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Reinventing Environmental Regulation: Lessons from Project XL, by Alfred A. Marcus, Donald A. Geffen, and Ken Sexton. Washington, DC: Resources for the Future, 2002, 224 pp., \$22.95 paper.

Heterogeneity is the bane of the regulator. Heterogeneity across space makes it difficult to write a sensible one-size-fits-all rule (either technology- or performance-based). Heterogeneity over time makes it difficult to adapt to new technical possibilities and to provide incentives to regulated parties to create environmentally superior technologies. Heterogeneity over space and time has led to greater reliance on market-based instruments. But heterogeneity over context makes market-based instruments impractical, because market-based instruments are built on the assumption of the commodification of contexts (i.e., pollution in location A is equivalent to pollution in location B). The regulatory state has increasingly run into the buzz saw of heterogeneity, where this buzz saw has manifested itself both analytically and politically.

Out of this pressure has come a set of initiatives to make regulation more flexible so as to be more responsive to heterogeneity. This movement toward flexible regulation has surfaced in areas as diverse as food safety, worker safety, financial regulation, and environmental regulation. *Reinventing Environmental Regulation* focuses on one of the more prominent efforts in this vein, Project XL (standing for eXcellence and Leadership), launched by the Clinton Administration in 1995, and terminated by the Bush Administration in 2003.

Project XL is widely regarded as a disappointment, and the book focuses on one of its constituent disappointments: the failed negotiations between the EPA and 3M regarding 3M's facilities in Hutchinson, Minnesota. This was an "exemplary" disappointment because 3M had been an outstanding environmental performer, and because a bargain between 3M and the Minnesota Pollution Control Agency (MPCA), exchanging environmental innovation for flexible permitting, had been one of the models for Project XL. The authors compare the 3M case with three XL projects that EPA approved, but which were substantially less ambitious: projects at Intel, Merck, and Weyerhaeuser. The reader thus begins the narrative standing over the corpse of XL, as the authors assess "whodunit."

The promise of the negotiations between 3M and the MPCA/EPA was that 3M would achieve higher levels of environmental performance and receive a facility-wide permit that would allow flexibility as to how to achieve that performance. This flexibility would translate into cost savings, which, in turn, would translate into competitive advantage for 3M. The possibility was particularly plausible because many of the facilities at Hutchinson had been grandfathered, and thus not subject to regulation, consequently creating the possibility that 3M could exchange (cheap) improvements in the grandfathered facilities for what would be otherwise non-compliant processes elsewhere. In principle, one would imagine an agreement was to be had that would make both the public and the regulated party better off.

This possibility of a win-win solution was substantially muddled, as the authors point out, by a number of significant uncertainties. First, given the high environmental performance of the facility, it was questionable how many environmental gains were actually to be had. Second, 3M was substantially revamping its production at this time, so any proposed changes in processes had to incorporate the uncertainties of future production. Third, the legal basis of waiving some rules in

exchange for improved environmental performance was uncertain, creating the costly possibility for all parties of extended litigation.

Despite these uncertainties, the narrative suggests that an agreement was possible—and, in fact, reached by the MPCA, 3M, and a group of stakeholders assembled to assess the proposal (the authors were all participants in the stakeholder process). The agreement committed 3M to updating its environmental management system (EMS), enforceable implementation of certain best available control technologies (BACT), and certain emissions limits. Of course, we know, the agreement collapsed, and we return to the question: Whodunit? The answer to the mystery is resolved about halfway through the book—the EPA.

So how did the EPA do it? And, more importantly, why did it do it? The answer, the authors argue, is a combination of EPA skepticism of 3M's future behavior and the uncertainties listed above. The uncertainties regarding 3M's future production choices meant that there were scenarios under which the binding limits to which they agreed to adhere would actually allow a decrease in environmental protection. The EPA thus insisted upon additional enforceable performance criteria and substantial record-keeping requirements. The EPA approached the agreement with an explicit quid pro quo model: Cost-saving flexibility would be exchanged for quantifiable environment-saving practices. The authors argue that this was a misconstrual of the underlying principles of Project XL. In particular, the authors argue that the potential in XL was as an experiment in allowing locally based holistic management of environmental problems. The implication of an experimental paradigm was that failure should be possible. A guaranteed quid pro quo would place substantial risk on the private parties in case their experiments in environmental management failed—discouraging participation in XL, and dampening innovativeness among those who did participate.

This bargaining approach was exacerbated by a negotiation framework that did not engage EPA in its early stages. The EPA was only minimally involved in the initial negotiations among 3M, MPCA, and the stakeholders. The result was that bargaining became anchored on areas in the negotiating space that would turn out to be unacceptable to the EPA. Because 3M needed to move ahead in developing their production plans, in the end the clock ran out on negotiations. A negotiation process that simultaneously engaged all parties, the authors argue, would have expedited a conclusion.

Why did EPA do it? Here the authors are perhaps too harsh, overstating the difficulty in implementing flexible approaches in a system not built for it. They state that “[a]llegiance to the rule of law was a significant element in the agency's culture that made it difficult for EPA to bargain with industry and environmental groups, even when such bargaining might bring about significant environmental gains at reduced costs” (p. 39). Of course, presumably one does want agencies to have an allegiance to the rule of law, but one wants law that allows enough flexibility in implementation to allow better environmental results at lower costs to society, and regulatory agencies that seize the opportunities that flexibility offers for better outcomes. How much flexibility the law allowed EPA in implementing its regulations is indeed somewhat fuzzy, as the authors discuss. And the EPA clearly proceeded cautiously with respect to Project XL, as evidenced by the relative paucity of litigation around the initiative. The insistence of a quid pro quo, and of (sometimes expensive) documentation of environmental achievements, were effective preemptive attacks on potential challenges to Project XL. The question is whether, in the absence of a clear statutory framework that supported a more flexible approach, the EPA should have sought clarification in the courts by pushing innovative projects

that had fewer guaranteed environmental benefits. Of course, such a clarification process would have had substantial costs to the agency, and it is unclear whether, in the end, that path would have left the agency better able to achieve its mission. The distinction between the EPA's quid pro quo approach and the experimental approach the authors advocate is also somewhat overstated. As they note, experimental approaches should have a reasonable chance of achieving improved environmental outcomes, but with some uncertainty. The question is really one of who should bear the costs of that uncertainty. Under a quid pro quo model, the regulated party bears the costs of the uncertainty. If the experiment fails, the regulated party will have to implement additional measures to improve environmental performance. Under the alternative the authors advocate, society bears the costs of failed experiments. From a policy design point of view, it is analytically indeterminate who should assume those risks. Clearly, if the regulated party bears those risks, it will discourage participation in a program such as XL, but in particular discourage higher risk, lower yield experiments. Furthermore, the regulated party likely has better knowledge of those risks than the regulator. Both of these factors point to putting the onus on the regulated party. On the other hand, the government is likely somewhat more risk-neutral than most firms, and, most importantly, as the authors point out, experiments may generate informational benefits about how best to regulate, which would accrue to society.

In the end, what the reader is left with is a sense of the enormous transaction costs involved in regulatory flexibility, particularly where there are substantial uncertainties at the site, as at Hutchinson. The number of hours devoted to the negotiations were remarkable, especially when one considers the relatively limited resources of the regulators. These types of transaction costs may be greatly outweighed by the potential benefits of bargains, but this case strongly suggests that any program along these lines would require a serious scaling up of capacities of the regulators.

Reinventing Environmental Regulation is thus, first, a blow-by-blow account of an early attempt to graft flexibility onto the regulatory system of the United States. For anyone interested in the various models for making regulation more flexible, and the practical challenges involved in such approaches, it is mandatory reading. With the body of Project XL still warm, it would be tragic if we did not learn from the autopsy.

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Can Gun Control Work? by James B. Jacobs. New York: Oxford University Press, 2002, 304 pp., \$27.50.

These are tough times for gun-control advocates. Congress seems unlikely to renew the 1994 Federal Assault Weapons Law, which among other things bans large magazines and some military-style weapons. The most potent efforts at the state level are to expand the legal opportunity for individuals to carry concealed guns in public places; the Utah legislature, for example, recently authorized people who have gun permits to carry guns on school grounds. The traditional interpretation of the Second Amendment—that it protects the right of the states to organize a militia (i.e., the National Guard)—is being challenged by those, including Attorney General