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Book Review (reviewing Wesley A. Magat, Reform of Environmental Regulation (1982))

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Book Review

REFORM OF ENVIRONMENTAL REGULATION, edited by Wesley A. Magat. Cambridge, Massachusetts: Ballinger Publishing Co., 1982. Pp. 190. $24.95.

Political and social reform has captivated the American public for generations. Reform usually means efforts to improve institutions without destroying them. The successes of reformers often have prompted counter-reforms.[1] Environmental regulation recently has entered a period of counter-reform, with a movement to relax the strict regulations enacted in the past fifteen years.

Reform of Environmental Regulation[2] collects eight essays that focus on "reforming" Environmental Protection Agency (EPA) regulatory programs. With the exception of editor Wesley Magat, who wrote the introductory chapter, the authors prepared their essays for a conference held at Duke University on reform of environmental regulation. The first part of this review summarizes and critiques *Reform of Environmental Regulation*. The second part offers an approach to reform suggested by a recent United States Supreme Court case.

The introductory chapter of *Reform of Environmental Regulation* summarizes five separate approaches to regulatory reform. The following seven chapters explore these approaches in varying degrees.[3] The first approach, labeled "fine tuning," adjusts existing regulatory programs to ameliorate the harshness of certain requirements without changing the "basic thrust" of the laws.[4] The effort to weaken emission standards for new automobiles illustrates this approach.

The second strategy employs centralized review of all regulatory programs to redirect decisions of executive agencies, and to circumvent the existing regulatory and institutional structures.[5] President Reagan's Executive Order 12,291[6] exemplifies this approach. The order requires the Office of Management and Budget to approve the content of all significant regulations issued by executive agencies, such as EPA.

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1. See R. HOFSTADTER, THE AGE OF REFORM (1955).

2. REFORM OF ENVIRONMENTAL REGULATION (W. Magat ed. 1982) [hereinafter cited as REFORM].

3. REFORM does not explore all these approaches in detail, although it devotes some attention to each.

4. REFORM, *supra* note 2, at 2.

5. *Id.* at 3.

6. 46 Fed. Reg. 13,193 (1981).

The third approach relies on "economic incentives," which in theory underly EPA's "Controlled Trading Program."[7] The program allows marketing and exchange of air pollution credits, promoting economic efficiency, and permitting the reduction of air pollution at a lesser cost.

The fourth approach converts certain environmental protection programs to technology-based discharge limiting programs. Because this approach prescribes the areas of compliance rather than allowing the market to determine the proper method, it is the antithesis of the "economic incentives approach." Accordingly, the main argument raised against it is that it is economically inefficient.

Regulatory relief constitutes the fifth and final approach identified by Magat,[8] although relief goes beyond mere reform.[9] This approach aims simply to reduce the cost of compliance. Regulatory relief therefore does not necessarily improve the efficiency of regulation. Relief can be accomplished in a number of ways: Congress can relax regulatory statutes or reduce the budget of EPA, or, through administrative appointments, the Administration can coax EPA to relax existing rules, slow down the regulatory process, and delay the promulgation of new rules. Magat suggests that the Reagan Administration has pursued regulatory relief, as opposed to regulatory reform, because the Administration recognized that "reform" would have been too politically costly.[10]

Magat then divides the seven essays into two groups. The first group addresses the problems of developing data about environmental hazards, of assessing and evaluating risks, and of producing information useful to decisionmakers. The second group examines practical problems of implementing particular reform approaches, specifically economic incentives, cost-benefit analysis, and cost-effectiveness schemes.

In the first essay, Robert Dorfman examines the quality of decisions in the area of pesticide regulation.[11] The Federal Insecticide,

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7. These policies were renamed and republished as the Emissions Trading Policy Statement, 47 Fed. Reg. 15,076 (1982).

8. REFORM, *supra* note 2, at 5.

9. Eads & Fix, *Regulatory Policy*, in THE REAGAN EXPERIMENT 129-53 (J. Palmer & I. Sawhill eds. 1982):

> The fact that the Reagan administration's program unlike those of its predecessors, is labeled "regulatory relief" rather than "regulatory reform" is no accident. It is the administration's view that, for all their efforts, previous programs of reform have failed to reduce the regulatory burden, in part because their commitment was only half-hearted.

Id. at 152-53.

10. REFORM, *supra* note 2, at 7.

11. Dorfman, *The Lessons of Pesticide Regulation* in REFORM, *supra* note 2, at 13. Dorfman is Wells Professor of Political Economy at Harvard University. He also was the

Fungicide, and Rodenticide Act of 1974[12] (FIFRA), requires the EPA Administrator to review the registration of some 50,000 pesticides in use. The Administrator may decline to register a pesticide or place restrictions on use if he or she determines that the risks of use outweigh the benefits.[13]

Dorfman concludes that EPA is almost totally ineffective in regulating pesticides under FIFRA.[14] EPA has established a very formalized procedure for reviewing pesticide registration.[15] Through a complex and time consuming regulatory process, EPA reviews and develops an enormous amount of risk and benefit information on individual pesticides. In evaluating risks, EPA faces great uncertainties because of, among other problems, the difficulty of extrapolating human risk conclusions from laboratory toxicity studies on animals. Benefits, on the other hand, appear at first glance to be easier to estimate because a change in marginal cost affects the supply of a particular product. Nevertheless, EPA cannot know the true costs and benefits without knowing whether the alternatives are more or less hazardous. EPA thus must solve a huge matrix of simultaneous equations before it can regulate one pesticide. Even if this process is completed as planned, EPA officials face unanswerable questions such as: "Is it worthwhile to forego $5 million a year in economic benefits in order to reduce the amount of heptachlor to which a group of ten million people is exposed from an average of 0.6 to 0.4 milligrams per lifetime?"[16]

Dorfman concludes that "billowing clouds of uncertainty" surround any pesticide regulation decision made by the EPA Administrator.[17] He argues that this leads to a paralysis in decisionmaking, and that, as a result, EPA regulates few pesticides. "The public is not being protected, the law is not being executed, the agency is bogged down in an impracticable task, and the pesticide industry is burdened with oppressive procedural expenses and delays from which only the lawyers benefit."[18] Given the lack of a foreseeable scientific breakthrough in assessing harm, Dorfman's economic prescription for ameliorating this situation is to divide all pesticides into generic risk categories and to charge fees based on these categories.[19] This approach, he suggests, at

chairman of the National Research Council Committee on Pesticide Regulation, which issued a report on EPA's regulation of pesticides. *Id.* at 189.

12. Pub. L. No. 104, ch. 125, 61 Stat. 163 (1947) (codified as amended at 7 U.S.C. §§ 136-136y (1982)).

13. Dorfman, *supra* note 11, at 14.

14. *Id.* at 16.

15. *Id.* at 15.

16. *Id.* at 24.

17. *Id.* at 25.

18. *Id.* at 26.

19. *Id.* at 28.

least makes some judgment on how much economic benefit society would be wise to forego in order to spare its members the risks of exposure.[20]

Dorfman's analysis of the difficulty of evaluating the desired safe level of exposure to pesticides provides a thoughtful view of the regulatory dilemma. On the one hand, not enough solid information exists to judge societal risk. On the other hand, failure to make decisions can expose many people to harmful doses. As he notes, this dilemma is typical in regulatory decisions the EPA must make.[21] Dorfman's suggestion for reform, as he candidly admits, is merely stop-gap. It does not attack the core of the problem, which is that EPA, through no fault of its own, lacks the wisdom and knowledge to deal with pesticides and has resorted to awkward and unsatisfactory expedients to establish regulations. Dorfman's tentative solution merely adds a tax or surcharge to the incremental cost of using pesticides. Fundamentally, it is an unsatisfactory allocation of risks because, regardless of the design, the population exposed has no input into the amount of risk to which it will be exposed.

The next essay also examines the uncertainties of health risk assessment.[22] Viewing the problem from the perspective of a statistician, James Ware's essay dissects a small part of the problem of establishing national ambient air quality standards under the Clean Air Act—the relationship between persistent coughing and long term exposure to sulfur dioxide and particulate matter.

Although a number of epidemiological studies conclude that a direct relationship exists between persistent coughing and high concentrations of sulfur dioxide and particulate matter, Ware suggests that uncertainties remain in using these studies to establish national ambient air quality standards.[23] The major uncertainties encountered include the variability of the population samples, limitations on the accuracy of air pollution measurements, and reporting errors.[24] Ware examines statistical techniques to deal with this uncertainty, and concludes that conventional means of statistical analysis inadequately summarize the available medical studies.[25] He suggests that a new language should be developed for weighing and synthesizing evidence to enable scientists, decision analysts, and decisionmakers to more effec-

20. *Id.* at 29.

21. *Id.*

22. Ware, *Health Risk Assessment: The Role of Statistical Analysis*, in REFORM, *supra* note 2, at 31. Ware is Associate Professor of Biostatistics at the Harvard School of Public Health. *Id.* at 189.

23. Ware, *supra* note 22, at 33.

24. *Id.*

25. *Id.* at 42.

tively communicate about risks.[26]

Ware's essay on statistical risk assessment attempts to extract statistical confidence from uncertain data. That he finds no easy method for doing so from a wide range of data is not surprising. His call for a new methodological approach is not particularly helpful to decisionmakers who must make judgments daily and in highly charged political climates. At some point, an environmental decisionmaker must make a judgment on the best data available, without engaging in wishful thinking about greater degrees of certainty. Unfortunately, Ware offers no immediate guidance in making such a judgment.

In the third essay, A. Myrick Freeman III examines the strengths and weaknesses of cost-benefit analysis in evaluating environmental risks.[27] He "demythologizes" the concept that cost-benefit analysis should be used to make actual decisions. Cost-benefit analysis itself is prescriptive only when coupled with a value judgment that the government should seek to maximize the dollar benefits of its policy action. Executive Order 12,291 embodies such a prescriptive value judgment.[28] Yet the prescriptive use of cost-benefit analysis in Executive Order 12,291 is inappropriate for making regulatory decisions, because some benefits cannot be measured in dollars, because environmental decisions are not strictly utilitarian in nature, and because such analysis falsely assumes even distribution of costs and benefits. For example, benefits can accrue to one group, but costs, such as increased health risks, can fall on another group. Cost-benefit analysis obscures these issues. Nevertheless, Freeman finds that cost-benefit analysis aids systematic organization and presentation of information on regulatory consequences and tradeoffs.

Freeman examines EPA's 1979 regulations for the storage and disposal of polychlorinated biphenyls (PCB's).[29] He finds the analysis accompanying the regulations deficient because it failed to analyze three important considerations: the cost-effectiveness of alternative regulation, the reasonableness of the risk remaining after adoption of the regulations, and the proposals of other governmental agencies to reduce or remove PCB's from the environment.[30] As a result, EPA had no coherent basis for selecting its purportedly "cost minimizing mix of regulatory options."[31] In spite of cases such as this, Freeman ultimately

26. *Id.* at 44.

27. Freeman, *Risk Evaluation in Environmental Regulation*, in REFORM, *supra* note 2, at 47. Freeman is Professor of Economics at Bowdoin College. *Id.* at 189.

28. *See generally supra* note 6 and accompanying text. Executive Order 12,291 provides that a regulatory action shall not be taken unless its social benefits outweigh its social costs. 46 Fed. Reg. 13, 193 (1981).

29. 40 C.F.R. § 761 (1983).

30. Freeman, *supra* note 27, at 58.

31. *Id.* at 64.

concludes that competent cost-benefit analysis is a valuable tool for the environmental decisionmaker. The key to its successful use, he asserts, lies in knowing its limitations.[32]

Freeman's essay clearly identifies the problem with relying on cost-benefit analysis to make decisions; the analysis operates within only a restricted set of values. Even a competently constructed cost-benefit analysis, then, asks unanswerable questions, given the problems identified in Dorfman's earlier essay.[33] Although EPA may not have been able to reasonably conclude that its strategy on PCB's was the best mix of regulatory options, it could have concluded that it had thoroughly examined the costs of the particular strategy that it had chosen. Such an analysis would have been within Freeman's avowedly limited expectation for cost-benefit analysis.

The shortcomings of cost-benefit analysis pointed out by Freeman lead to James Vaupel's short essay on policy analysis.[34] Vaupel defines and defends the role of the policy analyst in environmental agencies. He describes how the policy analyst integrates the narrower functions of natural scientists, economists, and political scientists. Policy analysts acknowledge that natural scientists are important to the setting of standards, that economists have a role in identifying costs and benefits, and that political scientists understand the political process. The role of the policy analyst is to assemble this information in a manner that enables the decisionmaker to "think about a particular decision problem."[35] Vaupel suggests that policy analysts are able to assess incomplete, contradictory, and widely varying scientific studies in formulating options for the decisionmaker.[36] He urges more research into creative policy design, giving the decisionmaker better and more imaginative alternatives from which to choose.[37]

Vaupel attempts to promote the role of the policy analyst at the expense of others who participate in environmental decisionmaking. Although it is true that good policy analysis helps environmental decisionmakers to reach good decisions, Vaupel has not shown that the lack of good policy analysts has hindered decisionmaking. Indeed, a policy analysis accompanies every major EPA decision. EPA decisionmakers, however, confront a limited range of policy choices. In many instances, a Congressional mandate restricts their freedom of action. Thus, while it may be possible to strengthen the analyses, the ultimate quality of

32. *Id.* at 66.

33. Dorfman, *supra* note 11.

34. Vaupel, *Truth and Consequences: Some Roles for Scientists and Analysts in Environmental Decisionmaking*, in REFORM, *supra* note 2, at 71. Vaupel is Associate Professor of Public Policy and Business at Duke University. *Id.* at 189.

35. Vaupel, *supra* note 34, at 77.

36. *Id.* at 78-79.

37. *Id.* at 89-90.

EPA decisionmaking will depend on the range of choices available to the decisionmakers.

The next two essays represent forays by economists into the jungle of marketable or tradeable pollution credits. The essays, which form the core of the book's second section, explore the use of economic incentives to control pollution. Marc Roberts examines practical problems in EPA's air pollution trading and bubble policies.[38] He traces the origins of these policies to classical economic theory, which regulates undesirable side effects of economic behavior through economic incentives and disincentives. The most direct method of mitigating the effects of pollution, for example, is the levy of a surcharge in the form of effluent charges. In environmental regulation, however, effluent charges currently are not perceived to be politically feasible. The concept of "marketable pollution rights" has arisen, therefore, as a partial substitute.

EPA first applied the marketable rights concept to the problem of locating new sources of pollution in areas that are not attaining national ambient air quality standards.[39] In such areas, EPA allowed new sources to be built if the owner of the new source could negotiate to obtain emission reductions from existing sources.[40] The emission reductions from the existing sources theoretically offset emissions from the new source, resulting in no net decrease in air quality. Although this concept often works well on paper, it is difficult to assess its true validity because of the unavailability of monitoring data, the difficulty of forecasting emissions from each participant in the transaction, and the lack of any method to compare location, time and size of emissions. Moreover, the tradeoff system encourages both buyers and sellers of emission credits to exaggerate the emissions reductions achieved. Roberts argues, surprisingly, that the difficulty with the application of the concept to the real world stems more from a failure to embrace the concept than from the complexity of its application.[41] The solution to these problems, according to Roberts, is to reduce transaction costs to the participants and to widen the market to ensure a reasonable number of buyers and sellers.[42] In particular, he argues that EPA should adopt a system of permits that specifies emission quantities.[43] He asserts that this proposal and a number of others would introduce greater certainty and flexibility into the permitting process, and make

38. Roberts, *Some Problems of Implementing Marketable Pollution Rights Schemes: The Case of the Clean Air Act*, in REFORM, *supra* note 2, at 93. Roberts is Professor of Political Economy and Health Policy at the Harvard School of Public Health. *Id.* at 189.

39. 41 Fed. Reg. 55,525 (1976).

40. *Id.* at 55,525, 55,528.

41. Roberts, *supra* note 38, at 108.

42. *Id.* at 109.

43. *Id.*

the marketable pollution credit program more effective.[44]

Roberts' essay on the origin and application of emission credits uncovers many of the inherent problems in devising a "market rights scheme." Nevertheless, he argues that the solution is to make the commodity (clean air) more fungible and to expand the market.[45] In our opinion, the real problem lies not in devising a market system to make air pollution control fungible, but in ensuring that regulatory agencies adopt cost-effective control requirements in the first instance. Roberts admits that only a limited amount of air quality improvement can be achieved in the Los Angeles air basin, precisely because the regulatory agency has designed control requirements with cost-effectiveness as a consideration. Consequently, once controls are in place and ambient air quality goals achieved, a substantial need no longer exists for artificial market mechanisms such as the trading of emission rights. An artificial market for these emission rights becomes a "fine tuning" mechanism for source control.

In a related essay, Robert W. Hahn and Roger G. Noll argue that it is possible to develop a market for tradeable emission rights.[46] They suggest that market approaches would be much less costly than the existing system of technologically based emission controls, and propose a modified form of wasteload allocations. For example, in an air pollution program, once the regulatory body establishes a maximum level of emissions, it holds an auction for permits. The total amount of emissions to be permitted equals the air quality goal for the region. The open market where firms could buy and sell permits would establish the prices. The rationale for this system, of course, is that the market determines the most cost-effective means of controlling pollution.

Hahn and Noll believe that problems with market-based systems, such as a market imbalance caused by a single source in a region, can be solved. They insist that such a system, applied to the sulfur oxide problem in the Los Angeles air basin, would result in identifiable gains.[47] They admit, however, that such a market scheme depends on four critical components: a knowledge of the cost of regulation, a sufficient monitoring and enforcement capability by the regulatory agency, a good inventory of emission sources, and an understanding of the relationship between source emissions and the measures of environmental quality.[48] With respect to the last component, Hahn and Noll concede

44. *Id.* at 108.

45. *Id.*

46. Hahn & Noll, *Designing a Market for Tradeable Emissions Permits*, in REFORM, *supra* note 2, at 119. Hahn is Research Economist at the California Institute of Technology. *Id.* at 189. Noll is Professor of Economics and Chairman of the Humanities and Social Sciences at the California Institute of Technology. *Id.*

47. Hahn & Noll, *supra* note 46, at 145.

48. *Id.* at 142-43.

that in very complex pollution problems several types of emissions interact to form a variety of pollutants, "often in nonlinear and even nonmonotonic ways."[49] This does not discourage them, however, because they believe that market imperfections can be overcome by an intelligently designed market institution. Hahn and Noll pin great hopes on the artificial market concept. They suggest that an entire regulatory program could be developed around the market approach. Although the structure they have devised may be suitable for resource development problems, such as the auction of offshore oil leases, it is not easily transferable to problems where there has been overutilization of a resource such as clean air, and where there is a need to reduce use of the resource. Scientists and policymakers have studied the Los Angeles air quality problem for years, yet no one fully understands it. Without a full understanding of the nature of atmospheric chemistry, it is unlikely that a voluntary market mechanism will control pollution more precisely and effectively than the present system of targeting controls. Hahn and Noll's argument that free markets are more efficient, therefore, is unconvincing.

The final essay, by David Harrison, Jr. and Paul Portney, bears the title "Who Loses from Reform of Environmental Regulation?"[50] Harrison and Portney identify a latent problem in all reform approaches: someone usually loses. If the potential loser has sufficient political influence, he or she can often prevent the reform from taking effect, or can request and receive compensation.[51] For example, municipalities receive compensation for the cost of capital plant to treat sewage waste through a public works grant program administered by EPA.[52] Similarly, Congress has permitted businesses to finance some pollution control equipment through tax exempt Industrial Development Bonds.[53] The potential loser is an overlooked part of the political process, and is an unlisted item in any cost-benefit analysis. Reform does not always generate winners.

Attempts to mitigate the harshness of some environmental regulations have taken the form of reform. Recent programs adopted by EPA in administering the Clean Air Act exemplify this. Under the EPA bubble policy a source owner may increase airborne emissions from an existing source by reducing emissions at another.[54] This theo-

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49. *Id.* at 144.

50. Harrison & Portney, *Who Loses from Reform of Environmental Regulation*, in REFORM, *supra* note 2, at 147. Harrison is Associate Professor at the John F. Kennedy School of Government, Harvard University. *Id.* at 190. Portney is Senior Fellow at Resources for the Future. *Id.*

51. Harrison & Portney, *supra* note 50, at 148.

52. 40 C.F.R. §§ 35.900-.970 (1983).

53. I.R.C. § 103(b)(4)(F) (1982).

54. Air Pollution Control, Recommendation for Alternative Emission Reduction Op-

retically allows the source owner to pick its own most efficient pollution control strategy. Similarly, the EPA offset policy allows the building of a new emission source in a nonattainment area only if the new source offsets its pollution by reducing emission levels elsewhere.[55] Operators of the new source can accomplish this either at one of their own existing sources or at someone else's. The authors note that these policies achieve the desired result of economic efficiency without creating losers among the polluting industries.[56] Unfortunately, losses may occur outside the industry. One example of this, cited by the authors, concerns an emissions trade between sources located several miles apart.[57] Residents and workers near the plant reducing emissions enjoy better air quality, while those located near the new plant are subjected to poorer air quality. Accomodation of these losers, the authors state, makes political sense.[58] "Designing institutions that simultaneously achieve equity, efficiency, and political feasibility should be a priority for researchers and government officials."[59]

The essays in *Reform of Environmental Regulation*, taken as a whole, stand for the proposition that regulatory reform is no substitute for thoughtful decisionmaking. Every responsible administrative agency evaluates its programs on a continuing basis, examining how it can do its job more effectively and less expensively. The term "regulatory reform" has come to connote conservative lawmaking that trims away at the environmental regulations that were established in the 1970's. There is no particular reason, however, other than the present political climate, to define "regulatory reform" in this manner. Reform, as Magat notes, need not be a cynical way of carving up particular statutes or regulations.[60] It can be making laws work better to achieve the goals identified in the statutes and can represent more careful development and implementation of regulatory programs.

Significantly, the United States Supreme Court appears to be moving toward reasoned decisionmaking as an appropriate means of regulatory reform. In an important recent case, *Motor Vehicles Manufacturers Association v. State Farm Mutual Automobile Insurance Co.*,[61] the Court remanded an agency action which had been a centerpiece of the Reagan Administration's regulatory relief program—rescission of the passive restraint or "airbag" rule. Under the Carter

tions Within State Implementation Plans. 44 Fed. Reg. 71780 (1979) (EPA Policy Statement).

55. 40 C.F.R. § 51 app. s (1983).
56. Harrison & Portney, *supra* note 50, at 152.
57. *Id.* at 153.
58. *Id.* at 176.
59. *Id.*
60. REFORM, *supra* note 2, at 2-7.
61. 103 S. Ct. 2856 (1983).

Administration, the Department of Transportation (DOT) adopted a regulation under the National Traffic and Motor Vehicle Safety Act (Safety Act)[62] that required all automobiles to be installed with passive restraints by 1984. Two different devices could satisfy this regulation. A manufacturer could install automatic seatbelts, which are conventional seatbelts that attach to the interior of the door, and which can be used without any action by the passenger. Alternatively, a manufacturer could install airbags, inflatable devices that automatically inflate under accident conditions and rapidly deflate afterwards.

In an earlier round of rulemaking, DOT had decided that the automatic seatbelts could be detachable.[63] In 1981, under the Reagan Administration, the agency rescinded the entire regulation. The agency reasoned that manufacturers would install automatic seat belts rather than airbags, passengers would detach the automatic seat belts and, as a result, the safety benefits of the regulation would be negligible. At the same time, the agency reaffirmed its earlier finding that airbags were an effective and proven safety technology.[64]

The Court had little trouble seeing the obvious flaws in this analysis. Although the Court analyzed the case in terms of its standard test for judicial review of agency rulemaking—whether agency action was arbitrary or capricious—it did so in a manner that required the agency to consider alternatives. The "first and most obvious" reason for remanding the rescission, the Court held, was the agency's failure to consider an "airbags-only" standard:

> Given the effectiveness ascribed to airbag technology by the agency, the mandate of the Safety Act to achieve traffic safety would suggest that the logical response to the faults of detachable seatbelts would be to require the installation of airbags. At the very least this *alternative* way of achieving the objectives of the Act should have been addressed and adequate reasons given for its abandonment. But the agency not only did not require compliance through airbags, it did not even consider the possibility in its 1981 rulemaking.[65]

Remarkably, the court criticized the agency for not proposing or considering a regulatory alternative—something that sounds a great deal like NEPA's requirement for consideration of alternatives.[66] It is well-established that an agency must develop a record explaining its

62. Pub. L. No. 89-563, 80 Stat. 718 (1966) (codified as amended at 15 U.S.C. §§ 1381-1431 (1982)).

63. 103 S. Ct. at 2869 & n.13.

64. *Id.* at 2869.

65. *Id.* (emphasis supplied). The Court also held that the agency had dismissed arbitrarily the benefits of a detachable automatic seat belt. *Id.* at 2871. This part of the holding prompted Justice Rehnquist's dissent. *Id.* at 2874-75. The Court's opinion on the airbag issue was unanimous. *Id.* at 2874.

66. 42 U.S.C. § 4332 (1976).

decision[67] and may not change direction without an explanation on the record.[68] But the Court never before had remanded a regulation for an agency's failure to consider alternatives never proposed. The case, therefore, appears to break new ground on the matter of judicial review of agency rulemaking. Although the case does not expressly require the development of alternatives (as does NEPA),[69] it plainly requires the consideration of obvious alternatives once developed.

The Court also reaffirmed, as it has on other occasions,[70] that fidelity to statutory purpose is a touchstone for administrative rulemaking. That the National Traffic and Motor Vehicle Safety Act is a technology-forcing statute intended to protect public safety played a critical role in the decision. The Court recognized that regulations may be changed, and then added:

> But the forces of change do not always nor necessarily point in the direction of deregulation. In the abstract, there is not more reason to presume that changing circumstances require the rescission of prior action, instead of a revision in or even the extension of current regulation. If Congress established a presumption from which judicial review should start, that presumption . . . is not *against* safety regulation, but *against* changes in current policy that are not justified by the rulemaking record.[71]

Agencies presumably design regulations to implement statutes. Rescissions of those regulations, therefore, must be scrutinized to ensure that the agency is still implementing the statutory purpose. Because there was a safer alternative to rescission, the Supreme Court held the agency's action to be arbitrary and capricious.[72]

For the moment, the most openly suspect forms of "regulatory relief" are being reversed or remanded by the courts.[73] At the same time

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67. Securities Exch. Comm'n v. Chenery, 318 U.S. 80, 87 (1943).

68. Atchison, T. & S.F. Ry. v. Wichita Bd. of Trade, 412 U.S. 800 (1973).

69. An agency has an obligation to respond to significant public comments submitted in response to a notice of proposed rulemaking. Portland Cement Ass'n v. Ruckelshaus, 486 F.2d 375, 394 (D.C. Cir. 1973). An agency therefore is required to consider significant alternatives presented in public comments. This obligation differs, however, from a requirement to consider alternatives at an early stage of the rulemaking process, and to develop alternatives whether or not interested members of the public independently urge their adoption. *Cf.* Vermont Yankee Nuclear Power Corp. v. Natural Resources Defense Council, Inc., 435 U.S. 519, 551-55 (1978) (even NEPA does not require agencies to consider alternatives only vaguely suggested by comments).

70. *See, e.g.*, American Paper Inst. Inc. v. American Elec. Power Serv. Corp., 103 S. Ct. 1921 (1983).

71. *Motor Vehicles Mfrs. Ass'n*, 103 S. Ct. at 2866 (emphasis in original).

72. *Id.* at 2868.

73. Natural Resources Defense Council, Inc. v. Gorsuch, 685 F.2d 718 (D.C. Cir. 1982), *cert. granted sub nom.*, Chevron U.S.A. v. Natural Resources Defense Council, Inc., 103 S. Ct. 2427 (1983); Natural Resources Defense Council, Inc. v. EPA, 683 F.2d 752 (3d Cir. 1982); Action on Smoking and Health v. CAB, 699 F.2d 1209 (D.C. Cir. 1983); Planned Parenthood of Am. v. Schweiker, 559 F. Supp. 658 (D.D.C. 1983).

that the Court has begun to ask for consideration of obvious alternatives, writers such as the contributors to *Reform of Environmental Regulation* have undertaken to assess alternatives. Thus, *Reform of Environmental Regulation* makes a valuable contribution in directing attention away from mere "relief" to genuine issues of reform. It is unfortunate that so many of those who are attracted to this enterprise focus narrowly on reducing economic costs. In our view, their efforts should have a broader aim, such as improving the level of protection afforded the general public.

Of equal importance to factual or methodological questions, however, are ethical or moral questions raised by regulatory reform. As some of the contributors to *Reform of Environmental Regulation* recognize, public law questions are ultimately questions of social morality; the best mathematical analysis in the world does not provide a self-evident means for making policy choices. An administrator faced with five lawful options for a particular program still needs to articulate an ethical framework for weighing costs, risks, and benefits. Until we develop a more sophisticated way of thinking about and resolving the moral issues raised by regulatory reform, the contributions made in this and other works cannot be fully applied.

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