

The Institutional Framing of Policy Debates

Economics Versus the Environment

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By framing the economics versus environment debate as a mixed-motive situation, opportunities become visible that allow greater benefits to all interests in the debate. Yet, social, cultural, and institutional arrangements frame how these interests see these opportunities, creating a barrier to mixed-motive analyses. In this article, the authors use an institutional perspective to analyze how the economics versus environment debate emerges from institutions as presently structured. They present an analysis of its present framing based on three aspects of institutions—regulative, normative, and cognitive—and consider the prescriptive implications they expose at the managerial and organizational level of action. The authors conclude with an analysis of possible solutions to overcome them.

There is some very good news about the climate problem: we do not need to worry about how the climate science turns out or whether this is a real problem or not . . . because we ought to do the same things about it anyway just to save money. . . . The obstacles to achieving this profitable resolution are not technological or economic. Rather, they are cultural and procedural. . . . Obsolete rules-of-thumb used throughout engineering practice are typically wrong by half to one order of magnitude compared with whole system life-cycle optimization, because they're optimizing a little piece of the system and therefore pessimizing the whole system. Most of our building design is "infectious repetitis," not real engineering or architecture at all—partly because architects and engineers are rewarded for what they spend, not for what they save. Similarly our utilities, in almost every jurisdiction, are rewarded for selling more energy and penalized for cutting your bill. We have split incentives between builders and buyers of equipment or buildings, and between landlords and tenants.

—Lovins (1997, pp. 146, 195)

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Lovins (1997) reminds us that the form of the debate over environmental issues such as climate change is determined by which actors are engaged, what kinds of problems are debated, how those problems are defined, and what kinds of solutions are considered appropriate (Espeland, 1998). Lovins's insight is to recognize the possibilities of better outcomes by looking beyond conventional practice and ideology; our challenge is to imagine how this can be accomplished.

This article follows a similar theme, investigating the institutional framing of such policy debates, paying particular attention to their cultural, organizational, and political features (Hirsch, 1986). We draw on recent theories of organizations and institutions to develop an understanding of how policy debates take particular shape. We use these arguments to explain policy debates as struggles between competing frames of meaning, embedded in contending interests and identities. Where other articles in this issue develop mechanisms at the level of individuals, we direct our attention to field-level debate and activity, incorporating cultural analysis to what might otherwise seem like problems of individual biases, information asymmetries, political manipulation, and strategic avoidance.

We see research on institutions and policy as an underexplored agenda at the intersection of organizational, governance, and collective action theories on one hand, and negotiation and bargaining research on the other (Kochan & Bazerman, 1986). Institutional arguments feature attention to the interweaving structures of meaning and resources as well as their wider cultural and political context (Powell & DiMaggio, 1991; Suchman & Edelman, 1997). We build on the idea of policies as theories about the nature of problems, their solutions, and appropriate interventions (Majone, 1981; Weiss, 1998). We distinguish this from policy debates that we see as grounded in the interplay of the interests and institutional context of their formation (March & Olsen, 1984).

The environmental case links these analytic issues, and is exemplary of policy issues in which problems and solutions are institutionally directed (Jennings & Zanderbergen, 1995). Environmental debates occupy both public and scholarly attention, and they range from the most local concerns about waste management or the racial stratification of hazardous waste disposal to corporate initiatives and strategy and to the uncertain imageries of global warming and climate change. These debates involve large numbers of actors whose behavior bears on their outcome. Often, these actors are heterogeneous, geographically dispersed, and engaged in behavior that is difficult to observe and measure (Weiss, 1998). The evolution of policy, regulation, and organizational strategy has embodied a dramatic redefinition of the linkages between environmental and economic goals (Hoffman, 1997). Finally, there is wide ambiguity about the nature of the debate and the relationship between the business and technical solutions enacted and the environmental and public welfare objectives that are desired (Bansal & Evans, 1998).

Our attention is focused on institutional mechanisms. We will elaborate how institutions structure policy debates with consequences for their initial framing

and the practical work of finding and implementing integrative solutions. We note the conventional attention to institutions as sources of constraint and inertia that keep policy discussions anchored in assumptions and models that work against finding integrative, productive options to resolve differences of interest. But we also focus on emerging conceptions of institutional elements that support change within the context of the debate. As such, we apply our perspective to analyzing specific empirical examples of institutional barriers to the reconfiguration of the economics versus environment debate and will present an assessment of conceptual and practical mechanisms to overcome them.

AN INSTITUTIONAL FRAMEWORK FOR THE ECONOMICS VERSUS ENVIRONMENT DEBATE

Annual costs for pollution control in the United States rose from \$27 billion in 1972 to more than \$90 billion in 1990 and are projected to reach \$155 billion by the year 2000 (Pendleton, 1992). The impact of such expenditures on economic competitiveness is clear. Or is it? There is little disagreement that environmentalism affects corporate management, altering profit and loss statements and influencing both domestic and international strategy. Yet, although many within industry and government are vilifying environmentalism as a threat to economic growth, others are taking advantage of the economic opportunities it can reveal. The Carrier Corporation invested \$500,000 to eliminate the use of toxic solvents in the manufacture of air conditioners. By the end of 1 year, it had recouped \$1.2 million in reduced manufacturing costs ("Industrial Switch," 1990). DuPont undertook a \$500 million capital improvement plan at three North and South Carolina plants, which will reduce air emissions by 60% and will increase production by 20% ("DuPont to Spend Big," 1991).

Why do some see a synergy between economic and environmental objectives while others see only a threat? Is the relationship between economics and the environment inherently win-win, win-lose, or mixed motive (Hoffman et al., 1999 [this issue])? Recent work on organizations and the environment might approach these questions with a focus on the strategic actions of individual firms (e.g., Lawrence & Morell, 1995; Lober, 1996; Shrivastava, 1995). For example, Hart (1995) advances a "theory of competitive advantage based upon the firm's relationship to the natural environment" (p. 986). Porter and van der Linde (1995) argue that "companies must start to recognize the environment as a competitive opportunity" (p. 114). These lines of work are important for their emphasis on the interaction of organizational decision making with the natural environment.

However, they are incomplete to the degree that they neglect the cultural and institutional contexts in which such decisions are made. Firms are not autonomous units, able to develop and implement strategy in isolation from the influence of the external environment. Indeed, institutional arrangements and social

processes are central to the formulation of both individual and organizational action (Orrù, Biggart, & Hamilton, 1991). Organizations and managers within them cannot choose from an unlimited range of possible strategies. Rather, they choose among a specified set of legitimate options. These options are bound by institutions. Institutional theories pose questions about how these social choices are shaped, mediated, and channeled by the external (institutional) environment.

So, to address the question of whether the relationship between economics and the environment is inherently win-win, win-lose, or mixed motive (Hoffman et al., 1999), we focus on the institutional sources for the initial framing of the issues. How are wins and losses defined? Who defines them? If trade-offs between economic and environmental interests are necessary to uncover mixed-motive solutions, whose economic and environmental interests are legitimate in this equation? In essence, the questions to which the institutional perspective directs us are the following: (a) Why is the economics versus environment debate framed as it is? and (b) Who is influential in framing it? With the answers to these questions, we can begin to deconstruct the debate and reconstruct solutions to it. To organize our analysis, we will discuss (a) emerging conceptions of institutions and organizations, (b) a three-aspect model for understanding them, and (c) an explanation for how these three aspects can help us understand both inertia and change.

INSTITUTIONS AND THEORIES OF ORGANIZATIONS

Institutions and organizations are central in the basic framing of policy issues such as the environment and economics relationship. Institutions present normative and contextual constraints that alter individual and organizational perspectives on relevant issues. They also contribute the cultural terms and cognitive elements in the policy field around which the issue is debated. In this way, policy debates, including problem definition and the form of its solutions, are based not only within the strategic, technological, or economic arena but also within the social, cultural, and institutional arenas (Bazerman & Hoffman, in press). Although strategic, technological, and economic activity may be the direct cause of or solution to environmentally destructive behavior, it is the cultural norms and societal institutions out of which that activity emerges that are important (Barley, 1986; David, 1985; Smith & Marx, 1994). The institutional approach directs us to consider the interplay of varied organizational actors and the contending institutional logics, authority structures, and conflicts that occur among them to understand the shape of the policy debates (Ventresca & Washington, 1998).

Institutional influences devolve from a field of actors and comprise symbolic elements, networks, technology, material resources, and historical remnants of prior practice and decisions (Scott, 1983). In fact, the mixed-motive framework central to this volume assumes that normatively rational action is complicated by social and cultural process. The very nature of the apparent trade-offs or

mixture of motives in the mixed-motive framework is an outcome of institutionally robust processes. Conceptions of the value of nature, the responsibility of the corporation toward protecting it, and the economic costs associated with such efforts are all mediated by social, cultural, and institutional context. Although the mixed-motive framework presents strong arguments for the possibility of finding optimal outcomes in policy debates through a process of clarifying interests, incorporating information, and treating decisional outcomes as modular (in ways that unbundle and rebundle preferences to find agreeable and stable solutions), it is the institutions that provide sources of stability and meaning in each of these action steps.

THREE ASPECTS OF INSTITUTIONS

Scott (1995) identifies three characteristic emphases in research on institutions and organizations: on regulative, normative, and cognitive models of institutions. Regulative aspects of institutions are based on legal sanction to which organizations accede for reasons of expedience. Normative aspects of institutions are morally grounded, to which organizations will comply based on social obligation. Cognitive aspects of institutions reference the collective constructions of social reality via language, meaning systems, and other rules of classification embodied in public activity (Thompson & Fine, 1999). We note that cognitive aspects are not limited to individuals; rather, they recognize the role of social classification and cognition as elements of everyday social reality. It is this aspect that emphasizes the taken-for-granted beliefs to which the organization will attend out of habit, convention, or obligatory action (Zucker, 1983).

The key insight that institutions comprise all three aspects, analytically distinct but intertwined in practical activity (Scott, 1994, 1995; Hirsch, 1997), is the basis for understanding change opportunities in the institutional framing of policy debates. The interrelations among cognitive, normative, and regulative aspects vary—in different mixtures, with different implications for change processes. These are the source of robustness and durability of institutional arrangements or of their fragility and vulnerability to challenge, erosion, and emendation by contending logics or shifting resources (Galvin, 1998; Greenwood and Hinings, 1996).

For example, regulative models of institutions often focus on government regulations, protests, lawsuits, political lobbying, and stakeholder negotiation. Normative models of institutions typically recognize the prescriptive and evaluative activities of universities, professional training institutions, and trade associations manifest in occupational standards, educational curricula, and membership requirements. And, cognitive models of institutions stress the socially constituted nature of reality—that action occurs within the context of wider and prior symbolic frameworks and systems of social categorization. We see each of these institutional arenas as possessing elements of all three institutional aspects. For example, although government regulations may form a visible

embodiment of the regulative aspects of institutions, they actually are supported by normative and cognitive aspects that form the basis and philosophy behind their purpose and meaning.

INSTITUTIONAL INERTIA AND CHANGE

The power of the three institutional aspects is in explaining how institutions first restrain and second change organizational activity by identifying distinct mechanisms through which these processes occur. The notion that institutions act as constraints rests on the view that existing policies and institutions confine the ability of actors to respond to and solve their problems once they have been articulated (Campbell, 1998). More contemporary institutional arguments focus on the source of that articulation, exploring how actors define political and economic problems that confront them and the policy and institutional solutions available to them (Creed & Scully, 1998). Institutional context provides “rationalized building blocks” (Meyer & Rowan, 1977)—institutional elements such as recognized structures, policies, and practices available for assembly into organizations. Institutional rules form prescriptions about how society works or should work, and they define the meaning and identity of the patterns of appropriate economic, political, and cultural activity (Meyer, Boli, & Thomas, 1987). This claim emphasizes the generative aspects of institutions—how authoritative social rules do not simply describe but actively generate and confirm social and economic realities. The three aspects suggest the possible mechanisms of this generation process, whether through coercion, education, or connection to accepted beliefs. In short, institutional context provides cultural elements for the formation and reproduction of the central structures and actions of organizational actors. As such, institutional processes become central in constituting and constraining the elements of economic action.

The form of institutional constraint, or inertia, becomes (a) multilevel, involving organizations, policy systems, or industry fields; and (b) multiaspect, involving the interweaving of regulative, normative, and cognitive aspects. Inertia implies embeddedness—in social structures of relationships, power dynamics, meanings, and everyday practices that “hold” institutional arrangements in place (Dacin, Ventresca, & Beal, 1999; Starik & Rands, 1995). This said, barriers to mixed-motive strategy solutions certainly include particular cognitive biases at the level of individuals but also those embodied in expertise and authoritative definitions of the policy issues and potential solutions (Weiss, 1998) or the presence of regulatory frameworks that provide incentives for one course of action, despite the best intentions of the policy makers, or professional norms about appropriate policy interventions (Bazerman & Hoffman, in press).

Moving beyond constraints, we also provide a framework for understanding how policy regimes and fields of activity can be reconstructed. The three aspects become the basis for understanding how efforts to resolve the policy dilemma between economics and the environment can follow two possible paths. First,

change efforts can focus on pragmatic action that works within the existing framework of the debate as given. In this way, competing interests are reframed in terms consistent with those interests that dominate. For example, environmental issues can be reframed to fit within the dominant economic framework of the social and political system. They can be reconstructed as an economic opportunity, such that a merge of interests reduces tension in the debate and exposes mixed-motive opportunities for conflict resolution. Second, change efforts can focus on efforts to restructure the existing framework and thereby identify entirely new possibilities for action. In this way, existing institutions are exposed and restructured to support a new set of beliefs and actions. In either case, institutional approaches remind us of the several analytic levels that interact to frame and reinforce current definitions of *what is at stake*. Furthermore, the three aspects expose where leverage points exist for creating change (Hoffman, in press).

THE INSTITUTIONAL FRAMING OF THE ECONOMICS VERSUS ENVIRONMENT DEBATE

Every past generation has had to disenthral itself from an inheritance of truisms and stereotypes. . . . For the great enemy of the truth is very often not the lie—deliberate, contrived, and dishonest—but the myth—persistent, persuasive, and unrealistic. . . . We subject all facts to a prefabricated set of interpretations. (John F. Kennedy, 1962, p. 471)

Our review of institutional theories of organizations features attention to processes of meaning making and the role of “rational myths” in providing stable sources of practical action for organizations and individuals. As Kennedy (1962) points out, institutional processes give shape to policy debates by creating and sustaining perceptions of social and economic realities that are often ambiguous, negotiated, and contested. Interpretation is embedded in prior ways of knowing, seeing, and doing. As such, beliefs, convention, and language can keep policy discussions anchored in assumptions and models that work against integrative problem solving. In this section, we consider how some of those barriers have taken shape.

Although not an exhaustive list, we will explore the institutional constraints embedded within four empirical arenas: environmental standards, educational curricula, engineering and operational practice, and international regimes. Whether we are discussing these areas or one of the many other institutional elements that shape the present configuration of the environment versus economics debate, we argue that each can be analyzed in terms of the regulative, normative, and cognitive aspects that ground its specific standards and criteria, key assumptions, and underlying beliefs (Scott, 1995). In each case, we will illustrate mechanisms by which institutional processes contribute to the social definition

of the apparent trade-off in the policy debate, with evidence from recent cases of government, industry, professional, and organizational activity.

ENVIRONMENTAL STANDARDS

Standards form the most apparent source of pressure for organizational action in environmental protection. Regulatory pressure is seen as coercive in nature, forcing compliance by threat of penalty. But standards are also symbolic, uncertain, contested, and constitutive. Courts frequently measure compliance against industry standards, business necessity, or the limits of current technology. Although we can consider standards in terms of their regulative aspects, we also must consider how they are supported by contending logics and project symbolic activity (Powell, 1996). For example, Edelman (1990) shows how abstract legal mandates are typically enacted in organizational practices via mechanisms of translation and adaptation based on these supporting normative and cognitive institutions.

The present regulatory structure in the United States is founded on fundamental beliefs about the nature of pollution and the appropriate methods for eliminating it. Dating from the formative days of the Environmental Protection Agency (EPA) in 1970, these beliefs, values, and practices contribute to a stable policy paradigm. Three components of this regulatory culture are particularly important for our discussion.

First, the regulatory structure is based on a perception of environmental issues as compartmentalized by media—air, water, pesticides, radiation, solid waste, and so on. Although obviously inaccurate as a framework for understanding the inherently trans-media nature of pollution, this conception is perpetuated by a formal organizational structure within the EPA that is an artifact of its early formation. Although many advisors to the agency's first administrator recommended an intermedium approach that would have regulated an industrial facility as a unit, considering the impact of its operations on the environment as a whole, political realities forced the creation of the new agency through the consolidation of the existing departments scattered through the federal government. These departments were based on media specific mandates, so the resultant agency was similarly structured. But this structure reinforces a framework that inhibits creative environmental problem solving by focusing on partial solutions.

A second aspect of the regulatory structure that fosters a particular conception of environmental issues is its “command-and-control” format. In 1970, many felt that once government set standards and began to enforce them, industry would fall in line and the environmental problem essentially would disappear (U.S. Environmental Protection Agency, 1993). During the first 60 days, the EPA brought five times as many enforcement actions as the agencies it inherited had brought during any similar period (Landy, Roberts, & Thomas, 1990). This

focus on punishing polluters was justified on political grounds to establish credibility, but it also set the adversarial type of industry-government relationship that carries over to today. This adversarial relationship supports a belief that government regulators and industry decision makers cannot find solutions that offer mutual gain.

Finally, a third aspect of the original EPA legacy are durable beliefs about the relationship between economics and the environment manifest in the technological-fix solution to environmental problems. Since the 1970s, regulations have been based on prescribed, technology-based standards. The catch word for the early 1970s was *technology-forcing*, where new federal rules would force industry to use new pollution free technology, and as new plants replaced old ones, eventually the problem of pollution was expected to disappear (Novick, 1986). Today, that mindset is manifested in regulations that prescribe "best demonstrated available technology" (BDAT) for specific environmental problems across disparate industries.

Over time, this (a) media-segmented, (b) command-and-control, (c) adversarial, (d) technology-based approach to environmental regulation came to provide a standard approach to understanding the nature of environmental issues, regulatory solutions, and the inherent policy trade-offs among government, industry, and activist communities. These are the regulative and normative aspects of the institutions of environmental standards. Many now view this paradigm as out of date and as overly restrictive of corporate environmental initiatives beyond compliance (Schmitt, 1994). But to change them will require alterations in their cognitive aspects.

Government standards historically have produced results consistent with broad environmental objectives (Easterbrook, 1995), but some observers are beginning to argue that the existing standard and enforcement programs may be the biggest challenge faced by environmentalists today. Although they can force behaviors that are easily monitored by oversight agencies, they perpetuate perceptions about the relationship between economics and the environment that may be contrary to the goals of both. They are based on cognitive institutions that perpetuate the view that economic and environmental interests are mutually exclusive.

Tenbrunsel, Wade-Benzoni, Messick, and Bazerman (1997) argue that legal standards lock organizations into a focus on strict legal compliance rather than on the attainment of environmental goals or more subtle societal interests. They suggest that decision makers may evaluate suboptimal choices (both economically and environmentally) that adhere to a standard more highly than optimal choices that violate the standard. Once standards are written, program managers within both government and corporations become constrained by a compliance mindset and bureaucratic procedures that attenuate the search for creative solutions to complex environmental problems. Standards direct attention and embody a theory of cause, effect, and solution that is often received as accepted wisdom. A given rule structure dictates which pollutants and sources to control,

to what extent, and with which technologies across a broad spectrum of disassociated industries. It often ignores the technological and logistical issues associated with overlapping regulatory programs as well as the multimedia and multiobjective impacts of a particular rule or policy (Raffle & Mitchell, 1993). At times, standards can explicitly restrict environmentally optimal solutions. For example, the permitting requirements under the Resource Conservation and Recovery Act (RCRA) often restrict hazardous waste recycling initiatives by strictly imposing regulation on those wastes once created. Any company that creates hazardous wastes and then attempts to recycle or reuse them will be required to obtain a hazardous waste Part B permit for treatment of a hazardous waste, an extremely expensive and time-consuming process (Byers, 1991). In the eyes of many corporate managers, such as Thomas Zosel, manager of 3M's 3P program, "RCRA permits are so extensive and expensive to develop that many companies forego recycling to cut all the regulatory hassle required by RCRA" (Ember, 1991, p. 15).

Tenbrunsel et al. (1997) also suggest a motivational explanation for the "misdirected attention" effect, namely, that standard-based systems can change the incentive systems for individuals and promote self-interested behavior at odds with wider societal interests (Tenbrunsel et al., 1997). Suboptimal outcomes are the product of both unintentional and intentional actions on the part of a decision maker, within the context that frames incentives and defines options. Unintentional actions may result from individuals "just following the rules," creativity not being rewarded, a "use it or lose it" rationale, intrinsic motivation being replaced with extrinsic motivation, or a "no law against it" mentality. Intentional actions include trying to "beat the system." For example, the EPA listed *n*-methyl pyrrolidone (NMP) in 1995 as one of the chemicals for which industry must report emissions. NMP is a common replacement in the adhesives industry for chlorinated solvents. It is nonflammable, practically nonvolatile, and 80% to 90% recyclable. The listing was prompted by a single study citing a potentially remote health effect. Many companies decided to revert back to flammable and volatile (but nonreportable) solvents to avoid the reporting burden of NMP. The end result of the NMP listing requirement was a reversion to a less safe and potentially more environmentally harmful option.

As we noted earlier, standards are supported by contending logics and project symbolic activity. To alter the meaning behind environmental standards and the tensions that exist between such mandates and the organizational processes (Edelman, 1990; Mezas, 1995), we must change the normative and cognitive institutions on which they are based. In essence, a standard is an artifact of the wider regulatory cultures, structures, and traditions from which it originates. But existing cognitive aspects of such standards are anchored in the constellation of beliefs, organizational routines, policies, and practices that have accumulated over 30 years of organizational and programmatic routines and have defined the nature of environmental problems and the form of their solution. Breaking down such structures will require attention to their regulative aspects

that are influenced by direct political control but also to their cognitive aspects that perpetuate a practical conception of the nature of environmental problems that counterpose environmental sense to economic competitiveness.

EDUCATIONAL CURRICULA

The content of educational curricula, professional association strategies, and industry standards and best practices also provides a basis for institutionally grounded inertia in policy dialogues. And, where education and training are often treated as normative effects, understanding their full impact on the economics versus environment debate must also consider the deeper meaning embedded in their cognitive aspects. Looking first at the most explicit level of programmatic training programs, one can see institutionalized notions of environmental problems.

For example, undergraduate chemical engineering education often overlooks waste considerations in the economic calculations of chemical plant design. Marked as an arrow aiming off the page and labeled "to waste," students systematically are taught to ignore the associated costs of waste and opportunities to reduce these costs at the source. Business management education treats environmental issues as an issue of "socially responsible business" and outside the rubric of core decision-making logic (Hoffman, 1999). A survey of U.S. business schools found, "Only 16 percent of schools report integrating environment into core or departmental requirements, thus only a few MBAs truly receive environment-business training" (Finlay, Bunch, & Neubert, 1998, p. 2). And finally, economic education treats environmental protection as an externality from the market (Cropper & Oates, 1992), the consequence of an absence of prices for certain scarce environmental resources, such as clean air and water.

These are the regulative and normative aspects of institutions within this social arena. But educational curricula transcend such normative rules and procedures, being built on culturally supported beliefs about the nature of professional life and the place of the environment within it. Through each of the educational curricula described above, economic benefits and environmental responsibility are presented as separate and opposing outcomes. In such a framework, the potential for innovative mixed-motive agreements are minimized. The cognitive aspects of these institutions support the idea that market and engineering objectives are inconsistent with environmental protection and that decision makers will never find it in their own economic interests to incorporate environmentally sensible policies.

Historians and environmental management experts (Allenby, 1998; Gladwin, Freeman, & Kennelly, 1994; Merchant, 1980) now argue that contemporary ideologies of educational training (and capitalism more broadly) rest on fundamental cognitive assumptions that perpetuate a disconnect between environmental and economic sustainability. In the pursuit of economic progress, organizations and individuals are depicted as independent actors, bartering and

trucking in a market without social structure, in which resource extraction and development are the right of the property owner to the exclusion of other stakeholder interests, and unlimited progress is possible through the exploitation of nature's infinite resources. Scholars in the environmental management community challenge present management theory and practice for supporting these beliefs by promoting an uncritical belief in (a) the necessity of increasing economic growth, (b) the perception of nature as a limitless sink, (c) the superiority of technological development for controlling natural systems, (d) the social and physical autonomy of the firm, and (e) the profit motive as a singular objective of the firm (Capra, 1982; Daly, 1991; Daly & Cobb, 1994; Gladwin, Kennelly, & Krause, 1995). These cognitive aspects of educational curricula lie at the center of notions about what is the role of the business manager and the engineer in interacting with the environment and what is the role of the academy in training them for that role.

ENGINEERING AND OPERATIONAL PRACTICE

Engineering and operational practice also bear on the form of the debate over the relationship between economics and the environment. These can be the product of environmental standards or educational curricula, but they can also be perpetuated through regulative and normative institutions embedded within specialized units, habits, routines, and technical practices within organizations. These structural elements of individual organizations do embody cognitive aspects of institutions that support a divisionalization of environmental and economic responsibilities within the framework of organizational decision making. Over the past 25 years, corporations have developed specialized environmental, health, and safety departments to handle the command-and-control system of environmental regulation. Through force of habit, tradition, and power, this separation of responsibilities has created a cultural and institutional schism among business units and objectives within the corporation (Shelton & Shopley, 1995) and the wider debate over their relationship. The two cultures are divided by objectives, language, and external constituencies. For example, environmental managers are responsible to government regulators and often support their initiatives with nonbusiness acronyms, such as notice of deficiency (NOD), environmental impact statement (EIS), biological oxygen demand (BOD), and life cycle assessment (LCA), that may be familiar with this external constituency but serve to distance other business managers from environmental matters (Shelton & Shopley, 1995). These other business managers are focused on customers and shareholders and use terms such as return on investment (ROI), net present value (NPV), and return on assets (ROA) to justify their initiatives. Although these metrics remain the most common business validation metric, most environmental managers do not acknowledge such economic cost-benefit analyses when attempting to gain budgetary approval for environmental initiatives.

Operations personnel are not the only organizational tier at which institutionalized beliefs about the relationship between economics and the environment are perpetuated. In a survey of corporate managers about the primary obstacles to industrial expenditures on environmental programs, many placed the accounting department at the top of the list (Hoffman, 1992). Environmental protection costs generally are listed as a liability and not as an asset on balance sheets, even if the expenditure resulted in decreased compliance and disposal costs, savings in other areas such as improved public relations, or liability and regulatory reduction. Furthermore, individual managers often are shielded from incentives to seek more efficient solutions to environmental problems as environmental costs are lumped together as overhead costs, not for the department but for the corporation.

Institutionally maintained norms and rules in the form of standard operating procedures, best engineering practice, or established rules of thumb support deeper assumptions about the relationship between economics and the environment. Accepted financial objectives often are based on cognitive assumptions that undervalue environmental resources, discount the future, and uncritically favor economic over environmental objectives (Schmidheiny, 1996). For example, return on investment criteria must support the debt load expected by lending institutions and corporate investors. But financial markets have payback horizons that are not in sync with the long-term time horizons of ecological systems. For forestry companies, such economic pressures will lead them to diminish the natural capital asset base on which their long-term success is based, harvesting timber at rates that exceed maximum sustainable yield (MSY). The short-term economic interests of financial markets take precedent over long-term environmental cycles.

The Gross Domestic Product (GDP) is the foremost economic indicator of national economic progress. It is a measure of all financial transactions for products and services, but it does not acknowledge (nor value) a distinction between those transactions that add to the well-being of a country and those that actually diminish it. This creates perverse economic signals that promote short-sighted economic activity at the expense of environmental objectives (Redefining Progress, 1996). For example, GDP treats the depletion of natural capital as income, rather than the depreciation of a capital asset. The more a nation depletes its natural capital base, and with its ability to produce income in the future, the more its GDP will go up. GDP treats natural disasters as economic gain. For example, Hurricane Andrew was a disaster for southern Florida, but GDP recorded it as a \$15 billion boost for the economy due to recovery programs. Finally, GDP increases with polluting activities and then again with pollution cleanup (Redefining Progress, 1996). For example, through the century, economic activity and GDP have increased through the low cost and inappropriate disposal of hazardous wastes. Now, under the aegis of the Superfund program, it is estimated to cost \$750 billion to clean them up (Russell, Colglazier, & Tonn, 1992), which again will be added to GDP. As a result, pollution becomes a double benefit for

the economy and the true relationship between economics and the environment becomes clouded.

Any attempts to seek alternative solutions within the business organization, such as integrative negotiated agreements, may represent a challenge to these taken-for-granted beliefs of business and engineering practice. Integrative solutions require a joint problem-solving effort that relaxes the organizational structure and allows interaction among different functions (Hoffman, 1996). Yet, the functional differentiation of organizational responsibilities may preclude such opportunities. And even if structural boundaries were broken down, the cognitive perception that economic and environmental objectives are separate and distinct would be perpetuated within measures of performance, process criteria, and outcomes used to assess corporate health and success (Meyer, 1994; Rao, 1998).

INTERNATIONAL REGIMES

Standards, educational content, and operational practices come together in policy regimes that define the terms and content of competition. These are held within individual and collective beliefs, reinforced by normative activity, and embedded in regulatory culture and practices. Current environmental issues and policy often cannot be considered outside the context of the global commons. And where the global commons are concerned, international regimes must be engaged. Recent studies of the dynamics shaping the global environmental sector stress the twin factors of increased international organization and global dialogue (Meyer, Frank, Hironaka, Schofer, & Tuma, 1997) in driving the passage of environmental treaties and other regulatory frameworks (Frank, 1997). However, in this arena, the institutionalized separation of environmental and economic interests may be the most pronounced. International standards often are established with a clear set of underlying assumptions that place economic growth and environmental protection in separate domains with compatible solutions ruled out.

For example, international accords on fishing fail to protect the world's rapidly depleting fisheries due to short-sighted economic priorities. Of the world's fish catch, 90% is taken from coastal waters (Nickerson, 1994) and, therefore, is under some form of government control. But because governments have invested heavily in protecting domestic fishing industries, subsidies distort economic signals of decline. In 1994, it cost \$92 billion worldwide to pull in \$70 billion worth of fish (Nickerson, 1994). The magnitude of this dysfunctional behavior worsens if you include the inefficiency and waste created from "by-catch." The Food and Agriculture Organization estimates that 27 million tons of fish per year—about 33% of the total catch—were discarded dead from fishing boats because they were too small, the wrong species, or out of season (Sissenwine, 1995). In 1996, 15% of the yearly take from the Bering Strait off the Alaskan coast was by-catch. This amount of fish equaled 50 million meals, enough to

treat everyone in the states of California and New York to a fish fry ("Pollock Overboard," 1996).

Although there are several international trade agreements that have environmental implications, the Global Agreement on Tariffs and Trade (GATT) is by far the oldest and most far reaching. GATT also illustrates how institutions perpetuate a separation of environmental and economic interests. GATT was created as a branch of the United Nations after World War II. It is both the framework and governing institution over most international trade. (In 1995, GATT was replaced by the World Trade Organization [WTO].) WTO's central premise in establishing fair and free trade is that of nondiscrimination. But the environmental implications of this agreement were tested in 1991 with a dispute over dolphin-free tuna. The U.S. Department of Commerce imposed an embargo on tuna from Mexico, Venezuela, Vanuatu, and other countries because the by-catch of dolphins killed in the process of harvesting the tuna violated the Marine Mammal Protection Act (MMPA) of 1972. Mexico complained to the WTO and won relief. The adjudicating panel decided that the MMPA was inconsistent with the nondiscrimination principle. A country had no right to enforce process restrictions on other countries when those processes have no impact on the product itself ("GATTery Versus Greenery," 1992). When the WTO again ruled in 1998 that the United States could not ban the import of shrimp from countries that do not protect endangered sea turtles from deadly entrapment in fishing nets (a domestic U.S. requirement), conservation groups pressed the Clinton Administration to defy the decision, arguing that the WTO was subverting domestic environmental policy (Cushman, 1998).

Environmental nongovernmental organizations feel that the underlying logic of these WTO decisions is that economic trade is paramount to environmental protection. As a result, they feel that WTO decision making is based on institutions that challenge national sovereignty in developing domestic environmental standards. They fear that pressure from foreign countries (supported by domestically disadvantaged companies) will create pressures to drive domestic environmental standards down to the lowest common denominator. Hard-won domestic environmental victories may be lost in the name of international trade equity. Underlying this possible outcome is the institutionalized notion that trade interests will rule out any attempt at balancing environmental objectives and commercial objective (Ferrantino, 1994).

STRATEGIES FOR OVERCOMING INSTITUTIONAL BARRIERS

Much current prescriptions for addressing the current trade-offs of the economics versus environment debate focus on "changing mindsets"—individual, organizational, and other (Porter & van der Linde, 1995). In the institutional perspective we develop in this article, mindsets are the outcomes of policy

struggles, organizational and professional learning, technical expertise, international regimes, and everyday routines and practices. They are durable and embedded in both individual and collective beliefs and are supported by "rational myths" and other rationales that reflect the "common sense" of often quite disparate constituencies: government officials, industry managers, accounting and engineering professions, environmentalists, and the general public (Geertz, 1983).

Research, explanation, and prescription on the practical and political implications of institutional arguments are still very initial, with current emphasis on (a) garnering legitimacy through symbolic compliance, (b) strategic management of impressions and identity through cultural accounts, (c) overcoming normative and cognitive barriers that work as impediments to market efficiency, and more generally, (d) firm-level strategies in market competition (Oliver, 1996). Here, we develop an alternative view of the strategic and practical implications of thinking institutionally understand the opportunities and constraints for mixed-motive strategies in environmental policy.

In 1995, nearly three quarters of Americans described themselves as being environmentalists. Sixty-nine percent also believed that environmental protection and economic development could go hand in hand (Times Mirror, 1995). Although such statistics have little bearing on the ease with which we can adjust our behaviors to accommodate such espoused beliefs, they represent a key paradox that makes the institutional perspective on the economics versus environment debate such a challenge. The beliefs of the American public, while having little connection to the technical possibilities related to the issue, represent an important consideration in determining the reality of the issue. They represent a change in one aspect of the institutional structure that defines the relationship between economics and the environment and therefore represent an important component in the definition of its overall form. But institutions are sedimented, multilevel, and durable assemblies. For these reasons, efforts at institutional change also must incorporate strategies that address all aspects of institutions—regulative, normative, and cognitive—and work on multiple levels.

In this section, we will elaborate on two fundamental strategies for overcoming institutional barriers and driving change. First, strategies may work within the present framework of the debate. Second, they may focus on reconfiguring the form and nature of the debate. This distinction can be seen in strategies of various segments of environmental community. For example, the Nature Conservancy seeks to protect the environment by collecting donations from corporate sponsors and purchasing ecosystems for their protection. Earth-First uses eco-sabotage (among other strategies) to achieve its goal of zero economic and population growth. The former works within the existing institutional framework. The latter works to change it.

In using an institutional framework for understanding this distinction, strategies toward reshaping current institutional inertia in the framing of policy issues ought to involve the provision of new norms, models for practice, and underlying

expertise that defines the problem, its possible solutions, and appropriate interventions. The tools and skills are those developed by recent theories of leadership, change, and management (Eccles & Nohria, 1992) and directed at activity within organizational fields (McDonough, Ventresca, & Outcalt, 1999). The mechanisms are based on the regulative, normative, and cognitive aspects of institutions. Debate about which aspects of institutions are "more or most" amenable to change or contestability (DiMaggio & Powell, 1991, p. 8) must be balanced with an insight from our framework that recognizes the interrelatedness and reinforcing features of the three aspects operating together.

Both change efforts within the existing framework and efforts to restructure the form of the debate must on deliberate alterations in the regulative and normative aspects of institutions, as these are "the products of human design, [and] the outcomes of purposive action by instrumentally oriented individuals" (DiMaggio & Powell, 1991, p. 8). They are therefore open to manipulation and change. However, the alteration of cognitive institutions is beyond direct individual control. Their influence is not always readily perceptible, they are considered "taken-for-granted," and they are generally more implicit than the actors know or wish to acknowledge.

Our approach treats "taken for granted" as a stable and (time-dependent) claim about a dominant logic or model. But there is seldom a situation in which only one cognitive model prevails—although certainly many in which one dominates or has primacy (Hoffman, *in press*). This, of course, recognizes the political and cultural nature of such claims to dominance and underscores the value of identifying contender models or claims even if they are currently on the margins of the policy dialogue. Recognizing this, cognitive strategies involve identifying and supporting alternative models, mobilizing competing frames by borrowing or analogy (Leblebici, Salancik, Copay, & King, 1991) to redefine the terms of the debate (Clark & Jennings, 1997), and creating options.

With this distinction, the temporal implications of the two strategies now become clear. Change within the system will meet with short-term results, the result of tinkering around the edges of the regulative and normative aspects of institutions. Restructuring of the overall system will require long-time horizons to complete, involving more radical challenges to the regulative and normative aspects with the intention of altering beliefs in the cognitive aspects. We will consider each strategy in turn.

STRATEGIES WITHIN THE PRESENT FRAMING OF THE DEBATE

The first strategy is to incorporate environmental considerations into the existing market, social, economic, and political institutions that predominate organizational and individual interaction. This strategy shares features of standard conflict resolution routines, from behavioral to attitudinal interventions. It involves reformulating environmental and economic debates into a common

language and rhetoric, by reframing environmental issues into terms and models that fit within the existing context (Clark & Jennings, 1997). It requires alterations in the regulative and normative aspects of institutional structures in a way that does not challenge or undermine the cognitive aspects in place.

For example, environmental regulation could be restructured to trigger corporate environmental action through generally accepted economic means, such as the introduction of surrogate or artificial prices in the form of unit taxes, effluent fees, or more recently, market incentives to provide the needed signals to economize on the use of these resources (Hahn & Stavins, 1991). Universities could connect educational programs and environmental issues in terms that complement existing educational curricula. So for example, management schools could incorporate environmental issues into the management curriculum by teaching it in the language of core business disciplines such as strategy, finance, marketing, accounting, and organizational behavior (Hoffman, 1999). It is a strategy based on the integration of environmental interests into the business program in such a way that it does not challenge the basic precepts of corporate objectives and responsibilities.

Within the corporation, environmental managers could be trained to frame environmental management as a business issue that complements the overall business strategy (GEMI, 1999). Traditional business terms such as ROI and NPV could be adopted to sell the costs and benefits of environmental initiatives to business management (Shelton & Shopley, 1995). This will trigger organizational initiatives that seek environmental initiatives that can be shown to satisfy economic objectives. Finally, international regimes can be amended such that environmental interest could be introduced as compatible and supportive of pre-existing goals of economic growth and increased world trade.

STRATEGIES FOR REFRAMING THE POLICY DEBATE

Instead of integrating environmental considerations into the existing institutional framework, a second strategy is to reconfigure that framework and the form of the debate. This strategy would also involve an alteration of regulative and normative institutions but, unlike the previous strategy, would be conducted with an intention of challenging and undermining the existing cognitive aspects that support them.

This strategy is based on a notion that the integration of environmentalism into present-day social and economic structures does not fundamentally change the cause of environmental problems and, therefore, will not alter their ultimate outcome (Gladwin et al., 1994; Schnaiberg, 1980). Proponents of this notion argue that the environment should not remain external to the economy, internalized through the application of norms and rules based principally on human utility and not ecological stability (Evernden, 1985, p. 128). Instead, they argue that environmental issues signal problems for the sustainability of society's institutions and therefore must be interpreted as a signal to change and challenge them.

For example, changes in environmental policy could reconfigure the role and objectives of both oversight agencies and the regulated community. Such reconfiguration could allow flexibility and autonomy for corporations to define which emission sources to control through site-specific compliance strategies that achieve broadly defined objectives (Schmitt, 1994). Environmental policy also could focus on the secondary effects of regulatory programs, stimulating both direct and indirect pressures by changing core business networks, such as financial markets, international regimes, and consumer demands. Such programmatic changes could trigger new types of organizational responses and eliminate competing institutional pressures from multiple constituencies (Hoffman, 1997). But they also will challenge cognitive aspects of policy, necessitating new forms of relationships and responsibilities between the regulators and the regulated community that break down accepted notions of command-and-control, media-based, technology-forcing, and adversarial-based regulation.

The content of educational curricula in science, politics, and business could be redefined such that humans no longer are accorded status separate to nature; nature itself could no longer be viewed as inert, infinitely divisible, and moved by external rather than internal forces (Frank, 1997; Gladwin et al., 1995). Business management (education and practice) could be redefined in a way that treats the firm as socially and physically connected to the ecosystem and other societies; the profit-motive could be redefined as just one of many prime objectives of the firm; and economic growth could be redefined to include concerns for information intensiveness, community consciousness, and the experiential quality of economic activity, rather than merely its material-energy intensiveness (Daly, 1991; Daly & Cobb, 1994; Gladwin et al., 1994). Finally, international regimes could be restructured in such a way that brings into balance the imperative for global free trade with the economic and environmental sustainability of world communities (Rodrik, 1997; Soros, 1998).

OPPORTUNITIES AND LIMITATIONS

The reduction of institutional barriers involves the unlearning of what has been ingrained over history and embedded into structures, policies, metrics, rhetoric, and practice. In the past 35 years, a policy conception that treats environmental and economic interests as incompatible has taken hold in environmental policy, educational curricula, operational practice, and international regimes. Integrative environmental solutions will be difficult to achieve as long as these institutional frameworks prevail. However, breaking the established routines that these institutions perpetuate will invite resistance through habitual inertia, threats to established power bases, or fear of the unknown (Mintzberg, 1979). The choice between a strategy that integrates environmental issues into present institutional structures or a strategy that seeks to reformulate those structures does not alleviate this resistance. But each strategy also holds unique opportunities and limitations, segregated along several dimensions.

First, working within the existing system will encounter less opposition and face a greater chance of short-term success. By co-opting existing political leaders, prominent businesses, and leading institutions to "champion" environmental values, social change can be gained incrementally toward a more broad-scale goal. For example, world religions are incorporating environmental concerns into existing structures of moral behavior and sin. In 1986, five world religions signed the Assisi Declarations, an agreement to attend to environmental concerns (Rockefeller & Elder, 1992). The Presbyterian Church placed environmental concerns into the church canon in 1991, making it a sin to "threaten death to the planet entrusted to our care" (Associated Press, 1991), and the Catholic church added environmental concerns to its catechism (Woodward & Nordland, 1992). By connecting environmental concerns to accepted notions of behavior and thought, resistance will be minimized as the change is less threatening or challenging.

On the other hand, working within the existing system limits the range of potential outcomes to those that are already known and considered palatable by existing social constituents. The second path of challenging the existing institutional system holds a greater promise of yielding new structures and beliefs that have yet to be discovered. But this strategy will encounter stronger opposition, face a greater chance of short-term failure, and take longer to succeed. It is a strategy similar to other fundamental social transformations such as the social construction of freedom in early western culture (Patterson, 1991) or the emergence of self-interest as a guiding value for human behavior (versus obligation to the general welfare), forming a necessary foundation of modern capitalism (Hirschman, 1977). To fundamentally alter institutional structures and fully incorporate environmental issues and interests (Evernden, 1992) would require a reexamination of the foundations of ethics (Jonas, 1973); technological development (Piller, 1991); science, medicine, and economics (Capra, 1982); and the basic moral precepts of the world's religions (White, 1967). By challenging such fundamental institutions, resistance will be increased as the change threatens accepted ways of acting and thinking.

CONCLUSION

Field approaches to institutions and organizations challenge basic assumptions of the solitary actor perspective that is central to much behavioral research. Their arguments offer a conceptual framework and claims about institutional mechanisms to develop a cultural account of how things happen and why. We have explored a class of arguments and mechanisms that people call "institutional" but that we could also refer to as "cultural/structural." The substantive topic—environmental issues and the question of mixed-motives—presents an excellent site to develop these issues: clear cases in which identities and interests have taken form and solidified into practices, policies, and positions. We see the very nature

of the apparent trade-offs or mixture of motives as institutionally ordered and hence amenable to institutional redefinition.

But we have gone further to propose strategies for setting an agenda in support of the mixed-motive analysis. We presented a discussion of how to deal analytically with the institutional framework that incorporates insights from recent studies in institutional theories of strategic action. Our prescriptions for deliberate efforts at change engage a contentious and central issue in modern institutional approaches—the nature and possibilities of “action in institutions” (see *American Behavioral Scientist* special issue, Vol. 40, Iss. 4). Because although the focus in institutional theory is on symbols, meanings, and rules, “it is essential that we do not lose sight of the human agents who are creating and applying these symbols, interpreting these meanings, and formulating, conforming to, disobeying, and modifying these rules” (Scott, 1994, p. 15). The literature must acknowledge “institutional entrepreneurs” (DiMaggio, 1991; Hoffman, in press), actors who possess “the ability to motivate cooperation of other actors by providing them with common meanings and identities” (Fligstein, 1997, p. 397). Such “social skills” combine insights from recent social and cultural theory, incorporate the insights of behavioral negotiations research, and find practical strategies in the language and practice of robust action (Eccles & Nohria, 1992; Ventresca & Lacey, 1999). We now find ourselves in a time and certainly in places (management schools) in which strategic action is on the agenda, and we strive in this article to integrate that agenda with the cultural realities highlighted by the institutional account.

REFERENCES

- Allenby, B. (1998). USA vs. SD: Can American values and sustainable development live together in peace? *Tomorrow*, 4(8), 61.
- Associated Press. (1991, June 9). Presbyterians ratify teaching on sex, ecology. *The Boston Globe*, p. 4.
- Bansal, P., & Evans, B. (1998, August). *Profiting from norms: The adoption of sustainable development structures*. Paper presented at the Academy of Management Annual Meetings, San Diego, CA.
- Barley, S. (1986). Technology as an occasion for structuring: Evidence from observations of CT scanners and the social order of radiology departments. *Administrative Science Quarterly*, 31, 78-108.
- Bazerman, M. H., & Hoffman, A. J. (in press). Sources of environmentally destructive behavior: Individual, organizational, and institutional perspectives. *Research in Organizational Behavior*.
- Byers, R. (1991). Regulatory barriers to pollution prevention. *Journal of the Air and Waste Management Association*, 41(4), 418-422.
- Campbell, J. (1998). Institutional analysis and the role of ideas in political economy. *Theory and Society*, 27, 377-409.
- Capra, F. (1982). *The turning point*. New York: Bantam.
- Clark, V., & Jennings, P. D. (1997). Talking about the natural environment: A means for deinstitutionalization. *American Behavioral Scientist*, 40(4), 454-464.
- Clemens, E. S. (1997). *The people's lobby: Organizational innovation and the rise of interest group politics in the United States, 1890-1925*. Chicago: University of Chicago Press.
- Clemens, E. S., & Cook, J. (1999). Politics and institutionalism: Explaining durability and change. *Annual Review of Sociology*, 25.
- Creed, W.E.D., & Scully, M. (1998, August). *Switchpersons on the tracks of history: Situated agency and contested legitimacy in the diffusion of domestic partner benefits*. Paper presented at the Academy of Management Annual Meetings, San Diego, CA.
- Cropper, M., & Oates, W. (1992). Environmental economics: A survey. *Journal of Economic Literature*, 30, 675-740.
- Cushman, J. (1998, April 7). Trade group strikes blow at U.S. environmental law. *The New York Times*, p. D1.
- Dacin, M. T., Ventresca, M. J., & Beal, B. D. (1999). The embeddedness of organizations: Dialogue and directions. *Journal of Management*, 23(5).
- Daly, H. (1991). *Steady-state economics*. Washington, DC: Island Press.
- Daly, H., & Cobb, J. (1994). *For the Common Good*. Boston: Beacon.
- David, P. (1985). Clio and the economics of QWERTY. *Economic History*, 75, 227-332.
- DiMaggio, P. J. (1991). Constructing an organizational field as a professional project: U.S. art museums, 1920-1940. In W. W. Powell & P. DiMaggio (Eds.), *The new institutionalism in organizational analysis* (pp. 267-292). Chicago: University of Chicago Press.
- DiMaggio, P. J., & Powell, W. (1991). Introduction. In W. Powell & P. DiMaggio (Eds.), *The new institutionalism in organizational analysis* (pp. 1-40). Chicago: University of Chicago Press.
- DuPont to spend big to cut plant pollution. (1991, August 5). *Engineering News Record*, p. 22.
- Easterbrook, G. (1995). *A moment on the earth*. New York: Viking.
- Eccles, R., & Nohria, N. (1992). Action: The realities of managing. In *Beyond the hype: Rediscovering the essence of management* (pp. 39-58). Boston: Harvard Business School Press.
- Edelman, L. (1990). Legal environments and organizational governance: The expansion of due process in the American workplace. *American Journal of Sociology*, 95, 1401-1440.
- Ember, L. (1991, July 8). Strategies for reducing pollution at the source are gaining ground. *Chemical and Engineering News*, pp. 7-16.
- Espeland, W. (1998). *The struggle for water: Politics, rationality, and identity in the American southwest*. Chicago: University of Chicago Press.
- Evernden, N. (1985). *The natural alien*. Toronto: University of Toronto Press.
- Evernden, N. (1992). *The Social Creation of Nature*. Baltimore: Johns Hopkins University Press.
- Ferrantino, M. (1994). *A brief description of international institutional linkages in trade and the environment* (Working Paper No. 94-11-A). Washington, DC: U.S. International Trade Commission, Office of Economics.
- Finlay, J., Bunch, R., & Neubert, B. (1998). *Grey pinstripes with green ties: MBA programs where the environment matters*. Washington, DC: World Resources Institute.
- Fligstein, N. (1997). Social skill and institutional theory. *American Behavioral Scientist*, 40(4), 397-405.
- Frank, D. (1997). Science, nature, and the globalization of the environment, 1870-1990. *Social Forces*, 76(2), 409-436.
- Galvin, T. (1998). *Organized interests and governance in the health care field: Patterns of development and transformation among professional associations*. Unpublished doctoral dissertation, Northwestern University, Evanston, IL.
- GATTery versus greenery. (1992, May 30). *The Economist*, p. 12.
- Geertz, C. (1983). Common sense as a cultural system. In *Local knowledge: Further essays in interpretive anthropology* (pp. 73-93). New York: Basic Books.
- GEMI. (1999). *Environment: Value to business*. Washington, DC: Global Environmental Management Initiative.
- Gladwin, T., Freeman, T., & Kennelly, J. (1994). *Ending our denial and destruction of nature: Toward biophysical sustainable management theory*. Unpublished manuscript, Stern School of Business, New York.

- Gladwin, T., Kennelly, J., & Krause, T. (1995). Shifting paradigms for sustainable development: Implications for management theory and research. *Academy of Management Review*, 20(4), 874-907.
- Greenwood, R., & Hinings, C. R. (1996). Understanding radical organizational change: Bringing together the old and the new institutionalism. *Academy of Management Review*, 21(4), 1022-1054.
- Hahn, R., & Stavins, R. (1991). Incentive-based environmental regulation: A new era from an old idea. *Ecology Law Quarterly*, 18(1), 1-42.
- Hart, S. (1995). A natural-resource-based view of the firm. *Academy of Management Review*, 20(4), 986-1014.
- Hirsch, P. M. (1986). From ambushes to golden parachutes: Corporate takeovers as an instance of cultural framing and institutional integration. *American Journal of Sociology*, 91, 800-837.
- Hirsch, P. (1997). Review essay—Sociology without social structure: Neo-institutional theory meets brave new world. *American Journal of Sociology*, 102(6), 1702-1723.
- Hirschman, A. (1977). *The passions and the interests*. Princeton, NJ: Princeton University Press.
- Hoffman, A. J. (1992). *The hazardous waste remediation market: Innovative technological development, and the market entry of the construction industry* (CCRE Working Paper No. 92-1). Cambridge, MA: MIT Department of Civil and Environmental Engineering.
- Hoffman, A. J. (1996). Environmental management withers away. *Tomorrow*, 6(2), 60-61.
- Hoffman, A. J. (1997). *From heresy to dogma: An institutional history of corporate environmentalism*. San Francisco: New Lexington.
- Hoffman, A. J. (1999). Environmental education in business school. *Environment*, 41(1), 4-5.
- Hoffman, A. J. (in press). Institutional evolution and change: Environmentalism and the U.S. chemical industry. *Academy of Management Journal*.
- Hoffman, A. J., Gillespie, J. J., Moore, D. A., Wade-Benzoni, K. A., Thompson, L., & Bazerman, M. H. (1999). A mixed-motive perspective on the economics versus environment debate. *American Behavioral Scientist*, 42(7), 1254-1276.
- Industrial switch: Some firms reduce pollution with clean manufacturing. (1990, December 24). *Wall Street Journal*.
- Jennings, P. D., & Zandbergen, P. (1995). Ecologically sustainable organizations: An institutional approach. *Academy of Management Review*, 20(4), 1015-1052.
- Jonas, H. (1973). Technology and responsibility: Reflections on the new tasks of ethics. *Social Research*, 40, 31-54.
- Kennedy, J. F. (1962). Commencement address at Yale University, June 11, 1962. In *Public papers of the presidents* (pp. 470-475). Washington, DC: Government Printing Office.
- Kochan, T., & Bazerman, M. H. (1986). Macro determinants of the future of the study of negotiations in organizations. In R. J. Lewicki, B. H. Sheppard, & M. H. Bazerman (Eds.), *Research in negotiation in organizations* (Vol. 1, pp. 78-98). Greenwich, CT: JAI.
- Landy, M., Roberts, M., & Thomas, S. (1990). *The Environmental Protection Agency: Asking the wrong questions*. New York: Oxford University Press.
- Lawrence, A., & Morell, D. (1995). Leading-edge environmental management. *Research in corporate social performance and policy* (pp. 99-126). Greenwich, CT: JAI.
- Leblebici, H., Salancik, G., Copay, A., & King, T. (1991). Institutional change and the transformation of interorganizational fields: An organizational history of the U.S. radio broadcasting industry. *Administrative Science Quarterly*, 36, 333-363.
- Lober, D. (1996). Evaluating the environmental performance of corporations. *Journal of Managerial Issues*, 8(2), 184-205.
- Lovins, A. (1997). Stabilizing the climate is not costly, but profitable. In A. J. Hoffman (Ed.), *Global climate change: A senior-level dialogue at the intersection of economics, strategy, technology, science, politics, and international negotiation* (pp. 143-147, 194-196). San Francisco: New Lexington.
- Majone, G. (1981). Policies as theories. *Policy Studies Review Annual*, 5, 15-26.
- March, J., & Olsen, J. (1984). The new institutionalism: Organizational factors in political life. *American Political Science Review*, 78, 734-749.
- McDonough, P. M., Ventresca, M. J., & Outcalt, C. (1999). Field of dreams: Organizational field approaches to understanding the transformation of college access, 1965-1995. In W. G. Tierney (Ed.), *Higher Education Handbook of Theory and Research* (Vol. XIV). New York: Agaton Press.
- Merchant, C. (1980). *The death of nature: Women, ecology, and the scientific revolution*. New York: Harper & Row.
- Meyer, J. W., Boli, J., & Thomas, G. (1987). Ontology and rationalization in Western cultural account. In G. Thomas, J. M. Meyer, F. Ramirez, & J. Boli (Eds.), *Institutional structure: Constituting state, society, and the individual* (pp. 12-38.3). Thousand Oaks, CA: Sage.
- Meyer, J. W., Frank, D., Hironaka, A., Schofer, E., & Tuma, N. (1997). The structuring of a world environmental regime, 1870-1990. *International Organization*, 51(4), 623-651.
- Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, 83, 340-363.
- Meyer, M. (1994). Measuring performance in economic organizations. In N. Smelser & R. Swedberg (Eds.), *The handbook of economic sociology* (pp. 556-578). Princeton, NJ: Princeton University Press.
- Mezias, S. (1995). Using institutional theory to understand for-profit sectors: The case of financial reporting standards. In W. R. Scott & S. Christensen (Eds.), *The institutional construction of organizations* (pp. 164-198). Thousand Oaks, CA: Sage.
- Mintzberg, H. (1979). *The structuring of organizations*. Englewood Cliffs, NJ: Prentice Hall.
- Nickerson, C. (1994, April 17). Stripping the sea's life. *The Boston Globe*, pp. 1, 24, 25.
- Novick, S. (1986, January). The 20-year evolution of pollution law: A look back. *The Environmental Forum*, 4(9), 12-18.
- Oliver, C. (1996). The institutional embeddedness of economic activity. *Advances in Strategic Management*, 13, 163-186.
- Orrù, M., Biggart, N., & Hamilton, G. (1991). Organizational isomorphism in East Asia. In W. W. Powell & P. D. DiMaggio (Eds.), *The new institutionalism in organizational analysis* (pp. 361-389). Chicago: University of Chicago Press.
- Patterson, O. (1991). *Freedom in the making of western culture*. New York: HarperCollins.
- Pendleton, E. (1992). *A survey of the environmental construction market* (Working Paper No. CCRE 92-39). Cambridge, MA: MIT, Department of Civil and Environmental Engineering.
- Piller, C. (1991). *The fail-safe society: Community defiance and the end of American technological optimism*. Berkeley: University of California Press.
- Pollock overboard. (1996, January 6). *The Economist*, p. 21.
- Porter, M., & van der Linde, C. (1995, September/October). Green and competitive: Ending the stalemate. *Harvard Business Review*, 120-134.
- Powell, W. W. (1996). On the nature of institutional embeddedness: Labels versus explanation. *Advances in Strategic Management*, 13, 293-300.
- Powell, W. W., & DiMaggio, P. D. (1991). *The new institutionalism in organizational analysis*. Chicago: University of Chicago Press.
- Raffle, B., & Mitchell, D. (1993). *Effective environmental strategies: Opportunities for innovation and flexibility under federal environmental law*. Chicago, IL: AMOCO Corporation.
- Rao, H. (1998). Caveat emptor: The construction of nonprofit consumer watchdog organizations. *American Journal of Sociology*, 103(4), 912-961.
- Redefining Progress. (1996). *What's wrong with GDP?* San Francisco: Author.
- Rockefeller, S., & Elder, J. (1992). *Spirit and nature*. Boston: Beacon.
- Rodrik, D. (1997). *Has globalization gone too far?* Washington, DC: Institute for International Economics.
- Russell, M., Colglazier, E., & Tonn, B. (1992, July/August). The U.S. hazardous waste legacy. *Environment*, 34(6), 12-15, 34-39.
- Schmidheiny, S. (1996). *Financing Change*. Cambridge, MA: MIT Press.