But

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482 *Cf.* Michael Power, *Constructing the Responsible Organization: Accounting and Environmental Representation*, *in* ENVIRONMENTAL LAW AND ECOLOGICAL RESPONSIBILITY, *supra* note 13, at 369-92 (arguing for an environmental reform of accounting).

483 Otto Hintze, *Kalvinismus und Staatsraeson in Brandenburg zu Beginn des 17ten Jahrhunderts*, *in* 144 HISTORICSH ZETISCHRIFT 232 (1931), *translated and quoted in* REINHARD BENDIX, WORK AND AUTHORITY IN INDUSTRY, at xlix (1974).

484 *See supra* Part V.

for a start, major industrial societies should adopt roughly consonant regulations.

As noted in the Introduction to this Article, Stephen Breyer argues that responding to the irrationality of environmental law in the United States requires the creation of a kind of super EPA to evaluate risks comprehensively and scientifically.[485] But the complexity of environmental problems is outstripping the capacity of even the best scientists and scholars to solve environmental problems from on high, as if they were Platonic philosopher-kings or philosopher-bureaucrats.[486] The complexity of contemporary environmental problems and their social context forces a more modest role for law. Because law itself cannot solve all the problems directly, regulators must begin to find ways to use law to encourage other forces in society to work for environmental improvement.

Reflexive environmental law enlists businesses and other intermediary institutions in the struggle for environmental protection. Many businesses have already begun to address environmental issues positively, going beyond requirements of compliance with substantive regulation.[487] Reflexive environmental law aims to structure these efforts systematically and effectively. It presents a new and potentially powerful alternative to conventional methods of environmental regulation.

485 BREYER, *supra* note 11.

486 *See* Gillette & Krier, *supra* note 132, at 1031 ("[T]hose critics who would alter existing arrangements through sweeping delegations to experts and bureaucrats have utterly failed to carry a reasonable burden of proof. A careful comparative assessment [of abilities of courts and agencies] simply raises too many doubts about the wisdom of wholesale abdication to technocratic rule.").

487 *See supra* notes 3, 15, 258-65, 292 & 402 and accompanying text.