

Three Models of Reinvention

Daniel A. Farber

Reinvention is all the rage today. Perhaps the most vivid illustration is the transformation of the Endangered Species Act from a draconian ban on development to a flexible vehicle for eco-system protection through Habitat Conservation Plans. As Sabel, Fung, and Karkainen document, such reinvention efforts are now being pursued with much energy and imagination at all levels of government, as well as in the private sector. It is clear what reinvention is designed to replace: a regime purportedly dominated by centralized regulation and punitive sanctions. But it is much less clear is precisely what reinvention means or how reinvention relates to the existing framework of environmental law.

At present, three different ways of thinking about reinvention are emerging. Although we don't yet know the future of reinvention, it seems likely to lie somewhere in the triangle marked out by these three models. The first model, which is ably developed by Sabel, Fung and Karkainen, views reinvention as a multilateral process. This model eventually hopes to produce new, ecosystem-based governance structures. Another model is unilateral, focusing on the potential for self-regulation by firms. In this model, the government's primary role is catalyzing and enforcing rules designed by industry itself. The third model is bilateral. It focuses on bargaining between regulators and the regulated, with others such as public interest groups playing a secondary watchdog role. In short the models highlight governance, self-regulation or bargaining as the key feature of reinvention. In these models, or in some combination of them, we must seek the future of reinvention.

The governance model is the most exciting, since it promises not only efficient environmental regulation but also a rebirth of participatory democracy. Sabel, Fung and Karkainen see the seeds of this model in some existing programs such as Habitat Conservation Plans or the new watershed planning efforts for the Chesapeake and San Francisco Bay areas. Although this model may have genuine transformative potential, there are also serious risks in switching from existing governance structures. While existing structures are imperfect, they have been honed over time. The new governance structures which Sabel, Fung and Karkainen advocate pose a host of unresolved questions about the representativeness of participants such as public interest groups, the accountability of government participants and others, and the incentives for all of the parties to participate constructively.

These issues of representativeness, accountability, and incentives have yet to be resolved persuasively. As to the putative representatives of the public interest, we must wonder who will anoint them, what incentives and resources they will have participate to constructively, and how their performance will be assessed. (This has been a recurring and sometimes bitterly contested issue in the formation of habitat conservation plans.) How will the national interest in environmental quality be protected in a system that delegates effective management to the local level, and what will prevent a "race to the bottom" by localities seeking economic advantages? After all, the reason, we have

federal environmental regulations such as the Clean Water Act is that the states weren't doing their jobs. And should we trust the "foxes" -- the targets of regulation -- to sit on the architectural committee in charge of designing the proverbial henhouse? The risk here is that we will recreate the pattern of previous generations of government regulation, where regulatory bodies like the ICC were dominated by the very industries they were supposed to be regulating. If we find answers to these questions, the governance model may prove transformative, but these answers will not be available overnight.

The self-regulation model, if anything, puts even more faith in taming the foxes so they will voluntarily help guard the henhouse. It's easy to be cynical about this approach; firms often seem to be more interested in minimizing their costs than in protecting the environment. But in recent studies, environmental economists have identified various incentives for firms to improve their environmental records -- including pressure from customers, the desire to head off more rigorous regulation, and negative stock market reactions to environmental misconduct. And, as Sabel, Fung and Karkainen point out, there have been some impressive efforts at self-regulation by the nuclear industry, and more recently by the chemical industry in the wake of Bhopal. There is also fairly persuasive evidence that disclosure laws (like California's extensive toxics disclosure rules) actually have a significant effect on the performance of industry. Still, it would take an exceptional degree of optimism to view self-regulation as the mainstay of environmental protection. All too often, harming the environment is good for profits, and even the best intentioned business managers cannot ignore the ultimate reality of the balance sheet.

This leaves the bargaining model. The bargaining model takes the existing regulatory scheme as a baseline, and views reinvention as a way of negotiating from this baseline to outcomes that are better for both industry and the environment. A simple example is provided by the EPA's program for Supplemental Environmental Projects (SEPs). A SEP allows a firm to avoid paying part of its fine for environmental violation by undertaking a project like cleaning up a local lake. This is a familiar process to lawyers, who are used to seeing similar forms of negotiation used every day to settle disputes. If we had complete trust in the federal government as a guardian of the public interest, we could be positive that the outcome of this process would be better for the environment (otherwise the government wouldn't agree) and better for the industry (otherwise the firm wouldn't agree). We could then celebrate a "win-win" solution. The problem is that we can't be completely confident of the government's ability and incentives -- "capture" by industry is a familiar problem.

So we will need safeguards, probably including some involvement by public interest groups. But designing these safeguards isn't easy. For instance, if involvement by public interest groups is too extensive, the bargaining process may devolve into a form of the governance model. One option is to leave public interest groups out of the initial bargaining process, but empower them to overturn the deal if it inadequately protects the environment.

Making the bargaining process work is a challenge, but seems less audacious than trying to redesign the governance system or place all our trust on the good will of industry. At least in the short to medium term, conceptualizing reinvention as a form of bargaining, rather than as a novel form of governance or as self-regulation, seems to be the most useful way to move forward. But in the end, probably more will depend on the ability and imagination of the re-inventors, than on the conceptual frameworks of academics.

Comments on "After Backyard Environmentalism"

Daniel J. Fiorino

"After Backyard Environmentalism" offers a promising and, for the most part, astute vision of the future of environmental policy in this country. After nearly three decades of building an elaborate regulatory apparatus and centralizing ever-greater authority in Washington, policy makers are responding to demands for greater autonomy, flexibility, and participation. There are even signs that our adversarial approach to environmental regulation will eventually become more cooperative.

Many of us find this vision of a post-backyard environmentalism world appealing. It is one in which conflict is replaced by consensus. Citizens will engage experts and administrators on vital issues. Regulatory agencies will relax their technical-rationalist mode of operation in favor of a more populist orientation. Powerful national bureaucracies and activist organizations will cede the authority they have accumulated over the last thirty years and allow local governments and citizens groups more control over their environmental destinies. Traditional adversaries from industry, government, and environmental groups will set aside years of distrust and work together for a better environment. Everyone will engage in a kind of national learning seminar, in which goals are set, information on their achievement spreads throughout the policy system, multiple actors adapt their behavior in response to information, and goals are tightened as the capacity to meet them improves.

This is an appealing vision. And it is not the only such vision we have seen. The 1996 report of the President's Council for Sustainable Development made the case for a policy system that is more cooperative, participatory, collaborative, flexible, and decentralized. In two recent reports commissioned by Congress (1995 and 1997), the National Academy of Public Administration urged a shift toward a more performance-based, result-oriented policy system, and urged that we create the flexibility, state-local authority, and citizen capacities needed to achieve it. And in an ambitious effort to build consensus among a range of influential stakeholders, the Enterprise for the Environment Initiative, led by former EPA Administrator William Ruckelshaus, offered a vision of environmental policy making that was based on the same principles of participation, collaboration, and flexibility. Yet the policy response to each of these visions (and in many cases some fairly specific recommendations) has been less than resounding.

The most progress toward the kind of policy regime outlined here has been in regional or community-based environmental protection. The Chesapeake Bay experience is an

excellent example, one the authors develop nicely in the article. Many of the issues regarding non-point pollution, local land use, and economic growth were not addressed by national regulation, and there was ample room for the emergence of an adaptive, flexible, learning based-approach to the problem. In areas where regulation is more extensive, such as in industrial air, water, and waste pollution, the efforts to move toward a more flexible, responsive, performance-based approach have been far more difficult, as participants in Environmental Protection Agency's Common Sense Initiative and Project XL have found. In these efforts, a prescriptive legislative framework and traditionally adversarial relationships among parties, among other factors, presented barriers to the process of change.

The authors attribute the growing interest in flexible, decentralized, participatory approaches to the rise of "backyard environmentalism." This activism was essentially reactive, in which citizens rose to protect their neighborhoods from threats (such as the siting of a waste treatment facility) or to demand attention to an existing threat (such as an abandoned industrial waste site). The authors argue that this movement laid a foundation for a new citizen activism, and with it demands for greater local autonomy and participation. Other visions of a new environmental policy have generally overlooked the contributions of grassroots activism. At the same time, the authors give little attention to other factors that have contributed to the demands for change, such as the trend toward a "greening of industry" among leading firms, the change from a manufacturing to a services-dominated economy, and the growing impatience from nearly all quarters with a rigid, complex, and often inefficient regulatory system. What they call backyard environmentalism is a part of the picture, one they develop creatively, but these other factors also drive the demands for change.

Some more specific points deserve comment. The authors note the limits of a command-and-control approach, in particular its demands on the knowledge held by regulators. For a top-down regulatory approach to work (what is here referred to as command-and-control), regulators need lots of information about processes, costs, technologies, and other factors. They simply cannot be expected to stay current on all aspects of all sectors in today's dynamic, global economy. Although I agree that the benefits of marketable permits often are oversold, they do remove some of the information demands made on regulators. Instead of government making all of the decisions about process changes, investments in new technologies, and levels of production, each firm is allowed to make its own decisions within the context of the marketable permits trading and allocation system. I do not agree that market mechanisms necessarily make the same demands on regulators as are made by traditional regulation. A well-designed permit trading program may serve as a building block of the decentralized, learning model of environmental policy making espoused in this article.

The discussion of the Toxics Release Inventory (TRI) also deserves comment. The TRI has become known as one of the great unintended successes in the recent history of U.S. public policy. It is seen as the stimulus for substantial reductions in pollution releases by a range of industrial firms who, sensitive to their public image and often surprised at what they did not know about their own releases, undertake to improve their performance in

areas that are not required by existing regulation. While I agree that the TRI has been an impressive and innovative policy tool, I think we at least should keep it in perspective. First, the TRI might not have had the same effect had it not been against a backdrop of often stringent regulation. Some of the reductions may even have been in anticipation of future such regulation. Second, we do not know how widespread, deep, or lasting the effects of the TRI have been or will be. Firms react to bad news by acting to reduce emissions (or at least the larger, visible firms do). Before we stake the future of U.S. environmental policy on mandatory disclosure, however, I would want more information on the actual effects of the TRI.

The section on Responsible Care highlights an important and promising trend. Industry sectors are beginning to take collective responsibility for the effects of their activities on the environment. This trend is most pronounced in the chemical and nuclear power industries, where public scrutiny and potential for environmental catastrophe have stimulated industry self-regulation. But it is happening in other sectors as well, such as forest products and textile manufacturing. My own view is that these sector codes of environmental practice, issued by trade associations, offer a potentially powerful mechanism for improving environmental performance. They certainly deserve a role in the new kind of environmental policy regime that the authors lay out in this article. I give the authors credit for recognizing the potential value of sector codes in the future policy regime.

This vision for the future leaves several issues unaddressed. For example, what is the role for technical expertise and bureaucratic authority in an essentially democratic populist policy regime? Is the public willing to take on this expanded responsibility for determining environmental outcomes? If outcomes are based on local priorities and negotiations, what is the role of national standards? If national standards are not present, will local citizens have the political clout to maintain high levels of environmental performance? How will national regulatory agencies and national environmental organizations (both of whom derive their power from federal legislation) be convinced to turn over significant authority to local government and citizens groups? What we get here is a vision, but little sense of how it might be translated into a new environmental policy regime.

These reservations aside, I heartily agree with the authors' fundamental premise: The world is changing and environmental policy must change with it. Government no longer will be able unilaterally to impose its will on powerful firms, especially those with a global reach. As the origins of backyard environmentalism show, the public will not defer lightly to technical experts and administrative officials who claim authority on what is in the public good. The pace of change and complexity of modern manufacturing and the rise of service industries (which have environmental consequences as well) render traditional regulatory strategies obsolete. Just as economies and political systems modernize, so must institutions and capacities for solving and preventing environmental problems must modernize as well. The vision of a learning model of policy making that is participatory, flexible, adaptive, and decentralized is clearly the way to go. Now if we can just figure out how to get there.

Good Cops and Bad Cops for the Environment

DeWitt John

Sabel, Fung, and Karkkainen have a clear fix on the six-year debate about what others are calling "civic environmentalism" or "second generation environmental policy". They describe this new form of governance accurately.

(1) This approach engages diverse citizens, community leaders, polluters, and regulators in custom-designing environmental solutions for individual places and industries.

(2) Regulators allow flexibility to businesses to redesign their products, services, and production processes to minimize environmental impacts while still making a profit.

(3) Regulators allow flexibility when the environmental results will clearly be better. They -- and the public -- demand accountability, which requires vastly improved information about environmental conditions.

(4) New technologies for monitoring environmental conditions will help provide such information, but scientists must work as peers with citizens to collect data and interpret what it means.

This is the happy half of the story. The other half is that these new ways cannot replace our regime of strictly enforced national standards. We need both the good cop of government willing to empower and support local problem-solving efforts and the bad cop of government standing ready to enforce national standards, if necessary. Often the good cop is not persuasive if there is no bad cop waiting in the next room. The challenge is how to operate a tough regulatory regime alongside flexible civic deliberation.

Sabel, Fung, and Karkkainen might address more clearly three limits on civic environmentalism.

Borders: Many forms of air and water pollution cross borders. It is often difficult to get all interested parties around the negotiating table. Federal officials represent out-of-town and national interests. Recently thirty states did negotiate a remarkable agreement about interstate movement of ozone. But in the end, they asked EPA to incorporate the agreement in national regulations, and then some parties to the agreement promptly litigated the continuing points of disagreement.

Time: collaborative problem-solving is a demanding, often exhausting process. In most communities, citizens, local leaders, and businesses will keep talking only when there is a crisis and when there is a good chance of a mutually rewarding breakthrough. Often it is easier just to follow the prescriptive regulation because you can easily buy technology off the shelf to comply with the law. A multi-year study by the Natural Resources Defense Council and Dow Chemical recently uncovered dozens of ways to prevent pollution

while also cutting costs. The returns on investment were excellent. But the dollars saved were so small that the company would not have bothered if NRDC had not helped out.

Money: environmental issues have a consensual element; we all like clean air and water. But sometimes environmental politics is about real differences. Often business save millions by emitting a bit more pollution. So consensual problem-solving works best when there is money to pay off the losers -- for example, tax breaks for environmental equipment or purchases of conservation easements to protect species, watersheds, or open space. To make backyard or civic environmentalism work, the federal government must not only offer regulatory flexibility but also put up cash. The Chesapeake Bay program, for example, is sustained partly by a powerful Maryland senator on the EPA appropriations subcommittee.

The trend toward civic environmentalism **is** unstoppable. Citizens do demand answers that fit local conditions. New monitoring technologies help supply the information needed to measure performance and ensure accountability. Twenty moderate Republican and Democrat members of Congress recently offered "Second Generation" legislative proposals, paralleling proposals in a 1997 report by the National Academy of Public Administration which says that the old EPA system is "broken". Congress seems ready to invest billions of federal budget surpluses in protecting lands and water.

But there is a long way to go. Innovations like those which Sabel et al. celebrate are still "marginal," said the Academy. Statutes offer little encouragement to customized local problem-solving. Engineers and lawyers skilled in drafting and defending detailed prescriptive regulations still dominate agencies. Indeed, since 1999 progress towards flexibility and has been slow -- perhaps slowing.

The challenge to environmental agencies and to us advocates of second generation environmental governance is to explain how to fit the good cop and the bad cop into the same system. For example, flexibility includes devolution to states, but states collect most data and need different kinds of data than federal regulators need to ensure states do not abuse flexibility. So EPA must simultaneously command and devolve.

It is liberating to uncover a new way of addressing public concerns. The enthusiastic claims of Sabel, Fung, and Karkainen have merit. Whatever its name, new forms of environmental governance will reinvigorate our republic and protect the environment more efficiently. But we must draw on multiple traditions. We can progress with a more Jacksonian spirit; (perhaps de Toqueville is a better guide). But we need Madisonian pluralism too.

BACKYARD ENVIRONMENTALISM -- FRONTYARD PROPAGANDA

Theodore J. Lowi

For an article using some simple case studies supporting a benign and, on the surface, attractive concept of "backyard environmentalism," this has been the most dense, difficult

assignment since I quit trying to read German philosophy. Maybe it hurt that my version came e-mail, single spaced. But the turgidity was mostly in the prose.

If I got their drift after the third reading, it seems that the authors are arguing that we can arrive closer to a maximum of environmental protection from a nationally coordinated localism than from the traditional environmental regulation involving "hierarchical forms in which subordinate parts answer to the center's authority of command." Everyone lives happily ever after within a "new structure [that] is a collaborative and mutual accountability of center to parts, parts to center, parts to other parts, and all to the whole enterprise, and to the public generally." Yet in the very same paragraph, the authors inform us that their construct is neither voluntarism -- abdication of public authority to private actors -- nor is it devolution of authority from center to local units. Rather, the center retains the "whip hand ensuring that local units live up to their commitments." In other words, local interests, including experts as well as amateurs, NIMBY groups and selfless citizen groups, and of course the special interest groups and corporations, interact in "a new form of democracy" to set "allowable performance standards [and] desirable targets"; and then the standards they set through their participation and interaction (rules? ordinances? policies? directives?) would be enforced by that very same "authoritative command" of central government, of whose absence we had just been assured. All this is affectionately referred to as "the rolling-rule regime" -- which means we can have our central government and reject it too.

This is where I came in 35 years ago in my confrontation with the late New Deal policies and the very same squaring-of-the-circle we confront in this piece. Words and style are different, because the underlying ideology (i.e., the choir to which the authors are singing) is different. Their choir is the decadent phase of classical liberalism, whereas the choir in the 1960s to which the propagandists were singing was the decadent phase of social-democratic liberalism. But the motivation is the same -- to try to finesse the coercive nature of public authority in order to validate or embrace or make more convincing the key principle of that ideology as it goes into decline. I'd call it ideology if the singers were unaware of the meaning of the song they were singing: I called it propaganda in my title because it seems to me to be an ideology of whose meaning the authors are quite aware. The key principle of the classical liberal, laissez faire ideology is that free-market localism bordering on anarchy is the best way to serve the public interest. Again, pretend away public authority.

The authors then use case studies to give the impression of empirical support for their process. In the New Deal era, case studies were also a major means of illustrating and confirming the political system to which they were committed. Political scientists called this the analysis and presentation of "how democracy works," or "how the system functions" -- as though it did in fact function successfully, due to the principles being embraced. But the trouble is, for every supporting case study there is almost inevitably an unsupportive case study.

The same problem with case studies is even more pressing here because of the innate problem of "area and power" or "area and authority." Environmental policies almost

always exist in a geographic context considerably larger than the area or principality within whose jurisdiction or boundaries the policy applies. Mancur Olson introduced us in the 60s to the intractable problem of public goods and their spillover effect by use of a fable formulated by David Hume back in 1740 about the draining of a meadow. Two morals can be drawn from Hume's fable. First, there is an innate incentive not to drain the meadow if the public or spillover benefits can be enjoyed by everyone in the vicinity regardless of whether they contribute; they can go along as "free riders." Second, if the public or spillover effects are costs rather than benefits, there is an equally strong incentive or tendency to act in concert to displace as many of the costs onto other people in other communities and other principalities, near and far.

At a minimum, these are principles leading inexorably to the conclusion that the next larger and more inclusive principality must have a superior share of authority over all backyard environmental policy decisions that are made. The authors tell us of the importance of "contextual intelligence," but they don't say what context and how (and how inclusively) it is to be defined. They say, only hopefully, that in the process of participation "ordinary citizens would become quasi-experts by imitation." And they support their discovery of this natural and spontaneous acquisition of expertise with the experience of their case study on the Chesapeake Bay Program, in which "the Program" [I assume the officials or their PR people are speaking for the Program.] "... explicitly equated participation with the emulation of expert knowledge." This is a new pedagogical method for human adult learning, copied from canines and chimpanzees, that specifically relevant and required expertise -- as well as "conceptual intelligence" and "system-level learning" -- can be acquired through mimicry. How much time does this education-through-emulation take? My answer to that question is inspired by something I learned from Shaw a long time ago that democracy will fail, because there aren't enough evenings in the week!

Even more hopeful (downright propagandistic) is the authors' report on the Massachusetts case, which involved the broadening of the federal "right-to-know" requirement nationwide that the 30,000 private and government-run facilities which meet statutory size requirements must report estimates of the amount of [around 650] chemicals that are transferred off-site or are routinely or accidentally released. In 1989, Massachusetts expanded on the federal requirements to include "use or generation of toxics in any stage of production." However, as with the federal program, although the Massachusetts law set the ambitious goal of 50 percent reduction by 1997 and provided for penalties for "willful" violations of the reporting requirements, it provided no penalties for failure to act on the reduction plans that were formulated. The goals were to be achieved by an "obligation for self-monitoring to induce firms and citizens to acquire information that reveals problems and possibilities for their solution."

On the basis of this program, and all the observed participation and emulation and spontaneously acquired knowledge, the authors proceed to claim that there is "substantial evidence ... that this apparatus works." In the five years between 1990 and 1995, they report, "the production-adjusted use of toxic chemicals fell by 20 percent in

Massachusetts and the generation of toxic byproducts by 30 percent." Meanwhile, "the responding firms were most enthusiastic"

There is no reason to doubt their claim that use of toxic chemicals fell by 20 percent and generation of toxic byproducts declined by 30 percent. But there is no basis for their claim that these important data were produced by the backyard process they outlined. For example, during and before that five-year period, Massachusetts, especially the Boston metropolitan area, went through a period of rather serious de-industrialization. Massachusetts reached its peak growth in heavy industry or manufacturing in 1984, with close to 674,000 employees; it then declined by mid-1999 to 435,000. That 35 percent decline was bad news for the "Massachusetts miracle" but good news for Massachusetts breathers, with the closing of some of those old, first generation factories. Meanwhile, the city of Boston was losing population and the Boston metropolitan area (as defined by the U.S. Census Bureau) grew by a mere 0.8 percent, second to the bottom among the 30 major metropolitan areas in the U.S., the bottom spot occupied by the already thoroughly de-industrialized Pittsburgh. To attribute a 20-30 percent improvement in anything to a pussy-footed "rolling-rule regime" is no less a propaganda ploy than a president claiming credit for improvement in GDP or SAT or a mayor claiming a personal victory over crime. And meanwhile, suburban and open country areas in central Massachusetts, Connecticut and Long Island are suffering with the highest ozone scores, thanks largely to the consequences of moral #2 of Hume's fable of the meadow.

In a perverse sort of way, I am grateful for having taken on this assignment, because I can see more clearly now than ever the insidious neo-classical liberal (Republican party) influence on the thinking of intelligent policy analysts and advocates. In that light I would like to end this on a couple of important warnings, pedagogically speaking. First, never fall in love with the process. Americans love process, especially if it is grounded in competition, visibility and democracy. I suppose this is because it helps us maintain the appearance of consensus. But process is a double-edged sword: Eventually it will cut the other way, and then it will be called betrayal.

Second, if we really want a safer and healthier environment we will either have to embrace drastic de-industrialization with a smaller-is-beautiful standard, or we will have to take our beloved process and place it in a solid, legal framework: It's called rule of law. You can set strict standards -- regionally, nationally, internationally, as the situation warrants -- and you put the burden of participation on the polluter. That standard can be a rule or a tax. It puts all interested parties on an equal plane, part of a stable and understandable structure. And it enables us to ask the truly operational question, which I heard Milton Friedman ask 30 years ago at one of the first conferences held in response to the early environmental protection movement: How much pollution can we afford?

Jacqueline Savitz

The article "Beyond Backyard Environmentalism" is more a wishful fantasy than a true analysis of any purposeful reorientation in environmental regulation. The authors portray a world in which win-win situations abound, limited only by our willingness to build

partnerships and work together through a participatory dialogue. Reality, unfortunately, is not that simple. This suggestion that we are moving into such a paradigm is premised on a premature rejection of valuable regulatory programs, a mischaracterization of the programs used as examples, and a misunderstanding of the motives of well-intentioned citizens whose families and livelihoods are threatened by "progress".

Compared to centuries of human impacts on the American environment, it is too soon to label three-decade-young "traditional regulations" a failure. The need for, much less the emergence of, a "new approach" as described by Sabel, Fung and Karkkainen is not recognized by the majority of public interest advocates in place of the current regulatory approach. Participation by many organizations in these dialogues indicates a need for public involvement, but does not necessarily signal a shift in citizens' recognition of the value of more traditional approaches.

Conversely, corporate community involvement in, and even initiation of, participatory programs, likely does signify an interest in a new paradigm. The regulated community has expended billions of dollars to comply with environmental statutes, and millions more to undermine them. A new non-regulatory approach could help achieve the primary goal of corporations: to minimize costs and maximize profits.

Most environmental advocates would agree that the effectiveness of an environmental program depends primarily on its achievement of environmental goals. Using the authors' examples, one must ask: Did the TRI or TURA reduce toxic chemical use? Did the Chesapeake Bay Program (CBP) increase the quality of the Bay? These programs, among others, can be viewed on a continuum, say a scale from 1 to 10. Effective programs such as the Clean Water Act's water quality permitting program are closest to 10, TURA outranks TRI somewhere in the mid-range, and the Chesapeake Bay Program and Habitat Conservation Plans fall somewhere between TRI and the low end of the scale.

Through their initiation of public accountability, TURA and TRI are credited with stimulating a reduction of toxic chemical use and release. A closer look at these programs, however, fails to illustrate large-scale reductions resulting from participatory dialogue. In actuality, each of these laws relies heavily on what the authors refer to as "centralized command regulation." In addition to the fact that it has mandatory reporting requirements, much of TRI's perceived success has been attributed to co-existing regulations. For example, large reductions in TRI releases, while indirectly stimulated perhaps by public awareness, came about due to mandatory phase-outs of chlorinated fluorocarbons. Other reductions touted as successes in TRI are even less impressive paper reductions, resulting from changes in estimation procedures, or through chemical companies' successful attempts at chemical delisting.

Most improvements in Chesapeake Bay are attributable not to the Bay Program, but to the Clean Water Act permitting program, bans on phosphate detergents enacted by state governments in spite of staunch industry opposition, and sewage treatment plant upgrades. None of these efforts boast the type of participatory, non-regulatory process that the authors espouse.

The concept of citizen involvement itself is actually more of a historical construct than a new one. As government evolved, citizens were appointed to serve as environmental stewards. In that paradigm, which still exists today, citizens were compensated for their time. This article does not envision compensating today's citizen stewards for the time and effort expended through this onerous new construct, and as a result, confers what corporate lobbyists would call an unfunded mandate. Apparently, the authors envision a shift from citizens trained, compensated, and empowered to act as stewards to a decision-making citizenry that is disempowered, financially strapped, and as such, at a severe disadvantage in any stakeholder process.

This is not fiction. Well-intentioned everyday citizens like our parents are often invited to the table, without any resources to cover their travel or their time, and without any funds for outside technical assistance which they will require. They sit beside high-paid corporate lawyers and engineers attempting to out argue the lawyers and out engineer the engineers. With all due respect to them, how could our parents be expected to provide better service to their neighbors in the absence of federal regulations than the federal government provides? Such citizen panels are more likely to serve as smokescreens than as effective advocates. Who better understands complex technical issues, your mother, or the scientists paid by the public, to protect the public? This should not be read as a rejection of citizen involvement in protecting the environment -- indeed its the only thing that really can -- and it does so alongside a regulatory process.

In this light, promotion of "participatory approaches" touted by the authors as a new win-win approach, may instead be another method of corporate avoidance of regulations that were developed for the common good but that limit the extent to which costs can be externalized and profits maximized. The other possible explanation of the new-found prominence of these approaches, unfortunately, could be the current control of the political process that comes from campaign financing and other political/financial leverage. Equally unfortunate, there may be a limit to the endurance of principled, poorly-compensated, and in many ways altruistic citizens. The emergence of these programs is more likely the result of a combination of these factors than of a common belief in the benefits of such efforts.

As a result, the examples of the new approach outlined in the article are unconvincing at best. Few if any environmental improvements related to these programs occurred in the absence of regulation. While these efforts are premised on the obvious benefit of citizen involvement, stripping citizens of a regulatory system inflicts a handicap that could only lead to negative environmental consequences.

The proposed shift towards participatory decision-making, which the authors tout as an improvement while admitting it is improbable, stands as 1) a rejection of laws designed for the common good, 2) a shift away from compensating stewards of the common good, and while so-doing 3) preserving and even expanding the rights of corporations and individuals to externalize costs in pursuit of profit. The authors are right to suggest that this concept is counter-intuitive and improbable. Its environmental benefits also are highly questionable. After hundreds of years of environmental impacts on our finite

planet, where the result of population growth and resource extraction are becoming more and more clear, a surer more probable approach is desperately needed.

Western *Enlibra*

Jason F. Shogren*

Sabel, Fung, and Karkkainen have seen the future of environmental policy, and it is local control through consensus with added accountability. Many people would like this view of the future, especially those in the rural interior West. Local resource control is an old idea that westerners have long advocated to the powers back east. Those who live here know the land, and have a vested interest in its care. Just as we are accountable to the land, we are accountable to each other, and to the nation. Working together to find common ground just makes common sense, which is why collaborative decision making flourishes in the West. Collaboration groups now number in the hundreds, ranging from informal grassroots gatherings to government-mandated advisory councils.

This western vision is a driving force behind *Enlibra*, the Western Governors Association's new doctrine for environmental management in the region. The governors want less remote control and more local control over western resources. *Enlibra* outlines their push for strong local leadership to balance development and conservation goals, and resolve environmental conflicts. In fact, the first two principles of *Enlibra* are identical to the policy architecture promoted by Sabel, Fung, and Karkkainen.

The first *Enlibra* principle is: "national standards, neighborhood solutions - assign responsibilities at the right level." Locals understand local conditions. In contrast to unimaginative bureaucratic responses, the federal government should help local people and policymakers develop their own plans to achieve binding targets, and to provide accountability. The second principle is "collaboration, not polarization - use collaborative processes to break down barriers and find solutions." The western governors believe that community-based collaboration can help produce creative solutions with political momentum. Together these principles support local leadership and collaborative efforts to help landowners and others enhance the environment and achieve economic productivity. Sound familiar?

But the western governors take this doctrine a few steps further. *Enlibra* does not hold fast to one tool as the means for effective and accountable local control of natural resources. Consensus works in some cases, and it does not in others. They recognize that a variety of tools in combination with collaboration can be used to improve western environmental and community well-being. "Markets before mandates - pursue economic incentives whenever appropriate," is the relevant *Enlibra* principal. In some cases, collaboration might be better organized with an auction block than at a bargaining table.

To illustrate, consider collaborative Habitat Conservation Plans (HCP) for endangered species protection. Recall a HCP acts as a safety valve for a private landowner whose property shelters an endangered species. A landowner with an approved HCP has a

permit allowing the taking of endangered wildlife incidental to any otherwise lawful activity. The takings, however, cannot appreciably diminish the odds for survival and recovery of the species, and must be minimized and mitigated to the maximum extent practicable.

But at least three problems arise with the promotion of just consensus for HCP—the scope has changed with time, the process might be manipulated, and the process is seen as an invasion of privacy. First, the scope of HCPs has changed over the years. Back in 1982, people promoting HCPs had in mind a single landowner affecting a single species. Today people try to use HCPs to cover thousands of landowners and hundreds of species. Collaboration efforts are often fragile, slow, tedious processes. And most mediators will admit that adding more stakeholders will increase the costs and decrease the productivity of collaborative efforts. Second, many urban environmentalists fear that slick industry dandies will dominate the bargaining with local rubes. They fear that savvy trained experts with unending financial resources will dominate the process and pressure local communities to water down the HCP. The common perception is that anything so attractive to corporations and developers must be flawed, and primarily in their interests.

Third, many private landowners do not want to participate in a HCP collaborative process they see as inherently unfair. They consider the HCP process as an invasion of their privacy, a slap at their stewardship efforts, and an unfair restriction on their ability to protect their investment. These landowners won't even enter into a discussion when the topic of an HCP process arises. Accepting the idea of a collaborative process for critical habitat protection could be interpreted as meaning that they are not taking good care of the land already. The old adages that "no good deed goes unpunished" and "give an inch, take a mile" capture their mood.

But getting the cooperation of private landowners is vital to the preservation of endangered species. About half of the listed endangered species have eighty percent of their habitat on private land. The question is what tool besides an HCP might work to induce proactive measures to protect endangered species on private property. The scheme would need to respect landowner privacy, acknowledge their prior stewardship efforts, and allow some flexibility in how they protect their investments.

This big sticking item is compensation. Compensation for landowners have supporters and critics from both side of the debate. Conservationists who support compensation see it as a practical way to buy cooperation; landowners proponents argue that it is only fair to compensate property owners who are restricted in their ability to protect their investment. Conservationists who oppose compensation see it as a backdoor policy to sabotage the ESA through underfunding; averse landowners see compensation as a lever that will open the door for more federal control over their property, especially given the line of species being considered for listing.

A tool that might bring both sides together could be to create a market for critical habitat. Markets allow for both collaboration and privacy. While we might not be sitting across the table, a market exchange still implies we have a consensus. You want to buy habitat, I

want to sell it. Landowners can be provided the opportunity to sell private shares of critical habitat rights on the open market without opening themselves up to public access. Sabel, Fung, and Karkkainen discount market-based solutions because they require too much information. As any parent knows, too much flexibility with too little information can be a dangerous thing. This is a good point. But market respect privacy, and can help overcome major constraints facing consensus.

Markets can accommodate where consensus fails-- specifically a landowner's desire to keep private what has been private for years. Collaborative efforts face a real constraint if explicit consensus is required, but a market can work. Markets protect a landowner's desire to keep private what has been private for years. A shared feature of most models of consensus building is to even out power imbalances by "sharing information." But landowners who do not want to share information for whatever reason have little incentive to sit down at cooperate at the bargaining table.

How would this market be constructed? Similar to the real estate market, private-sector bio-economic appraisers would assess the biological quality of the critical habitat rights offered up for sale. The appraiser would certify the habitat as 4-star, 3-star, etc. quality. Sellers would then post their offer to sell a given habitat right for a given price subject to private appraisal. Negotiating fair market value for habitat rights will require independent and confidential biological/economic appraisals of habitat. Duration of the contract would be negotiated. Inspections and non-performance could be standard rules or open for discussion. Most importantly, information not essential for the public enforcement of the transaction would remain confidential.

There will be challenges. Finding landowners willing to sell habitat rights will be a task. Deciding where and how money should be spent to get the biggest ecological bang for the buck will take energy. Conservation contracts will have to be well specified because property rights are often complicated, especially for water rights. And determining which acquisition option is best for the circumstances--lease, purchase, or donation--must be thought through. This is not a pie-in-the-sky idea. Environmental markets are used around the globe, and are being proposed for use in climate change as a cost-effective mechanism to get more environmental quality at lower cost. Such a market would complement or replace already existing programs that use a bilateral negotiation landowner-by-landowner approach.

Healthy local control in exchange for stricter accountability is a trade-off many westerners might make. Suggesting that consensus is the main means to prevent hapless parochialism, however, might be asking too much. There is no universally preferred tool. Sometimes consensus works, but other times incentives work better, especially when privacy is the issue. The search for *Enlibra*, east or west, requires that we use the best tool for the task at hand.

Cass Sunstein

A system of environmental protection might be evaluated either substantively or procedurally. Let us understand a substantive evaluation to involve an assessment of the system's contribution to overall well-being, which might be defined in many different ways. Well-being could, for example, involve utilitarian or economic considerations; it may or may not be limited to the well-being of human beings; it may or may not involve judgments about rights. Let us understand a procedural evaluation to involve not the product of the system but its legitimacy, to be assessed above all by reference to democratic considerations, which might also be understood in many different ways. The intriguing and highly original discussion by Sabel, Fung, and Karkkainen (hereinafter SFK) points to an apparently new development, or set of developments, with many promising features; but I am not sure that SFK have shown that these developments are succeeding on either procedural or substantive grounds. In short, we do not know, from what SFK say here, that the developments warrant approval on democratic grounds, nor do we know that they are contributing a great deal to the various substantive goals of environmental protection.

A little background first. Until the late 1960s, much (not all) of environmental protection in the United States occurred via private law suits and judge-made common law. The result was a system that, by this time, was plainly producing excessive levels of pollution, with extremely harmful effects on social well-being (defined in any reasonable way). As we now know, regulation could greatly reduce those harmful effects, not costlessly, but without introducing comparably large harmful effects. The common law system was also highly objectionable on democratic grounds, since it ensured that pollution levels would be set, not through accountable institutions, and not as a result of democratic deliberation, but by unelected judges.

Between 1970 and the present, much (not all) of environmental protection has occurred via a remarkably ambitious, complex, and cumbersome system of national regulation. In many ways, the substantive results have been excellent, with extraordinary decreases, for example, in concentrations of all of the major air pollutants; ambient concentrations of lead alone have decreased by about 80% since 1985. Common law judges have been replaced by far more democratic institutions. But there have been serious problems as well. Much of the national effort has shown poor priority-setting, with some small problems receiving disproportionate attention, and with some large problems being neglected. For example, government devotes excessive attention to the relatively small problem of abandoned hazardous waste sites, and far too little attention to the much larger problem of indoor air pollution. Post-1970s environmentalism has also involved excessive costs, mostly because of the use of rigid, command-and-control regulation. Smarter and more flexible alternatives (such as taxes on polluting activities and tradeable emissions rights) could have produced the same reductions with hundreds of millions and probably billions of dollars in savings -- savings that might have been used for environmental or other purposes.

At the same time, the post-1970s environment process has been nothing to celebrate from the democratic point of view. Far from reflecting the deliberative judgments of the nation's citizenry, many governmental decisions have resulted from the political

influence of well-organized private groups, such as the high-sulfur eastern coal lobby (attempting to use environmental protection to insulate itself from competition from low sulfur western coal) and the corn lobby (attempting to promote ethanol).

An important question is whether the United States will be able to develop structures of environmental protection that better promote our substantive and procedural ideals. Recent initiatives, involving cost-benefit analysis and economic incentives, have accomplished considerable good -- with cost-benefit analysis pointing the way toward aggressive initiatives to remove lead from gasoline and to control destruction of the ozone layer, and with economic incentives contributing to massive, low-cost reductions in acid deposition. But SFK believe that they have identified much better, and largely unnoticed, structures for environmental protection, emerging from the participatory efforts of multiple actors and reducing key problems in flexible ways that do not impose an informational overload on national actors. There is a great deal of value in what SFK have to say; but from their discussion here, it remains unclear if the various initiatives -- assuming that they amount to something like a unitary trend -- deserve approval on either procedural or substantive grounds.

Democracy first: SFK emphasize the involvement of many "local actors," but much of what they say is quite abstract. Do the emerging structures really promote democratic ideals, suitably specified? They might show instead compromises among a set of organized interests, local and national, rather than anything deliberative or democratic. To be sure, Sabel identify far more participatory structures than national institutions are by themselves capable of providing, and the gain in local participation seems to be a large improvement. But surely many people are left out. Who are they, and with what consequences? Skeptics might fear that some of these processes are a form of environmental corporatism, reflecting not the outcomes of deliberative judgments of the citizenry, but negotiated solutions among visible well-organized actors. I doubt that the skeptics would be right, but it would be good for SKS to dispel their fears, by specifying the relevant democratic ideal and by showing, in concrete terms, how the emerging processes comply with (and perhaps inform) it.

The more important gap involves substance. What are the concrete results of the initiatives described by SFK for social well-being, defined in any reasonable way? As an illustration, consider the Toxic Release Inventory, a program that does appear to be a terrific success story, spurring large decreases in toxic releases without national regulatory controls. To make a full evaluation, it would be desirable -- indeed, it would seem indispensable -- to know both the costs of these decreases and the benefits for human health and welfare (and for nonhuman animals as well). By themselves reductions are surely good, but it is impossible to know how good they are without having a sense of the consequences of exposure for what we do or should care about.

So too for the reductions brought about in Massachusetts. SFK say that "this apparatus works" because it has brought about substantial reductions in toxic chemicals and also "enabled firms to discover significant net benefits of pollution prevention." Net benefits in terms of what, concretely speaking? Do we know that the reductions have had good

effects for social well-being, suitably defined? Would more reductions be better? Have the current reductions produced (a) trivial, (b) moderate, or (c) large benefits for health? It seems impossible to evaluate the program without knowing the answers to such questions. Similar issues might be raised about the Responsible Care Initiative and also the Chesapeake Bay Program. Compare the "best available technology" requirement in national environmental law, a requirement that has undoubted popular appeal but that has proved crude and troublesome partly because, from the standpoint of human health and other substantive values, some companies should do less than to use the best available technology, and others should do more -- by, for example, scaling back operations.

This is not at all to say that a substantive evaluation of environmental programs should depend on a crudely economic cost-benefit analysis; surely it should not. But from what SFK say here, it is possible that the health and associated benefits of the reductions are small or even trivial and also that the resulting decreases have been quite costly (even if in a sense voluntary). Costs of this kind are no mere technical matter; their consequences may include reduced employment, increased poverty, and increased prices, which come down especially hard on those least able to pay. Or it is possible that the relevant programs have done relatively little in terms of promoting the substantive goals of environmental protection -- and that other approaches would be better. Most of all, we need to know more about the effects of these programs for the health and welfare values associated with the relevant programs.

To deepen SFK's account of the emerging structure, it would therefore be helpful to have more in the way of both theory and empirical work. What is the account of democratic legitimacy by which we might evaluate the structures described by SFK, and do those structures fit that account? By what substantive criteria might we assess a system for environmental protection and how, concretely, have the structures at issue done under that standard? Have they, for example, reduced serious risks to life and health without imposing high costs, which can lead to lower wages, less employment, and higher prices? It is not the least virtue of SFK's intriguing essay that the developments they describe put such questions squarely on the table.

Lawrence Susskind

The partnerships that have caught the eye of Sabel, Fung and Karkkainen (SFK) do not just involve technical practitioners and citizens; they are collaborations among a wide range of stakeholders who realize that well-managed, face-to-face problem-solving sessions can help them advance their self-interest. While we can debate just how much of a democratic reform these activities represent, they certainly have produced impressive environmental results. [See Lawrence Susskind, Paul Levy and Jennifer Thomas-Larmer, **Negotiating Environmental Agreements**, Island Press, San Francisco, 1999.] Indeed, the "improbable reorientation" that Sabel et al. have discovered, has been going on for quite some time under the broader banner of the environmental dispute resolution (EDR) movement. There are literally hundreds of instances in which large number of

stakeholding interests representing a wide range of contending groups have-- with the help of trained mediators-- worked out voluntary agreements, including performance standards, to which all parties (including the public agencies) have agreed to be bound. In fact, there are even federal and state laws encouraging (and circumscribing) such consensus building efforts as well as university programs that offer all relevant groups the knowledge and skills needed to participate in these negotiations.

Because SFK are not attentive to the full range of relevant experience, they focus on questions that practitioners in environmental dispute resolution have already resolved, and don't get to the next set of questions on which we need their help. In particular, they are musing about three things that have, for better or worse, been resolved: the relationship between the power that seemingly devolves to ad hoc assemblies in this new form of regulatory dialogue and the formal decision-making authority that has always been in the hands of regulatory agencies; the role of experts versus the role of less engaged citizens who are not formally included in discussions; and, finally, the potential split among environmental activists into those who "prefer the inside game of pluralist grappling for influence at power centers" and those who are "reorganizing the take advantage of the local participatory possibilities of the emergent regime." I will summarize how these issues have been resolved and spell out the next set of questions that require attention.

Some Settled Questions

1. Power and Authority. When a legislative body enacts a law (and an administrative agency adopts rules to implement that law), the agencies involved can not turn over to an ad hoc assembly the authority to set performance standards or other terms of enforcement on a case-by-case basis. What they can do, though, is ask an appropriately selected set of stakeholders to generate a proposal (i.e. a set of consensus recommendations) that is not inconsistent with the intent of the relevant law and regulations. While the agency retains the power to ignore the group's advice, there is usually no reason for them to do so-- especially if agency staff have participated at every stage of the consensus building effort. Ad hoc consultations must take place "in the open" (i.e. this is required by open meeting or other sunshine laws). The product of most such collaborative partnerships are recommendations that still require the relevant agency to act. What is most interesting is that many of the negotiated outcomes of these ad hoc processes require members of the regulated community to accept constraints or to make voluntary commitments that exceed what the regulators could otherwise impose. They are accepted **in exchange for flexibility in how and when certain regulatory requirements must be met.**

2. Experts and Expertise. Most environmental dispute resolution efforts begin with a period of joint fact-finding. That is, all the stakeholders (including the regulators) agree on the selection of a set of experts to advise them collectively. Whatever knowledge and skills the experts have to offer are shared simultaneously with all the parties. A neutral facilitator acts as interlocutor-- making sure that even the least technically skilled participant is clear about what the experts have to say and how they went about gathering information, making forecasts, and preparing analyses of various kinds. Thus, the

technical resources operate in support of the collaborative effort-- avoiding the "battle of the printout" and the "dueling experts" so typical of legal confrontations. [See Connie Ozawa, **Recasting Science**, Westview Press, Boulder, Colorado, 1993 (?) not sure of the year]

3. ***A Schism in the Environmental Community***. Some advocacy groups have refused to participate in certain efforts to mediate environmental disputes, relying on media campaigns, direct action, and legal challenges to pursue their interests. Others have been willing to "come to the table" and have been remarkably successful at getting their way. Some advocacy groups have agreed to negotiate on some issues while refusing to do so on others. The same, I might add, is true of regulatory agencies. In some regions of the country, the Environmental Protection Agency has taken the lead in suggesting mediation, in other regions there have been few such efforts.

Whatever their reasons, the leaders reserve the right to decide whether or not to participate in particular consensus building efforts. If a key player refuses to participate, then dispute resolution can not go forward. As it turns out, though, there are usually more than enough disputants willing to negotiate. Since the product of these efforts is, again, only a proposal, and all such negotiations are transparent, groups that choose to stay on the sidelines retain an opportunity to make their views known at the end. Indeed, from a legal perspective, even those who choose to participate in an ad hoc effort to achieve a tailored settlement reserve their right to challenge the outcome in court if they feel they were deceived in any way or that some constitutional questions remains unanswered.

The Questions That Remain

After more than twenty years of experimentation and hundreds of documented successes, several important questions remain about environmental dispute resolution: Do mediated solutions have precedential value? Should the practice of environmental mediation be regulate? Does fairness require that hard-to-represent interests (like future generations) be represented by proxies?

1. ***Precedential Value***. The point of case-by-case problem-solving is to permit stakeholders to work out the most effective way of meeting the performance requirements contained in laws and regulations (and to stop mandating the choice of technology and other methodological details). It would follow, therefore, that differently tailored solutions might well emerge in roughly similar situations.

Our system of law and regulation presumes, however, that similar situations ought to be handled in the same way ***to ensure fairness***. Whether procedural guarantees (like the right to participate in any mediated negotiation in which you are a stakeholder) will be sufficient to assure fair treatment, remains to be seen. At present, mediated results are not recorded (the way legal decisions are). They can't be cited with the same effect in subsequent (similar) situations. Does fairness require that the results of environmental mediation ought to have precedential value?

2. **Regulating the Mediators?** There is a growing pool of experienced environmental mediators in the United States. Various states and federal agencies maintain rosters of such professionals. But there is no certification by any central body. Mediators have very different levels of scientific background and mediation experience. Some are lawyers while others are not. One unanswered question is whether there is a minimum level of (testable) competence that should be required of anyone who proposes to mediate an environmental dispute.

3. **Representation.** There are almost always hard-to-represent or diffused constituencies who are not formally represented in an environmental dispute resolution. One view is that representative democracy is not perfect, either, and that ad hoc efforts to resolve environmental disputes should not be held to a higher standard of "representativeness" than typical legislative or administrative procedures. The contrary view is that a system for selecting proxy representatives would not be hard to generate and would add to the democratic appeal of the new environmental regime.

Consensus building in environmental regulatory (and other) situations requires (1) convening the appropriate parties; (2) clarifying roles and responsibilities appropriate to the situation; (3) deliberating in a transparent and effective way; (4) reaching and testing the scope of agreement; and (5) binding the parties to their commitments. [See Lawrence Susskind, Sarah McKearnan, and Jennifer Thomas-Larmer, **The Consensus Building Handbook**, Sage Publishers; Thousand Oaks, California; 1999]. As SDF suggest, when this is done right, "disciplined consideration of alternative policies leads protagonists to discover unanticipated solutions provisionally acceptable to all." This is true and important, but it is not news. The hard questions remain.

Matt Wilson and Eric Weltman

"After Backyard Environmentalism" identifies and discusses some novel and important environmental policies and programs. Unfortunately, the article could be easily read to support government abdication of its fundamental responsibilities. It is the government's job to protect public health and the environment -- it should not be the obligation of citizens to join "stream teams" or publicize the Toxics Release Inventory (TRI) data to enjoy clean water and air. Although citizen activism is at the core of our organization's mission, it is mostly successful in concert with government action, not in lieu of it.

In fact, engaged citizenship on environmental matters is the exception, not the rule, and is often made necessary when the government is not doing its job of enforcing pollution limits and other environmental requirements. Clean water and air should be a right enjoyed by everyone, not just "squeaky wheels" with the time and assistance necessary to take up the battle for a safe environment.

In addition, the authors overstate the significance of information, planning, and public involvement initiatives. In many circumstances, they may not be the best policy. When they do work, they do so in tandem with other policies, not substituting for them. In fact, the

TRI data and other public information is often used as a tool to prod government action to enforce permits and regulations, not to embarrass polluters into cleaning up their acts.

Different types of environmental threats necessitate different policies, making it unwise to endorse one model as the wave of the future. For example, the authors rightly praise TURA as a model law for reducing industrial chemical use. For certain chemicals, however -- where there is no safe threshold for exposure, or the toxin is persistent and builds up in the food chain -- outright bans may be the safest and wisest policy. This was certainly the case for lead in gasoline, and may be equally so for perchloroethylene (perc), a dry cleaning solution, and MTBE, a gasoline additive.

In fact, the threat of the "stick" of bans, enforcement actions, and other stringent measures are necessary for the "carrot" of voluntary initiatives to work. For instance, the authors state that "leading environmentalists, landowners, public officials, and scientists contend that, on the whole, [Habitat Conservation Plans] produce more, better, and more sophisticated ecosystem management regimes" than strict application of the Endangered Species Act (ESA). Unfortunately, they cite no evidence to back this claim, nor do they even name any of the "leading environmentalists" who support it. More importantly, though, the threat of ESA Section 9 should be recognized as necessary to bring developers to the table for the expedient compromises developed in Habitat Conservation Plans. It is my experience that in negotiations with companies over a cleanup plan, the power that citizens wield is the threat of demanding government action; it is this threat which brings companies to the table and ultimately helps citizens have their demands met.

Again, the authors tend to overstate the success of their model initiatives, overlooking how they work in tandem with other policies. For instance, the authors state that the "publication of TRI data immediately disciplines polluting private actors." They cite no evidence to substantiate this, except for the anonymous claims of some "commentators." I suspect, however, that the TRI data may have had its greatest impact in embarrassing polluters in the years when it was first released, and publicity was at its height. When this year's data was released in the spring, to my knowledge, only one newspaper article highlighting a particular polluter appeared in all of Massachusetts.

More importantly, for many citizens, the TRI data is a tool to encourage more government action against polluters -- not to embarrass companies into conducting voluntary cleanups. For communities living with dirty air or polluted water, citizen activism is usually necessitated as much by a government willing to overlook the problem as much as by the companies causing the problem. This raises three key points. First, the TRI data and other public information are not a substitute for permit restrictions on pollution limits and other requirements; they are, in many situations, tools for citizens to ensure that the government fulfills its obligation to enforce these requirements. Second, the use of these strategies is only necessary in the unfortunate circumstances when the government is not doing its job.

Third, an extraordinary commitment of resources, skills, and time is required for information and public involvement opportunities to be effective in protecting public health and the environment. Many citizens -- for example, single parents, or families juggling several jobs -- do not have the time to organize a campaign against a polluter, or participate in tributary protection planning. Moreover, most citizens lack the skills necessary to organize effectively against powerful corporations. In New England, the Toxics Action Center provides organizing strategies, media training, and legal tactics to New England residents who are fighting local environmental hazards. Yet, not every state has a Toxics Action Center or a similar such organization. In addition, technical assistance is often necessary for citizens to understand the TRI data and the TURA information, and to determine what steps companies can take to clean up their acts. Yet, such assistance from the government is generally lacking; for these programs to truly fulfill their promise, grants should be made available for hiring consultants to advise grassroots groups.

The reality is that companies are more likely to have both the time and the expertise to participate in stream teams, Habitat Conservation Plans, and the like. In fact, the authors acknowledge that participation in Habitat Conservation Plans varies for site to site, often including only a permit seeker and a government official, potentially "transforming them into unprincipled backroom deals between regulators and the regulated."

Which leads to the most important point: Squeaky wheels should not be the only ones getting the grease. Engaged citizenship on environmental matters is the exception, not the rule. Yet, it should not be only communities with residents willing and able to publicize the TRI data -- and with newspapers willing to print it -- that have clean air. "Stream teams" may be effective, but it should not be the obligation of citizens to form teams for every stream, lake, and river to ensure their cleanliness. These tools are often necessary for pressuring the government to fulfill its obligations to protect our health and safety. But the use of these tools by citizens should not be obligatory for living in a clean and safe environment.