RETHINKING ENVIRONMENTAL REGULATION: PERSPECTIVES ON LAW AND GOVERNANCE

Daniel J. Fiorino∗[1]

I. Introduction

Contemporary environmental politics in the United States poses an interesting dilemma. On the one hand, public opinion surveys demonstrate consistently strong support for environmental values.[2] People are concerned about the quality of the environment and are willing to protect it, even at substantial costs to themselves and to the prospects for economic growth. Two concerted efforts to roll back environmental programs—under the Reagan administration in the early 1980s and the Republican Congress of the mid-1990s—ended in failure. On the other hand, there is dissatisfaction with the means policy makers have used to achieve policy goals. Even strong defenders of environmental programs complain of the inflexibility, short-sightedness, and distrust that is characteristic of regulation in the United States.[3]

This Article proposes a basis for a conceptual transition from an old to a new environmental regulation regime. The need for this transition becomes more

[1]∗Director, Emerging Strategies Division, United States Environmental Protection Agency ("EPA"), Washington, D.C. The views expressed in this Article are those of the author and not necessarily those of the United States Environmental Protection Agency. The author wishes to thank Allen White and Jennifer Nash for comments on an earlier draft of this Article.

[2]. For a summary, see Christopher J. Bosso, *After the Movement: Environmental Activism in the 1990s*, *in* Environmental Policy in the 1990s: Toward a New Agenda 31, 31–34 (Norman J. Vig & Michael E. Kraft eds., 2d ed. 1994).

[3]. The list of advisory panels and scholars that have expressed this dissatisfaction is substantial. *See, e.g.*, The President's Council on Sustainable Development ("PCSD"), Sustainable America: A New Consensus for Prosperity, Opportunity, and a Healthy Environment for the Future 25–55 (1996) (arguing the need for a more performance-based regulatory system); Jonathan Lash & David T. Buzzelli, *Beyond Old-Style Regulation*, J. Com., Feb. 28, 1995, at 8a (arguing for greater flexibility and incentives for continuous improvement by regulated firms) (Mr. Lash and Mr. Buzzelli are the first two co-chairs of the PCSD); Richard B. Stewart, *United States Environmental Regulation: A Failing Paradigm*, 15 J.L. & Com. 585, 585–91 (summarizing the principal criticisms of the existing regulatory system). *See generally* The National Academy of Public Administration ("NAPA"), Setting Priorities, Getting Results: A New Direction for EPA (1995) (recommending demonstration projects to develop experience with a more flexible approach); NAPA, Resolving the Paradox of Environmental Protection: An Agenda for Congress, EPA, and the States (1997) (evaluating several reinvention efforts and recommending further progress toward program integration, performance-based management, and greater flexibility to promote innovation); William D. Ruckelshaus, *Stepping Stones*, Envtl. F. Mar.-Apr. 1998, at 30 (discussing the work of the Enterprise for the Environment, an initiative that he chaired).

compelling each year, as we recognize the limits of the current regulatory system. Most observers would agree that we are at a point of diminishing returns; whatever we have achieved so far with the current model of environmental regulation, we will achieve less for the level of effort expended from here forward. The good news is that changes in private sector environmental management are creating new prospects and opportunities for environmental improvement. The world has changed since the 1970s, when the existing programs were created and a first generation of strategies applied. The bad news is that we have created a complex system that resists easy change.

Much has been made of the "reinvention" of environmental regulation in the 1990s. However, nearly all recent efforts to reinvent environmental regulation in the United States have come to little more than a tinkering with specific elements of a highly complex system.[4] These efforts aim, for example, to graft flexibility onto parts of an inflexible whole by inviting company proposals for exemptions from rules. They propose reductions in administrative burdens by expediting permitting, consolidating reporting, or replacing paper with electronic transactions. However laudable these improvements may be, they rarely, except rhetorically, deliver the systemic change that the term "reinvention" implies.

Why have these efforts been cautious and incremental? There are several reasons. First, despite the general dissatisfaction with the current regulatory system, there is little consensus on what level and forms of change are needed. Second, given the existing statutory framework, incremental reforms are the only kind likely to withstand legal challenge. Many recent reinvention initiatives have been impeded by strict requirements of current laws.[5] Third, many stakeholders are committed to maintaining the current system, which they see as the fruit of years of effort by environmental groups, Congress, and others. They see efforts to overhaul the current system as an excuse for removing, or at least substantially reducing, regulatory controls on industry. Similarly, within regulatory agencies, enforcement and program staffs are often skeptical of changes they fear will allow too much flexibility for regulated entities. They fear that such flexibility may open the door to fundamental changes that would undermine the regulatory system.

This Article proposes a first step in rethinking environmental regulation by examining three strands in the literature on law and governance. The three strands are reflexive law, social-political governance, and policy-learning. These strands

[4]. For a compilation of reinvention initiatives, see generally Jeffrey S. Lubbers, *Better Regulations: The National Performance Review's Regulatory Reform Recommendations*, 43 Duke L.J. 1165 (1994). Office of Reinvention, U.S. EPA, The Changing Nature of Environmental and Public Health Protection: An Annual Report on Reinvention (1998) offers a review of the EPA's activities.

[5]. *See generally* Terry Davies & Jan Mazurek, Industry Incentives for Environmental Improvement: Evaluation of U.S. Federal Initiatives (1996) (evaluating several recent initiatives and arguing the need for legislative flexibility); Bradford C. Mank, *The Environmental Protection Agency's Project XL and Other Regulatory Reform Initiatives: The Need for Legislative Authorization*, 25 Ecology L.Q. 1 (1998) (arguing the need for legislative change to accommodate regulatory innovations).

in the literature all address a common question: how do we adapt institutions, policies, and relationships to an increasingly complex and dynamic world? The three strands in the literature look beyond old distinctions between state and society toward new forms of public-private governance, law, and policy. The literature is largely the work of European writers on law and policy.[6]

The literature on law and governance reflects what often is described as a "post-modern" or a "post-material" view of society. The meaning of the concept of post-modernism could be debated endlessly. The perspective taken here is that of sociologist Anthony Giddens.[7] In social and political terms, Giddens suggests that one think of the world as moving *away from* one and *toward another* phase of modernity, rather than to some kind of post-modern era whose form is not yet clear. For Giddens, what is occurring is a *radicalization* (moving to a higher order and more rapid rate of change) and *universalization* (spreading throughout the world) of modernity in which "the trajectory of social development is taking us away from the institutions of modernity towards a new and distinct type of social order."[8]

One could distinguish modern societies from traditional societies over the last three centuries by their rapid rates of change (in technology and other spheres), the scope of change (in which "waves of transformation crash across virtually the whole of the earth's surface"),[9] and the nature of modern institutions. This process of modernization was driven by three sociological forces. One was a separation of time and space.[10] A second force was the development of disembedding mechanisms, in which social trust comes to depend not on individuals, but on the abstract capacities of institutions. Examples are the reliance in modern societies on symbolic tokens (such as money) and on expert systems (experts and their creations).[11] To illustrate, to accept money, we do not need to know or trust the source, just to be able to rely on the currency; nor do we need to have a personal relationship with the pilot or the designer of a plane to feel confident about taking a trip by air.

A third force driving modernization was the reflexive appropriation of knowledge.[12] Reflexivity refers to the process by which people learn from and change behavior based on information they receive. In pre-modern society, reflexivity

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[6]. In addition to the work discussed here, see generally Gunther Teubner et al., Environmental Law and Ecological Responsibility: The Concept and Practice of Ecological Responsibility (1994) (presenting several theoretical essays on the changing role of government in regulation, based largely on the European experience); Risk, Environment, and Modernity (Scott Lash et al. eds., 1996) (presenting the thinking in recent sociological theory regarding environmental risk and social change).

[7]. *See generally* Anthony Giddens, The Consequences of Modernity (1990).

[8]. *Id. at 46.*

[9]. *Id. at 6.*

[10]. The invention of the mechanical clock and standardized calendars allowed people to calculate time independently of spatial markers. This capability and other factors allowed for "the 'lifting out' of social relations from local contexts of interaction and their restructuring across indefinite spans of time-space." *Id.* at 21.

[11]. *Id.* at 21–29.

[12]. *See id.* at 36–45.

was mostly limited to "the reinterpretation and clarification of tradition."[13] In modern society, the anchor of tradition is gone; science and empiricism define the basis for reflexivity. In science, "*nothing* is certain. . . nothing can be proved. . . ."[14] Knowledge is contingent, subject to revision and reinterpretation.

For Giddens, the "reflexivity of modern social life consists in the fact that social practices are constantly examined and reformed in the light of incoming information about those very practices thus constitutively altering their character."[15] What is distinctive about this current phase of modernity is how tentative and uncertain knowledge is, to the point that "even the most firmly held notions can only be regarded as valid 'in principle' or 'until further notice.'"[16] Contemporary debates over such issues as global warming or hormone disruption illustrate this principle in the natural sciences. That knowledge is continually challenged and reconstituted is a characteristic of the social sciences as well, "since the chronic revision of social practices in the light of knowledge about those practices is part of the very tissue of modern institutions."[17] The inherent reflexivity of our current post-modern phase brings into question traditional regulatory strategies which assume that scientific premises are provable and that rigid technology-based instruments will be effective. The response of Gunther Teubner, discussed below, is to design reflexivity into the legal system.[18]

Reflexivity in gaining and using knowledge is more than ever a feature of modern social life. Knowledge is tentative and uncertain; it is continually subject to revision as it is reconstituted. Another feature of post-modernity is the increasingly rapid rate and scope of change, and with it the sense that no one set of institutions or authorities is in control. Giddens writes that "living in the modern world is more like being aboard a careering juggernaut. . . rather than being in a carefully controlled and well-driven motor car."[19] The three strands in the literature considered in this Article reflect Giddens' diagnosis of the current phase of post-modernity: the inherent reflexivity of knowledge; the rapid rate and scope of change, which is increasingly global; the inability of any one set of actors or institutions to determine events; and the sense that we are moving away from our current modernity "towards a new and distinct type of social order."[20]

These three perspectives share a common starting point: that the world is too

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[13]. *Id. at 37. The Oxford English Dictionary gives three definitions of reflexivity—or that which is "reflexive"—that may be helpful here: (1) capable of turning or bending back; (2) turned or directed back upon the mind itself; and (3) capable of, inclined to, or characterized by reflection or serious thought. Oxford English Dictionary 476 (2d ed. 1989). The second definition most directly conveys the meaning of the term as it is typically used in discussions of modernity, while the third expresses the desired result.*

[14]. *Giddens, supra note 6, at 39.*

[15]. *Id. at 38.*

[16]. *Id. at 47–48.*

[17]. *Id. at 40.*

[18]. Gunther Teubner, *Substantive and Reflexive Elements in Modern Law*, 17 L. & Soc'y Rev. 239, 252 (1983).

[19]. *Giddens, supra note 6, at 53.*

[20]. *Id.* at 46.

complex and dynamic to be managed within traditional conceptions of law, bureaucracy, and the state. At a theoretical level, many of the criticisms offered by these perspectives mirror the complaints that various political interests have had about the weaknesses of U.S. environmental policy and social regulation in general. The next sections describe the three theoretical perspectives and consider how these three perspectives—in both their diagnoses and prescriptions—relate to changes that are occurring in the United States. The conclusion considers the contributions that reflexive law, social-political governance, and policy-learning may make to the design of new environmental regulation in the United States.

II. Reflexive Law and the New Legal Rationality

Designing a new regulation requires that we think differently about the law and its place in environmental policy. Our current system of environmental regulation is based on a particular conception of law, one which many critics argue is unsuited to the complexity and dynamism of contemporary social and economic life.[21] This Part discusses the concept of "reflexive law," its relation to other forms of law, and its role in environmental regulation.

Gunther Teubner has proposed the concept of reflexive law as a third stage in the evolution of legal systems.[22] Formal and substantive law describe the first two stages.[23] Formal law defines relationships among private actors in society. The purpose of formal law is to structure private social and economic arrangements. Law is not used directly to make value judgments; it defines a framework within which private parties make judgments and "restricts itself to the definition of abstract spheres of action for the autonomous pursuit of private interests."[24] Formal law reflects a conception of legal reasoning that is based on deductive logic, universalism, and internal consistency. "Internally," Teubner writes, "law is formally rational to the extent that it is structured according to standards of analytical conceptuality, deductive stringency, and rule-oriented reasoning."[25] Formal legal rationality is consistent with a market economy; it legitimates economic arrangements based on autonomy and individualism. Advanced economies rely on formal law, a first stage in the evolution of modern legal systems. Statutory prescriptions and judicial interpretations regarding contracts are an example of formal law.

Substantive law is the instrument by which government intervenes to promote collective goals like safety and equity.[26] It is the law of the regulatory state—environment, occupational safety, consumer fairness, anti-discrimination, and the like. It is Teubner's second stage in the evolution of modern legal systems.

[21]. *See* sources cited, *supra* note 2; Eric Orts, *Reflexive Environmental Law*, 89 Nw. U. L. Rev. 1227 (1995) (describing the concept of reflexive law and its possible application to U.S. policy).

[22]. Teubner, *supra* note 17, at 254–57.

[23]. *See id.* at 252–54.

[24]. *Id.* at 252.

[25]. *Id. at 253.*

[26]. *See id.* at 253–54.

Substantive law defines a new form of legal rationality. Its justification "is to be found in the perceived need for the collective regulation of economic and social activities to compensate for inadequacies of the market."[27] Law is no longer a neutral way of ordering private social and economic arrangements. It has a purpose; hence the references among legal theorists to a "rematerialization" of the legal system. "Instead of delimiting spheres for autonomous private action, the law directly regulates social behavior by defining substantive prescriptions."[28] The concrete expression of substantive rationality is the tremendous growth of statutory law that began early in the century and continued in spurts in the 1930s, 1960s and 1970s.[29]

Teubner presents reflexive law as a third stage.[30] What is it? How does it differ from the substantive rationality that underlies the current environmental regulatory regime? Consider Teubner's statements on reflexive law:

Legal norms should produce a "harmonious fit" between institutional structures and social structures rather than influence the social structures themselves.[31]

[Reflexive law] seeks to design self-regulating social systems through norms of organization and procedure.[32]

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.[33]

Our approach suggests a quite different strategy to deal with the deficiencies of the current system, namely, the creation of legal structures which systematically strengthen "reflexion mechanisms" within the [private] organization.[34]

Reflexive law is characterized by a new kind of legal self-restraint. Instead of taking over regulatory responsibility for the outcome of social processes, reflexive law restricts itself to the installation, correction, and redefinition of democratic self-regulatory mechanisms.[35]

These statements suggest a different legal rationality from that which underlies the existing regulatory system. As traditionally conceived, the purpose of environmental regulation is to force entities to internalize the damages they impose on society. Based on a substantive legal rationality, conventional reg-

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[27]. *Id.*

[28]. *Id.*

[29]. *See generally* Marc Allen Eisner, Regulatory Politics in Transition (1993); Cass R. Sunstein, After the Rights Revolution: Reconceiving the Regulatory State (1990).

[30]. Teubner opens his essay by asserting: "We live in a time of increasing disenchantment with the goals, structures, and performance of the regulatory state." Teubner, *supra* note 17, at 239. In a post-modern world, he states: "Social processes and economic arrangements are simply too dense, complex, and potentially contradictory to be adequately accounted for in the kinds of interventionist mechanisms that have been created." *Id.* at 268.

[31]. *Id. at 251. This implies a system in which law so effectively structures behavior that it is seen almost as self-implementing rather than imposed by government.*

[32]. *Id. at 254–55.*

[33]. *Id. at 255.*

[34]. *Id.*

[35]. *Id. at 239.*

ulation achieves this internalization through a strategy of "legalistic enforcement."[36] Regulatory agencies issue rules that are binding on defined classes of entities. Agencies create a system of inspections and reporting to monitor compliance with their rules. Entities that fail to comply are subject to penalties. Traditionally, the dominant strategy has been one of "command-and-control" regulation.[37]

A strategy based on reflexive law has similar goals but accomplishes them in different ways. It attempts to create incentives and procedures that induce entities to act in certain ways and to engage in internal reflection about what form that behavior should take. The heavy hand of regulation, which aims to control behavior directly, is replaced by "indirect and abstract" forms of legal control. Rather than striving to tell the regulated entity what to do, a regulatory system based on reflexive law aims to strengthen "reflexion mechanisms" within the entity to encourage the desired behavior. The state sets goals, but shares more of the responsibility for achieving them with regulated entities.

Policy instruments based on reflexive legal rationality have become more common in the United States and elsewhere. The principal example is the growing use of information disclosure as a policy instrument.[38] Many countries now are requiring firms to release information on their environmental performance to communities and other interested stakeholders. Adopted as part of revisions in the Superfund law in 1986, the U.S. Toxics Release Inventory ("TRI") is a leading example.[39] It requires specified categories of manufacturing facilities to track and report annually on their use, storage, and release of some 600 chemicals into the air, water, land, and underground injection wells. The Environmental Protection Agency ("EPA") compiles the data and releases them in an annual report, which often has received extensive media coverage. The TRI does not require firms to install technology or otherwise take steps to reduce emissions; it is purely an information requirement. Nonetheless, experience and empirical studies document that firms respond to the negative publicity that accompanies the release of TRI information. Companies do not want to be known as leading polluters in their communities.[40]

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[36]. *See* Robert A. Kagan & John T. Scholz, *The 'Criminology of the Corporation' and Regulatory Enforcement Strategies*, *in* Enforcing Regulation 67 (Keith Hawkins & John M. Thomas eds., 1984); Stewart, *supra* note 2, at 587–91.

[37]. *See* Daniel J. Fiorino, *Strategies for Regulatory Reform: Forward Compared to Backward Mapping*, 25 Pol'y Stud. J. 249, 249–55 (1997). *See generally* Eugene Bardach & Robert A. Kagan, Going by the Book: The Problem of Regulatory Unreasonableness (1982) (an excellent discussion of command-and-control regulation).

[38]. For a discussion of the growing use of information disclosure as a policy tool, see generally Paul R. Kleindorfer & Eric W. Orts, *Information Regulation of Environmental Risks*, 18 Risk Analysis 155 (1998). On recent policy changes that expand information access, see Peter Baker, *Clinton Marks Earth Day by Widening Scope of Toxic Release Reporting Rules*, Wash. Post, Apr. 23, 1997, at A15.

[39]. *See, e.g.*, Emergency Planning and Community Right-to-Know Act, 42 U.S.C. §§ 11001–11050 (1986).

[40]. On the logic and early effects of the TRI, see generally Susan G. Hadden, A Citizen's Right to Know: Risk Communication and Public Policy (1989). For more recent studies, see generally Shameek Konar & Mark A. Cohen, *Information as Regulation: The Effect of Community Right to Know Laws on Toxic Emissions*, 32 J.

In the United States, information disclosure is used to complement a well-developed regulatory regime. Elsewhere, it is being used in place of conventional regulatory instruments. Rapidly growing countries like Indonesia have to cope with high levels of pollution, but may lack the legal and institutional infrastructure needed to implement regulation based on substantive law. Recognizing this, the Indonesian government began in 1995 to implement the Program for Pollution Control, Evaluation, and Rating ("PROPER").[41] The pilot program involved information on emissions, production, pollution control, and monitoring efforts by 187 dischargers of water pollution, each of whom was placed in one of six categories: Gold for "world-class" facilities; Green for excellent performance (better-than compliance); Blue for compliance with rules; Red for noncompliance, but with some effort to control pollution; Black for no effort at all. Facility ratings were revealed in stages (best to worst); poor performers had an opportunity to improve before public release. A World Bank assessment concluded that PROPER "increased compliance by over fifty percent in two years" and the "initial results suggest that public disclosure can play a powerful role in developing countries where conventional regulation is weak."[42]

Two other kinds of policy instruments deserve brief mention as illustrations of reflexive law. One is the use of environmental management systems, such as the European Eco-Management and Auditing Scheme ("EMAS"). Eric Orts used EMAS as an example when he first applied the concept of reflexive law to environmental regulation.[43] Although EMAS is voluntary in the European Union, firms that seek certification must commit to adopting such measures as an environmental policy, procedures for maintaining compliance and taking corrective action, a register of significant environmental effects, periodic environmental audits, and public disclosure of information about their performance.[44] This combination of organizational, procedural, and reporting provisions aims to create within firms the conditions for self-critical reflection about behavior and how to improve it. The role of EMAS is thus to structure the behavior of firms by "shaping both their procedures of internal discourse and their methods of coordination with other social systems."[45]

Economic incentives also rely on a reflexive legal strategy. Consider marketable permits, such as the emissions trading and acid rain allowance trading programs in the United States.[46] These programs allocate emission allowances to sources

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Envtl. Econ. & Mgmt. 109 (1997); James T. Hamilton, *Pollution as News: Media and Stock Market Reactions to the Toxics Release Inventory Data*, 28 J. Envtl. Econ. & Mgmt. 98 (1995).

41. *See* David Shaman & David Wheeler, *Controlling Industrial Pollution in the Developing World*, 8 Envtl. Quality Mgmt. 69, 70 (1998).

42. *Id.*

43. Orts, *supra* note 20, at 1227. For a discussion of EMAS, see Andrew Gouldson & Joseph Murphy, Regulatory Realities: The Implementation and Impact of Industrial Environmental Regulation 54–69 (1998).

44. *See* Orts, *supra* note 20, at 1287–1311.

45. Teubner, *supra* note 17, at 255.

46. On emissions trading, especially in comparison to other policy instruments, see Daniel J. Fiorino, Making Environmental Policy 167–88 (1995); Jeremy B. Hockenstein et al., *Crafting the Next Generation of Market-Based Environmental Tools*,

of air pollution in order to keep overall emissions at a determined level. Sources have three choices: they may take steps to bring their emissions down to the level allowed by their permits; they may do better than required and create an asset (the unused allowances) that they can sell or save for future use; or they may buy allowances from someone else, which means that they have decided not to take steps internally to reduce their emissions to required levels. While EMAS induces reflection by specifying internal procedures, marketable permits induce reflection by specifying a goal and allowing firms to decide how to achieve it, given their circumstances. Because they are implemented in the context of technology requirements, however, marketable permits are based on a combination of substantive and reflexive law.

III. Social-Political Governance and the New State-Society Relationship

Another strand in the literature that may help in rethinking regulation is writing on social-political governance.[47] The question that the writers on social-political governance pose is "how can dynamic, complex, and diverse social-political systems be governed in a more democratic and effective way?"[48] The heart of social-political governance is new patterns of interaction between government and other groups in society. It consists of "more or less continuous processes of interaction between social actors, groups and forces and public or semi public organizations, institutions or authorities."[49] These new patterns of interactions have several dimensions. First, they are not temporary but structural and enduring. They become institutionalized in some way. Second, distinctions between public (state, bureaucracy) and private (society, markets) are blurred, as the boundaries between them become fluid and permeable. Third, government acts not *on* but *with* non-governmental entities. This involves a shift from a situation in which "governing was basically seen as 'one-way traffic' from those governing to those governed, toward a 'two-way traffic' model in which aspects, qualities, problems and opportunities of both the governing system and the system to be governed are taken into consideration."[50]

Writers on social-political governance recognize the limits of a traditional, hierarchical model of government given the dynamism, complexity, and diversity

Environment, May 1997, at 12. For a comparison of several policy instruments, see Rosemary O'Leary et al., Managing for the Environment: Understanding the Legal, Organizational, and Policy Challenges 307–36 (1999).

47. For a collection of excellent essays on the concept of social-political governance, see Modern Governance: New Government-Society Interactions (Jan Kooiman ed., 1993). This collection provides a varied set of perspectives on the need for and emergence of new patterns of government-society interactions in Europe.

48. *Jan Kooiman, Governance and Governability: Using Complexity, Dynamics and Diversity, in Modern Governance, supra note 46, at 35, 36.*

49. *Jan Kooiman, Social-Political Governance: Introduction, in Modern Governance, supra note 46, at 3.*

50. *Id. at 4.*

of society.[51] For them, "the growing complexity, dynamics and diversity of our societies, as 'caused by social, technological and scientific developments,' puts governing systems under such new challenges that new conceptions of governance are needed."[52]

The key to the emergence of social-political governance is awareness of the limits of traditional governmental structures and relationships. Governments typically have responded to this recognition in one of two ways: through deregulation or privatization.[53] Both involve a shift away from public to private authority and thus a shift from state to market controls. In the United States, much regulatory reform over the last twenty-five years has consisted of the withdrawal of state control over the economic aspects of industrial life and a return to market forces. Since the late 1970s, the United States has deregulated substantially in such areas as airlines, trucking, communications, financial services, and energy.[54] Although the regulated industries in many cases opposed these changes, these regulatory reforms otherwise enjoyed public support. If the response in regulatory policy has been to deregulate, in social services and other distributive policies it has been to privatize—to contract out public functions to private sources in the interests of efficiency and responsiveness.

However, although substantial deregulation has been politically acceptable in the economic arena, it has not been acceptable in most environmental, health, and safety regulation. Here, governments have explored another pattern of state-society interaction. This pattern consists of "efforts to shift the balance towards a sharing of tasks and responsibilities; towards doing things together instead of doing them alone (either by the 'state' or by the 'market')."[55]

Martijn van Vliet considers social-political governance specifically in the context of environmental regulation.[56] Environmental degradation has traditionally been seen as a collective action problem for which public intervention through bureaucratic regulation was the only response. It is apparent, however, that we have exchanged *market failure* (the original justification for government intervention) for *bureaucratic failure* (limits in central regulatory capacities). To close the gap between governing needs and capacities, van Vliet offers a model of "communicative governance."[57]

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[51]. The articles in Modern Governance, *supra* note 46, are a good start. The articles in Teubner, Environmental Law and Ecological Responsibility, *supra* note 5, are also relevant.

[52]. *Jan Kooiman, Social-Political Governance, in Modern Governance, supra note 46, at 1, 6.*

[53]. For a discussion on economic deregulation, see generally Martha Derthick & Paul J. Quirk, The Politics of Deregulation (1985). On privatization (the contracting out of previously governmental functions to private sources), see generally E.S. Savas, Privatization: The Key to Better Government (1987).

[54]. *See generally* Derthick & Quirk, *supra* note 52.

[55]. Jan Kooiman, *Social-Political Governance*, in Modern Governance, *supra* note 46, at 1.

[56]. Martijn van Vliet, *Environmental Regulation of Business: Options and Constraints for Communicative Governance*, *in* Modern Governance, *supra* note 46, at 105.

[57]. *Id.*

Like other writers articulating relationships based on social-political governance, van Vliet argues that the differences between government and society have become obscured as public-private relations have changed.[58] Government exists less in a hierarchical relationship with society than in a partnership. Governing consists not of one agent (the state) controlling an object (society), but as "a relation or interaction" between two agents.[59] These interactions are the result of the *complexity* of the problems and the *interdependence* among public and private actors. Van Vliet refers to complexity as "the multitude and diversity of the parts and the interactions between these parts" of environmental problems.[60] Interdependence describes the condition in which governing and problem-solving capabilities are spread among actors, to the degree that "no one is capable of enforcing coordination against the will of other actors."[61] This combination of complexity in the nature of problems and high levels of interdependence among actors creates the need for cooperation.

In these circumstances, governing should be seen as a learning process. The purpose of governing is not to make the best possible decision in advance. Governing "should be directed at the creation of learning processes within the interested actors or society in general."[62] This learning process, van Vliet argues, works best when relations among key actors are built on trust. Although current U.S. environmental policy is a learning process in many ways, it is one "in which the interested actors have learned to distrust each other and in which the targets of government intervention have learned how to avoid and obstruct public rules and regulations."[63] In this case, the purpose of governance should be "to stimulate learning processes that will lead to cooperative behavior and mutual adjustment, so that responsibility for managing structural changes is shared by all or most actors involved."[64] One way to achieve this purpose is through communicative governance, a specific form of the social-political governance that Jan Kooiman and others advocate.[65]

When is social-political governance likely to emerge? According to Kooiman, certain objective and subjective conditions support the transformation to social-political governance. The objective conditions are that:

[1.] Existing and traditional structures of authority, methods and instruments, have failed or eroded.

[2.] New fields of social-political activities exist in which organizational forms

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58. *See id.* at 106–07.
59. *Id.* at 106.
60. *Id.*
61. *Id.*
62. *Id.* at 108.
63. *Id.*
64. *Id.*
65. *See* Jan Kooiman, *Findings, Speculations and Recommendations*, *in* Modern Governance, *supra* note 46, at 249, 252; Kooiman, *Governance and Governability*, *in* Modern Governance, *supra* note 46, at 34–48 (arguing the need for new patterns of governance); Jan Kooiman, *Social-Political Governance*, *in* Modern Governance, *supra* note 46, at 3; Van Vliet, *supra* note 55, at 105; Andrew Dunsire, *Modes of Governance*, *in* Modern Governance, *supra* note 46, at 21 (stressing the need for post-bureaucratic forms of government in an increasingly complex, dynamic, and diverse world).

and patterns of interest-mediation are not (yet) strongly established.

There are issues that are of great concern to the (public and private) actors that are involved.

[4.] There must be sufficient convergence of objectives and interests to make it possible to reach a synergetic effect or a "win-win" situation.[66]

The more subjective conditions relate to the "state of mind" of the actors involved. These include:

[1.] a certain amount of mutual trust or mutual understanding;

[2.] a certain preparedness to take (common) responsibility;

[3.] a certain degree of political involvement and social support.[67]

As of the late 1990s, conditions in the United States have not appeared to support a transformation to new patterns of social-political governance. Although there is widespread dissatisfaction with the current system, as the President's Council on Sustainable Development ("PCSD"), the Enterprise for the Environment, and similar groups attest, there is by no means a consensus that the existing structures, methods, and instruments have failed. Many influential interests still hold the view that improved compliance, tougher enforcement, fewer regulatory loopholes, and tighter standards offer the best path to environmental sustainability, that "more of the same" is the best path. They want to make the old model work better rather than take the risks and associated uncertainties involved in designing and implementing a new one.

On the other hand, many of Kooiman's conditions were present when the Dutch government decided in the 1980s to set national goals in its National Environmental Policy Plan ("NEPP I") and implement them with a sector-based strategy.[68] Dutch policy makers had reached a consensus that existing strategies and instruments would be insufficient for achieving the pollution reductions and behavioral changes needed to protect the environment over the long term. It was decided that dramatic changes in strategy would be necessary to make progress in the face of the high population density, intensity of industrial development, and geographical vulnerability of the Netherlands.[69] In terms of Kooiman's

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[66]. Jan Kooiman, *Findings, Speculations and Recommendations*, *in* Modern Governance, *supra* note 46, at 251.

[67]. *Id.*

[68]. On the Dutch planning process, see Graham Bennett, *The History of the Dutch National Environmental Policy Plan*, Environment, Sept. 1991, at 6 (describing the origins of the Dutch planning process and its early implementation); Hans A. Bressers & Loret A. Plettenburg, *The Netherlands*, *in* National Environmental Policies: A Comparative Study of Capacity-Building 109–31 (Martin Jänicke & Helmut Weidner eds., 1997) (presenting a comprehensive assessment of Dutch policy and planning as one of several cross-national studies in the collection); Martijn van Vliet, Environmental Regulation of Business, *in* Modern Governance, *supra* note 46 (discussing changes in government-society relations and environmental planning from a theoretical perspective); Maarten A. Hajer, The Politics of Environmental Discourse (1995) (comparing the Dutch experience with that of the United Kingdom, in terms of discourse theory); Gouldson & Murphy, *supra* note 42 (comparing the experiences in the Netherlands and the United Kingdom and drawing lessons regarding the regulation of industrial pollution).

[69]. *See* Gouldson & Murphy, *supra* note 42, at 104–07.

objective conditions, it was recognized that existing methods and instruments would likely fail, environment was an issue of concern to elites and the public, and there was convergence of interests within Dutch society sufficient to support development of a new approach.[70] The more subjective conditions—trust, acceptance of shared responsibility among interests, and political involvement and support—were accepted characteristics of the Dutch political culture. Even then, the transition was not seamless. But conditions supporting an environmental strategy based on social-political and communicative governance were more favorable in the Netherlands than they have been in the United States and elsewhere.

Nevertheless, despite the differences between the United States and countries like the Netherlands, there are signs of a shift to forms of social-political governance in the United States as well. Indeed, a central theme of the 1996 report of the President's Council for Sustainable Development was the need for new, more cooperative relationships and a greater sharing of authority among government, industry, and other groups.[71] Through its Common Sense Initiative ("CSI"), the EPA tried to bring a variety of groups together to discuss improvements in regulation, technology, permitting, and other areas.[72]

Much of the effort to promote more effective social-political governance comes from outside of government. Two trends are important. One is the emergence of such organizations as the Coalition for Environmentally Responsible Economies ("CERES") that ask firms to commit to a code of environmental conduct and work to bridge differences among groups by promoting dialogue among them. By encouraging firms to commit publicly to a set of environmental values and by building bridges between industry and other groups, CERES is trying to improve the capacity in the United States for social-political governance. Another trend comes from within industry, where many trade associations have adopted codes of environmental conduct and either required or encouraged member firms to commit to them.[73] Because the chemical industry was the subject of particularly high levels of public scrutiny and a source of several kinds of environmental damages, the industry was among the first to adopt such a code, in the form of Responsible Care. These codes may fall short as even a partial substitute for more conventional, state-sponsored regulation, especially considering the lack

[70]. *See id.*

[71]. PCSD, *supra* note 2, at 25–55.

[72]. For a recent description, see generally Office of Reinvention, U.S. EPA, The Common Sense Initiative: Lessons Learned About Protecting the Environment in Common Sense, Cost Effective Ways (1998) [hereinafter The Common Sense Initiative].

[73]. *See* Jennifer Nash & John Ehrenfeld, *Codes of Environmental Management Practice: Assessing Their Potential as a Tool for Change*, 22 Ann. Rev. Energy & Env't 487 (1997). On the changes that are occurring within industry, which in themselves suggest a need for new forms of law and governance, see generally Livio D. DeSimone & Frank Popoff, Eco-efficiency: The Business Link to Sustainable Development (1997); Stephan Schmidheiny, Changing Course: A Global Business Perspective on Development and the Environment (1992); Daniel Press & Daniel Mazmanian, *The Greening of Industry: Achievement and Potential*, *in* Environmental Policy in the 1990s: Reform or Reaction?, 255–77 (Norman J. Vig & Michael E. Kraft eds., 3d ed. 1997).

of third-party oversight and public accounting for performance.[74] However, they constitute efforts to improve the behavior of firms in different sectors and commit associations and their members to a more public responsibility for the environment.[75]

Environmental technology innovation is another area that illustrates the importance of governance issues. In his book on environmental technology innovation, David Wallace's objective is to identify the factors that promote technology innovation in policy regimes.[76] The book includes an analysis of the conditions that support innovation within firms, as well as case studies of six countries and two issues that involved decisions about new environmental technologies. Wallace finds no support in the literature or the case studies that any particular policy instruments (such as emission fees or charges) are inherently better for innovation than others.[77] What does matter is the characteristics of the policy regime in which the instruments are applied. Two dimensions of policy regimes are important: the *quality of dialogue* among government, industry, and other actors; and the *independence of government* from industry influence. The quality of dialogue describes the capacity for productive interaction and problem-solving; and the independence of government allows government to maintain pressure for improved performance. Wallace concludes that the essential characteristic of a regime that promotes innovation is "a high quality, honest dialogue that nevertheless does not compromise the independence of environmental policy-making from industry's special interests."[78]

Of the six countries analyzed in the case studies, Denmark, Japan, and the Netherlands rank high on both dimensions. In Denmark, the government sets demanding targets, but industry is well-integrated into policy-making, works cooperatively with government, and has flexibility in determining how to achieve its targets.[79] The United States, Germany, and France rank high on one of the dimensions but lower on the second. The United States, for example, has high government independence from industry influence, but low quality of dialogue. Wallace acknowledges recent efforts in the United States to improve relationships, trust, and dialogue, but he asserts that the existing patterns of governance

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[74]. *See* Peter Simmons & Brian Wynne, *Responsible Care: Trust, Credibility, and Environmental Management*, *in* Environmental Strategies for Industry: International perspectives on Research Needs and Policy Implications 201 (Kurt Fischer & Johan Schot eds., 1993) (describing the development of Responsible Care within the chemical industry internationally); Neil Gunningham, *Environment, Self-Regulation, and the Chemical Industry: Assessing Responsible Care*, 17 Law & Pol'y 57 (1995) (arguing that greater efforts at third-party verification would improve the credibility of Responsible Care with the public).

[75]. *See generally* Joseph Rees, *Development of Communitarian Regulation in the Chemical Industry*, 19 L. & Pol'y 477 (1997) (assessing Responsible Care as a form of "communitarian" regulation by industry).

[76]. David Wallace, Environmental Policy and Industrial Innovation: Strategies in Europe, the USA, and Japan (1995).

[77]. *See id.* at 241–51.

[78]. *Id. at xviii. Of related interest is Environmental Law Institute, Barriers to Environmental Technology Innovation and Use (1998), which examines barriers to innovation posed by technology-based regulation.*

[79]. *See* Wallace, *supra* note 75, at 25–42.

often pose a barrier to innovation.[80] Although it does not use the specific terminology, Wallace's book illustrates the value of approaching environmental policy from the perspective of social-political governance.

IV. Policy-learning in a New Regulatory System

Do governments and institutions learn? Are policy makers, activists, policy experts, and other participants in policy-making capable of drawing lessons from their own experience and that of others and applying it to the problems they face? A third strand in the literature on law and governance that offers a basis for rethinking environmental regulation is policy-learning. Students of learning "generally hold that states can learn from their experiences and that they can modify their present actions on the basis of their interpretation of how previous actions have fared in the past."[81] It is not the learning approach in general that interests us here, but its application to environmental policy-making.[82]

What does it mean to view policy-making as a learning process? An early application of a learning approach was Hugh Heclo's *Modern Social Politics in Britain and Sweden*, where Heclo described policy-making as "a form of collective puzzlement on society's behalf."[83] Heclo defined policy-learning as "a relatively enduring alteration in behavior that results from experience."[84] Policy makers learn as a response to changes in the external policy environment: "As the environment changes policy makers must adapt if their policies are not to fail."[85] Similarly, in a more recent book on "lesson-drawing," Richard Rose presents learning as a reaction by policy makers to dissatisfaction, which stimulates a search for solutions, or "actions that will reduce the gap between what is expected from a program and what government is doing."[86] This sense of dissatisfaction with the status quo may come from many sources: changes in problems, the emergence of new constituency groups, a catastrophic event, a globalization of issues, or budgetary constraints, among others. What matters is that there is enough of a sense of disruption of the routine that policy makers begin to search, either from their own experience or from that of others, for ways to reduce the dissatisfaction.

Glasbergen identifies four types of policy-learning,[87] three of which are con-

[80]. *See id.* at 122–25, 134.

[81]. Colin J. Bennett & Michael Howlett, *The Lessons of Learning: Reconciling Theories of Policy Learning and Policy Change*, 25 Pol'y Sci. 275, 276 (1992).

[82]. *See* Pieter Glasbergen, *Learning to Manage the Environment*, *in* Democracy and the Environment: Problems and Prospects 175 (William M. Lafferty & James Meadowcroft eds., 1996).

[83]. Hugh Heclo, Modern Social Politics in Britain and Sweden: From Relief to Income Maintenance 305 (1974).

[84]. *Id.* at 306.

[85]. *Id.* at 277.

[86]. Richard Rose, Lesson-drawing in Public Policy: a Guide to Learning Across Time and Space 50 (1993).

[87]. *See* Glasbergen, *supra* note 81, at 176.

sidered here.[88] The three are developmental; one type of learning may evolve into another over time. They are also cumulative; each may build upon experience with its predecessor and complement rather than replace it. In addition, the learning model may be applied to all aspects of the policy process: how problems are defined and organized; the organization of tasks in government; relationships among participants in the policy process; and the choice of policy instruments and strategies. Glasbergen proposes the learning model not as an alternative to the traditional policy models based on power struggles and political conflict, but as a supplementary perspective to enhance understanding and chart a path for the future.[89] It is especially appropriate, he argues, as a framework for accommodating the dynamism and complexity of contemporary environmental issues.

Glasbergen stresses the need for "continuing initial reflection on the policy process."[90] Two aspects of his approach should be emphasized here. First, he takes a broad approach to the question of *what is learned*. Learning relates not only to the design and selection of policy instruments (e.g., emissions trading or information disclosure) or analytical tools (e.g., cost-benefit analysis), but to questions of problem definitions, policy goals, and core strategies. Second, Glasbergen stresses the importance of *contexts for learning*, especially power relationships, institutional aspects of policy processes, and legal frameworks. This emphasis on context leads him to distinguish three types of learning:

Technical learning consists of the application of a limited number of policy instruments within the context of a relatively fixed set of policy objectives.[91] Change may occur, but within a narrow range, with limited discussion of objectives or basic strategies, and little attempt to use novel instruments. Policy makers respond to demands for change with "more-of-the-same" solutions: more rules, enforcement, or compliance assistance.

Conceptual learning is a process of redefining policy goals and adjusting problem definitions and strategies.[92] Policy objectives come under scrutiny; perspectives on problems change; core strategies are reformulated. New concepts emerge, such as pollution prevention, ecological modernization, and sustainability.

Social learning focuses on interactions and communication among actors.[93] It builds on the cognitive capacities of technical learning and the rethinking of objectives that occurs in conceptual learning. Policy-making is seen as "a social process in which intersubjective information plays an important role."[94]

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[88]. The fourth type in Glasbergen's analysis is cognitive learning, which is based on scientific knowledge. *See id.* It is an important aspect of policy-learning, one in which the United States may be said to excel. This Article addresses the other three because they focus more specifically on policy-learning capacities and convey the developmental aspects of environmental policy-making in the United States and other countries, an important theme in this discussion.

[89]. *See id.* at 178.

[90]. *Id.* at 175.

[91]. *See id.* at 178–80.

[92]. *See id.* at 180–82.

[93]. *See id.* at 182–84.

[94]. *Id. at 183.*

This Part considers the relevance of a policy-learning approach, especially the concepts of technical, conceptual, and social learning, to the United States and other nations. It argues that U.S. environmental policy is founded on a model of technical learning and the institutional and legal framework still reflects that model. Beginning in the early 1980s, a recognition of the deficiencies in the existing system led policy makers to search for new strategies and formulate new policy objectives. This search and the changes that resulted from it constitute an effort to build a capacity for conceptual learning. By the early 1990s, continued dissatisfaction with U.S. environmental regulation, especially adversarial relations among stakeholders and the lack of capacity for cooperative problem-solving, led policy makers to attempt to develop a capacity for social learning. A similar process of change in learning capacities may be seen in other industrial nations, with some variations. The history of contemporary environmental policy may thus be seen as a process of evolution from technical to conceptual to social learning, each building upon the others.

Technical learning describes the early stages of environmental policy in most industrial nations.[95] In technical learning, problem definitions are narrow and focus on threats to human health from industrial pollution. Environmental responsibilities are concentrated in one administrative entity that has weak links to other policy sectors and agencies. Problems are compartmentalized, so strategies are fragmented. Technical learning is based on a strategy of command-and-control regulation. The objective is to control behavior with prohibitive rules, and deterrence is the primary mode of influencing behavior. Enforcement and compliance activities are the visible signs of public policy for regulated entities.

Conceptual learning describes a second stage in the evolution of environmental capacity. As policy makers learn from their experience with technical learning, they become aware of its deficiencies. They appreciate that narrow problem definitions and an emphasis on effects (e.g., auto emissions) over causes (e.g., patterns of development) fragment strategies. They think more holistically about the environment and human dependence on it by giving attention to ecological as well as health issues. Environmental and economic goals are seen to complement more than contradict each other. Terms like "sustainable development"[96] and "ecological modernization"[97] enter the policy discourse. As the diminish-

[95]. Although Glasbergen does not apply his learning concepts beyond the Netherlands, cross-national studies of environmental policy development suggest similar patterns. For case studies, see National Environmental Policies: A Comparative Study of Capacity-Building, *supra* note 67.

[96]. Use of the concept of sustainable development became widespread after publication of *Our Common Future*, the report of the World Commission on Environment and Development. *See generally* World Comm. on Env. and Dev., Our Common Future (1987). For a critical but positive perspective on the concept of sustainable development, see William M. Lafferty, *The Politics of Sustainable Development: Global Norms for National Implementation*, *in* Debating the Earth 265 (John S. Dryzek & David Schlosberg eds., 1998).

[97]. On ecological modernization, see Hajer, *supra* note 67; Albert Weale, *The Politics of Ecological Modernization*, *in* Debating the Earth, *supra* note 95, at 301; Maarten A. Hajer, *Ecological Modernisation as Cultural Politics*, *in* Risk, Environment, and Modernity 246 (Scott Lash et al. eds., 1996).

ing returns and increasing cost-ineffectiveness of end-of-pipe pollution control become apparent, people look to *prevent* pollution rather than just controlling it at the point of discharge. Existing policy instruments come under scrutiny. As the deficiencies in traditional regulatory instruments become clear, policy makers complement them with new instruments, such as market incentives, information disclosure, and voluntary programs.

Social learning is a third stage in the evolution of environmental policy, which Glasbergen asserts will have "direct implications for a new concept of democracy."[98] It builds upon capacities for technical and especially conceptual learning, but it leads policy makers in new directions, toward new forms of communication and interaction. Social learning involves a fundamental shift "in the views which policy makers hold with respect to the facilities that have to be created to promote policy-oriented learning."[99] Like the concept of social-political governance, social learning requires new patterns of communication and interaction. Much of conceptual learning, in particular the broader definitions of problems and attention to new policy instruments, is incorporated but aspects of technical learning are modified.

Glasbergen discusses several features of social learning. First is a high degree of *structural openness*. The lines between public and private blur. Government and industry interact in multiple ways, not just in the highly structured ways associated with conventional rule-making. Ideally, parties would develop and share information on new technologies and practices, rather than use information as a weapon for litigation later in the process.

The second feature of social learning is a *change in the nature of participant roles*. Government's role changes from regulator and controller to facilitator. Industry is expected to participate as part of a search for the collective good, not just to assert its economic or political interests.

Third, social learning assumes a *different approach to implementation*. The model of policy implementation based on hierarchy and control is replaced by a cooperative model in which government, industry, and others share responsibility for achieving policy goals. Government might work in a cooperative relationship with industry, based on the achievement of mutually-defined goals, rather than in an adversarial relationship.

Contemporary U.S. environmental policy may be seen as a gradual and still incomplete evolution from technical to conceptual and, most recently, to early social learning. Between 1969 and 1983, the United States was a prototype of technical learning. Policy makers responded to problems piecemeal through an array of statutes and bureaucratic structures that fragmented problem-solving. Responsibility was assigned to one agency that, although possessing powerful authority to control industrial pollution, lacked influence over other sectors—agriculture, resource management, energy, transportation—that affected environmental quality.[100] The United States created a system of adversarial le-

[98]. Glasbergen, *supra* note 81, at 176.

[99]. *Id. at 182.*

[100]. On the origins of administrative and legal fragmentation of the U.S. system, see generally J. Clarence Davies III, The Politics of Pollution (1970) and Alfred A. Mar-

galism, the consequences of which have included prescriptive rules, deterrence, and patterns of mutual distrust.[101] In most political debates, policy makers assumed that there was an inevitable tradeoff between environmental and economic goals.

Beginning in the mid-1980s, there were signs of a shift to conceptual learning in the United States. Government and industry began to reformulate policy objectives and search for new strategies. There was growing interest in integrating programs across environmental media (e.g., air or water) and policy sectors (e.g., energy or transportation). The interest in pollution control expanded to encompass strategies for preventing pollution. Concern shifted from the narrow issues of industrial emissions, discharges, and waste to broader issues of ecosystems, biodiversity, and the global environment.[102] Agencies sought to engage industry more cooperatively, as EPA did with regulatory negotiation.[103] Most important, assumptions about one-to-one tradeoffs between economic and environmental values were challenged.[104] Policy makers began to rely on market incentives and information disclosure to complement regulatory instruments.[105]

By the 1990s, U.S. policy makers were trying to incorporate social learning into policy-making. Environmental agencies sought new fora for "stakeholder" interaction and communication. A growing emphasis on "environmental justice" (remedying possibly disproportionate exposures of certain racial and socioeconomic groups to environmental risks) opened regulatory officials and technical experts to the more subjective concerns of different ethnic and language groups.[106] Numerous interests outside of government called for more consultation and deliberation in environmental decision-making. Government and industry representatives alike spoke of the need for "dialogue" and "partnership."

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cus, Promise and Performance: Choosing and Implementing an Environmental Policy (1980). On its consequences, see Fiorino, *supra* note 45 at 7–8, 193–96, 209–11 (1995) (discussing the economic and environmental consequences of a fragmented approach); Lynton K. Caldwell, *Environment: A New Focus for Public Policy?*, 23 Pub. Admin. Rev. 132 (1963) (proposing environmental issues as an integrating concept for the study of public policy and administration)**;** Integrated Pollution Control in Europe and North America 51–65 (Nigel Haigh & Frances Irwin eds., 1990) (examining efforts at integrating environmental programs in several industrial nations).

[101]. *See* Robert A. Kagan, *Adversarial Legalism and American Government*, *in* The New Politics of Public Policy 88 (Marc K. Landy & Martin A. Levin eds., 1995).

[102]. The best statement at the time of the need for change may be found in the report of the EPA's Science Advisory Board. *See generally* Science Advisory Bd., U.S. EPA, Reducing Risk: Setting Priorities and Strategies for Environmental Protection (1990).

[103]. For a discussion of EPA's rationale for using negotiation and its early experience, see Daniel J. Fiorino, *Regulatory Negotiation as Policy Process*, 48 Pub. Admin. Rev. 764, 768–71 (1988).

[104]. On the complementary relationships among environmental and economic goals, see Frances Cairncross, Green, Inc.: A Guide to Business and the Environment 1–17 (1995).

[105]. An assessment of different policy instruments may be found in U.S. Congress, Office of Technology Assessment, Environmental Policy Tools: A User's Guide (1995).

[106]. *See generally* Evan J. Ringquist, *Environmental Justice: Normative Concerns and Empirical Evidence*, *in* Environmental Policy in the 1990s, *supra* note 72, at 231–54**.**

Interest in improving the capacity of the U.S. policy system for social learning was the product of many trends. One trend was an awareness of the concept of sustainable development. Internationally, the appeal of this concept may be traced to the 1987 report of the Brundtland Commission.[107] It was the United Nations Conference on Environment and Development ("UNCED") in Rio de Janeiro in 1992, however, that brought sustainable development solidly into the policy lexicon. Participation, inclusion, dialogue, partnership, and equity are recurring themes in Agenda 21, a key product of the UNCED meeting.[108] Even though the United States has been less enthusiastic than many other nations in building the concept of sustainable development into domestic policy-making, at least at the national level, the "social" aspects of sustainability have gradually been introduced into policy discourse.[109] Lessons from the experience of other industrial countries have influenced thinking in the United States as well. The relatively greater success of the Netherlands, Sweden, Denmark, and other nations in cooperative policy models has increased interest in what has been described here as social learning.

The emphasis on improving capacities for social learning may be seen at both a rhetorical and a practical level. At a rhetorical level, there have been many influential statements of the need for new patterns of communication and interaction to overcome the traditional distrust and poor quality of dialogue that characterize environmental regulation. Consider, for example, these statements from the 1996 report of the President's Council for Sustainable Development:

> The adversarial nature of the current system precludes solutions that become possible when potential adversaries cooperate and collaborate.[110]
>
> Partnerships and collaborative decisionmaking must be encouraged and must involve all levels of government, businesses, nongovernmental organizations, community groups, and the public at large.[111]
>
> For their part, businesses need to build the practice and skills of dialogue with communities and citizens, participating in community decisionmaking and opening their own values, strategies, and performance to their community and the society.[112]

The need for improved capacities for social learning has been stressed in many other places. The Enterprise for the Environment, a consensus-building forum chaired by former EPA administrator William Ruckelshaus, urged in its "vision for the future" that the United States create decision processes "that meaningfully involve affected stakeholders and engage all citizens in protecting the environment."[113] Ruckelshaus has reported that "these forums, together with efforts currently underway at EPA and in the states, are creating a re-

[107]. *See generally* World Comm. on Env. and Dev., *supra* note 95.

[108]. For a presentation, summary, and discussion of Agenda 21, see Agenda 21: The Earth Summit Strategy to Save Our Planet (Daniel Sitarz ed., 1993).

[109]. To see how the social aspects of sustainability have become a part of policy discourse in the United States, see generally PCSD, *supra* note 2.

[110]. *Id. at 26.*

[111]. *Id. at 29.*

[112]. *Id. at 8.*

[113]. Ruckelshaus, *supra* note 2, at 35.

markable convergence of ideas."[114]

At a practical level, interest in social learning is apparent in several of the Clinton administration's reinvention initiatives. An example is the EPA's Common Sense Initiative ("CSI"), announced in 1994.[115] The agency selected six industry sectors as subjects of the program: iron and steel, metal finishing, computers and electronics, printing, auto manufacturing, and petroleum refining. For each, the EPA formed a stakeholder panel that included representatives of firms, trade associations, environmental groups, state agencies, and environmental justice groups.[116] The panels were asked to assess regulatory permitting, pollution prevention, technology, and other aspects of environmental management, then recommend "cleaner, cheaper, smarter" policies and practices that government and other interests could mutually carry out. These industry-specific panels worked under the auspices of a high-level Common Sense Initiative Council, chaired by the EPA administrator, that reflected the same distribution of participants as the panels for each of the sectors.

The CSI illustrates an effort to build a capacity for social learning in the environmental policy system. The tangible accomplishments of the initiative were less than most participants originally had expected.[117] Although many assessments have pointed to problems in how the EPA designed and managed the program, there were also more fundamental barriers to success. The principal lesson of the CSI and related initiatives is this: a policy system founded on technical learning cannot easily be adapted to conceptual and social learning. A capacity must be developed within a policy system for different kinds of learning. The Netherlands, with its different history, culture, size, and situation, has been able to develop and integrate the capacity for different kinds of policy-learning. Larger, more complex nations like the United States, with a different history and political culture, will find it difficult to develop and integrate these learning capacities.

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114. *Id.*

115. *See* Office of Reinvention, U.S. EPA, The Changing Nature of Environmental and Public Health Protection: An Annual Report on Reinvention (1998); Daniel J. Fiorino, *Toward a New System of Environmental Regulation: The Case for an Industry Sector Approach*, 26 Envtl. L. 457, 470–72 (1996).

116. John S. Applegate describes the formation of stakeholder panels and advisory groups as an effort, taken from the line in the movie *Casablanca,* to "round up the usual suspects." *See* John S. Applegate, *Beyond the Usual Suspects: The Use of Citizens Advisory Boards in Environmental Decisionmaking*, 73 Ind. L.J. 903 (1998).

117. For assessments of the CSI from various perspectives, see Davies & Mazurek, *supra* note 4 (discussing various administrative and procedural issues that affected the success of the CSI projects); NAPA, Resolving the Paradox of Environmental Protection, *supra* note 2, at 9–34**;** U.S. Gen. Accounting Office, Regulatory Reinvention: EPA's Common Sense Initiative Needs an Improved Operating Framework and Progress Measures (1997) (proposing improvements in the design and management of CSI projects). For EPA's own perspective on the CSI, see Office of Reinvention, U.S. EPA, The Changing Nature of Environmental and Public Health Protection, *supra* note 114, and Office of Reinvention, U.S. EPA, The Common Sense Initiative, *supra* note 71 (describing several lessons that EPA has drawn from the CSI).

V. Law, Governance, and a New Environmental Regulation

The writers on environmental law and governance have diagnosed a mismatch between the demands of our current phase of modernity and the capacities of the state. Where society demands flexibility and dynamism, the state offers bureaucracy and rules. Where society requires legal instruments that are almost self-implementing, the state builds an elaborate oversight apparatus. While societies need a legal system that induces self-reflection toward "sustainable" behavior, the state maintains a legal strategy of forcing desired behavior from outside the firm, through threats of exposure and punishment. This at least would be an analysis of the current debate if seen through the lens of the writers that have been discussed here.

What do these writers have in common? The most striking similarity is their assumption that the world is changing, so law and patterns of governance must change with it. Underlying each strand in the literature is the belief that the increasing complexity, dynamism, diversity, and interdependence of contemporary society makes old policy technologies and patterns of governance obsolete.[118] For Teubner, what is obsolete is a legal system based on substantive law and the associated rationality of legalistic regulation.[119] For proponents of social-political governance, the traditional patterns of hierarchical governance through top-down regulation are obsolete; they should be replaced with cooperative governance based on continuous interaction and sharing of responsibility. From a policy-learning perspective, purely technical learning cannot cope with changes in problems, cause-and-effect relationships, and the relationships among stakeholders. To succeed in the use of environmental regulation, nations will have to develop and integrate the capacity for different kinds of policy-learning.

These writers lead us to similar policy strategies. For Teubner, any effort to redesign environmental regulation should focus on its underlying legal rationality. Substantive legal rationality is linked inextricably with the legalistic strategy typically known as command-and-control regulation. If one wants to change the strategy, one needs to rethink the legal rationality that underlies it. The solution is to use law systematically to strengthen "reflexion mechanisms" in society. Rather then relying primarily on a strategy of direct intervention in the behavior of groups in society, the goal of a reflexive strategy is "the design of organizational structures which makes the institutions—corporations, semi-public associations, mass media, educational institutions—sensitive to the outside effects of their attempts to maximize internal rationality."[120] This leads to policy instruments—such as information disclosure and management systems—other

[118]. *See* Modern Governance, *supra* note 46.

[119]. *See* Teubner, *supra* note 17.

[120]. *Id.* at 278. An example of a proposal for a regulation based on reflexivity is that of "enforced self-regulation." Ian Ayres & John Braithwaite, Responsive Regulation: Transcending the Deregulation Debate 101–19 (1992) (proposing institutional changes in regulatory structures as a middle ground between the two choices of traditional regulation and deregulation).

than direct intervention through traditional regulation, which is based on substantive legal rationality.

The writing on social-political governance directs us less to policy instruments than to the social and political environment in which those instruments are developed and implemented. It focuses on relationships, sharing of responsibility, and patterns of governance. Profound and rapid change in society—the characteristics of what Giddens would call the "radicalization" of modernity—render traditional concepts of governance and state-society interactions obsolete.[121] No one set of institutions possesses the authority to impose consistently its will on others, so authority must be shared. Natural and social scientific knowledge is tentative and continually subject to challenge, so there is often disagreement on factual premises, as the U.S. debates on global warming attest. Emerging groups in society demand a role in policy decisions that established governmental institutions may make hard to accommodate, as the demands for environmental justice in the United States and for social equity at the international level illustrate. As the world changes, so must patterns of governance: from one- to two-way communications; from vertical to horizontal relationships; from directing to learning strategies; from adversarial relationships to relationships based on trust; and from conflict to cooperation.

A policy-learning perspective offers the most comprehensive explanation of and prescription for policy change. It presumes a capacity for reflexive as well as substantive law. It encompasses policy goals as well as instruments. The concept of social learning addresses one of the oft-cited areas for growth in the U.S. policy system: the poor quality of the dialogue among participants and the need for more cooperation and trust in developing and implementing policy.

The core of the picture of environmental policy-making that may be drawn from Glasbergen's analysis can be summarized in this way: policy systems first respond to the recognition of environmental problems by building a capacity for technical learning. In this response, problems are placed in manageable categories; expertise forms around specific issues and technologies; and the legal system is mobilized to respond to the more apparent threats, largely from industrial pollution. After initial success at managing such threats, there are signs of dissatisfaction: results may be cost-ineffective; policy makers may chase small risks and ignore large ones; new, more diffuse causes of problems emerge; instruments that focus only on pollution control are seen as too narrow; legalistic strategies produce more conflict than useful dialogue.

Policy makers adapt by working to improve their capacity for conceptual learning and integrating it with technical learning. This is a creative period in environmental policy. Policy makers reassess their goals (e.g., from pollution control to pollution prevention, risk management, or sustainable development), apply novel policy instruments, consider how to integrate across environmental programs and policy sectors, and think more ecologically and globally. Even as their capacities for conceptual learning improve, however, policy makers realize that the quality of dialogue and interaction among different interests may not

[121]. *See* Giddens, *supra* note 6, at 51, 150.

be sufficient for the environmental challenges they face. Industry and government recognize the need for continuous improvements in management and technologies. Changes in scientific understanding about problems and solutions (a consequence of the reflexivity of knowledge) require constant adaptation. Newly vocal interests (advocates of environmental justice domestically and developing nations internationally) demand greater equity, both in their access to policy processes and the processes' substantive outcomes. Increasing dissatisfaction gives rise to efforts to develop a capacity for social learning and to integrate that with the capacities for technical and conceptual learning.[122]

VI. Conclusion

Three general lessons may be drawn from the literature on reflexive law, social-political governance, and policy-learning. First, the literature suggests that there are common stages through which nations progress as they learn to cope with environmental problems. Cross-national studies demonstrate a pattern in which nations have moved from technical through conceptual and social learning. At the end of their collection of essays on thirteen countries, Martin Jänicke and Helmut Weidner conclude that most nations began with a strategy of dispersion of pollution, moved to one of direct regulatory control of pollution sources, and then progressed to a more complex strategy that drew on a range of policy instruments and tried to build more cooperative relationships with a variety of societal interests.[123] Those progressions have moved further in Northern Europe than elsewhere, but signs of change are evident in most post-industrial nations. In terms of the literature discussed here, this progression may be seen as one from substantive to reflexive law; from hierarchical-adversarial to social-political governance; and from technical to conceptual and social learning. More cross-national analyses will shed light on this evolution over time.[124]

Second, this literature gives an underlying explanation for the dissatisfaction numerous groups have expressed with the current regulatory system. The recent history of U.S. environmental policy has not been *just* a series of random events or *purely* the product of whatever political coalitions were in conflict at a given time. Important underlying forces are driving both the desire for change and the kinds of change various groups have wanted to achieve. The short lesson is that as the world changes, patterns of law and governance must change with it. A rapidly changing world that is moving toward a new phase

[122]. *See supra* text accompanying notes 100–116.

[123]. Martin Jänicke & Helmut Weidner, *Summary: Global Environmental Policy Learning*, *in* National Environmental Policies, *supra* note 67, at 310–12; *see also* Martin Jänicke, *Democracy as a Condition for Environmental Policy Success: The Importance of Non-Institutional Factors*, *in* Democracy and the Environment, *supra* note 81, at 71.

[124]. For an excellent example, see the cross-national comparisons in Wallace, *supra* note 75, and Martin Jänicke, *Democracy as a Condition for Environmental Policy Success: The Importance of Non-Institutional Factors, in* Democracy and the Environment, *supra* note 81.

of modernity requires innovative legal and policy strategies. Only by grasping underlying trends in social relations, structures, and values can we think effectively about where we are going. Perhaps the participants in the PCSD and other reinvention initiatives would even find solace in the recognition that they are part of an often difficult process of adapting institutions and relationships to a new phase in modernity.

Third, these writers offer conceptual frameworks for change. Reflexive law is an intriguing concept that corresponds to the trends in the rate and scope of change and the inherent reflexivity of scientific and policy knowledge. The high levels of interest in such instruments as pollutant release and transfer registries, environmental management systems, and market incentives signal an awareness of the limitations of top-down regulation based on substantive law. But many questions should be asked about such instruments: How do we assure that mandatory information disclosure will achieve a given level of environmental protection? In what circumstances and for what kinds of entities should traditional regulation be the principal if not dominant instrument? Similarly, the directions suggested by writers on social-political governance raise a number of issues: At what point does the emergence of cooperative relationships compromise the ability of government to maintain pressure for high levels of environmental performance? When responsibility and accountability are spread among the many actors in the policy system, who ultimately may be held institutionally accountable? If trust must emerge as a characteristic of a new environmental policy regime, what should be done about those in society who inevitably will abuse that trust in the pursuit of their own short-term interests? Policy-learning offers an especially fruitful perspective and suggests many other questions. How may the United States build upon its strong capacity for technical learning and more effectively integrate policies based on conceptual and social learning? In what ways do existing legal requirements promote or impede effective policy-learning? How may mechanisms that promote policy-learning across international boundaries be strengthened? To what extent do policy-making institutions provide mechanisms for learning from experience and altering behavior based on that experience? One way to approach regulatory reinvention would be to focus on how best to promote policy-learning by, for example, building reliable feedback mechanisms into policy-making; strengthening learning networks; creating conditions that would lead to more trust and more productive dialogue; and building enough flexibility into the policy system so that it is possible to respond to lessons drawn from one's own experience or that of others.[125]

These three strands in the literature on law and governance may help in rethinking environmental regulation. There is a broad consensus in favor of the need for *some kind of change* in the current regulatory system. There is far less consensus on precisely what form it should take. Rather than just revis-

[125]. The implications of a learning approach are explored in more detail by Daniel J. Fiorino, Environmental Policy as a Learning Process, Presentation for the Annual Meeting of the American Society for Public Administration, Orlando, Fla. (Apr. 1999) (transcript on file with the *Harvard Environmental Law Review*).

ing permitting processes or convening scores of stakeholder groups in the name of reinvention—a strategy that has had mixed success so far—we should look more critically at the legal foundations of the current regulatory system and the patterns of governance it reflects. The writing on reflexive law, social-political governance, and policy-learning offers an intriguing start.