IMPLEMENTING FEDERAL ENVIRONMENTAL POLICIES: THE LIMITS OF ASPIRATIONAL COMMANDS

JAMES A. HENDERSON, JR.*
RICHARD N. PEARSON**

INTRODUCTION

There is an understandable tendency, whenever reliance is placed upon legal institutions for solutions to complex and pressing social problems, to pay relatively scant attention to the inherent limits upon the effectiveness of law. This tendency has been particularly evident when the need for solutions is perceived to be urgent, as it currently is in the field of environmental regulation. This Article examines the limits of a regulatory technique frequently relied upon by federal lawmakers in recent years: attempts to compel individuals and organizations to cooperate in good faith—to "aspire"—in implementing federal environmental policies. Frequently these attempts occur in the context of forcing addressees to develop pollution control technology. As the following analysis will make clear, however, they occur in other contexts as well. In Part I, the theoretical bases and historical antecedents of the limits upon the effectiveness of aspirational commands are developed. This analysis is used in Part II to examine some of the difficulties that have been encountered in implementing federal environmental policies.

It should be emphasized that the central thrust of this Article is *not* that federal attempts at environmental regulation will not succeed. To the contrary, a variety of regulatory approaches other than those focused upon here are available to implement important federal environmental policies.[1] Indeed, it does not follow from the analysis in this Article that aspirational commands attempting to compel good faith cooperation ought never to be employed. To the extent that forceful statements of policy contained in such commands provide a moral backdrop against which to measure and assess (and there-

---

* Visiting Professor of Law, University of Virginia; Professor of Law, Boston University. A.B. 1959, Princeton University; LL.B. 1962, LL.M. 1964, Harvard University.

** Professor of Law, Boston University. B.B.A. 1950, University of Michigan; LL.B. 1956, Boston University; LL.M. 1964, Yale University.

We wish to thank David E. Shellenberger, Class of 1978, and Michael S. Simon, Class of 1979, for their research help, and our colleagues John Leufsdorf, Henry Monoghan and Gilbert Verbit, who read several earlier drafts and provided many useful comments.

1. Professor Tribe, who has written extensively concerning the relationships between law and technology, has stated that for a regulator to bring about a shift in the direction of the technology development of an organization, he must use one of three methods or a combination of them: (1) he must tell the organization specifically what to do; (2) he must alter the environment in which the organization functions in ways calculated to generate the change; (3) he must restructure the organization so that it more closely reflects his own values. L. TRIBE, CHANNELING TECHNOLOGY THROUGH LAW 52-53 (1973). These methods are not limited to contexts in which technology is sought to be developed, but apply in any instance in which one person attempts to enlist an organization in the implementation of his values. Consistent with the analysis in this Article, Professor Tribe does not list the use of aspirational commands as one of the methods by which an organization's course of technology development can be changed.

fore gradually to influence) conduct affecting the environment, legal rules couched in essentially aspirational terms may constitute a necessary and important component of the overall program of federal environmental regulation.[2] But they must be placed in a proper perspective. Relying too heavily upon such rules generates substantial costs, including a general decline in respect for law. Such rules are also likely to produce unfair and seemingly random patterns of enforcement which in turn will generate not only disrespect for law in general, but also cynicism regarding the environmental policies which these mandates purport to advance. Indeed, too much reliance upon such commands may actually produce patterns of response which are the opposite of those desired. Thus, the following analysis is offered in the hope of strengthening, rather than weakening, federal environmental regulatory programs.

I. ASPIRATIONAL COMMANDS: THEIR NATURE AND LIMITS

"Aspiration," as that concept will be employed in the following analysis, refers to the state of mind with which an actor performs a task. An actor performs "aspirationally" when he aims at accomplishing as best he can the task's underlying objectives as he perceives them.[3] Since the objectives of many tasks are generally understood to carry limitations upon the commitment of resources, the phrase "as best he can" does not require a single-minded, "drop everything else" approach to performing the task. Instead, aspiration requires that, within these limitations, an actor will perform to the best of his ability. Nor need the task be described explicitly in aspirational terms to be aspirational. "Do your best" may accompany a request that an actor perform a given task; but even without such words the actor will be aware of the general nature of the task's purpose and will understand that he is to act in a way to achieve that purpose.[4]

---

2. For a collection of materials on the effectiveness of moral suasion as an adjunct of formal regulatory techniques, see L. FRIEDMAN & S. MACAULAY, LAW AND THE BEHAVIORAL SCIENCES 246-53, 307-41 (2d ed. 1977).

3. It does not make much sense to discuss aspiration in connection with tasks the actor undertakes upon his own initiative, in contrast to tasks assigned to him by another. Under the first circumstance, the actor defines the purpose of the task himself and typically acts in a manner consistent with his self-selected purpose.

4. Thus, even when told to "wash the dishes," an addressee is presented with a considerable range of possible responses, including some which deserve to be termed aspirational. Moreover, an addressee bent upon thwarting the addressor's purposes will certainly have the opportunity to do so—*e.g.*, by "accidentally" dropping the dishes in the process of washing them. For this reason, addressors of commands of this sort usually rely upon specific performance objectives. *See* text accompanying notes 46-50 *infra*. For the view that all commands, however formal and specific, inevitably require some "filling in" in light of their underlying purposes, and hence by implication present the opportunity for the addressee to aspire in responding to them, see Fuller, *Positivism and Fidelity to Law—A Reply to Professor Hart*, 71 HARV. L. REV. 630, 661-69 (1958). *See also* Murphy, *Old Maxims Never Die: The "Plain-Meaning Rule" and Statutory Interpretation in the "Modern" Federal Courts*, 75 COLUM. L. REV. 1299 (1975). Of course, different commands require varying degrees of "filling in," and to that extent are more or less aspirational. For example, the command to wash the dishes is less aspirational than one to develop a low pollution automobile engine.

This Article is primarily concerned with legal commands to aspire—that is, aspirational commands backed by threats of legal sanction. Such commands are not always doomed to fail. For example, when an addressee is commanded by law to perform a task, he may perform aspirationally because he happens to share a commitment to the purpose of the task with the addressor. It is more likely, however, that insurmountable difficulties will arise whenever aspiration is made the subject of sanction-backed commands.

A. *Aspirational Commands and the Legal System*

From the very beginnings of our jurisprudence, common-law judges recognized that only essentially nonaspirational patterns of conduct may effectively be compelled by threats of legal sanctions.[5] Thus, criminal law has traditionally consisted almost entirely of commands which are negative, specific, and nonaspirational. Tort law, although vaguer in some respects, is also predominantly negative and nonaspirational.[6] Courts have generally refused to rely upon affirmative, aspirational commands even when they are confronted with specific contexts in which such commands might have appeared to be especially desirable—where, for example, a helpless person could be rescued by the active intervention of another.[7] This same reluctance is reflected in the traditional refusal of courts to order specific performance of personal service contracts,[8] and in the concern in administrative law with constraining, rather than compelling, the exercise of administrative discretion.[9] It is no less clearly reflected in the restraint with which federal lawmakers in the American system have approached the delicate task of attempting to direct the conduct of the states.[10]

---

5. Legal philosophers have also noted the difficulties of enforcing aspirational commands. *See, e.g.*, L. FULLER, THE MORALITY OF LAW (rev. ed. 1969). Professor Fuller distinguishes between the moralities of duty and aspiration, and insists that aspiration cannot be compelled. "There is no way in which the law can compel a man to live up to the excellences of which he is capable." *Id.* at 9.

6. Tort law usually does not impose liability upon the actor for failure to act absent some special relationship between the actor and the person injured. *See generally* W. PROSSER, LAW OF TORTS 338-50 (4th ed. 1971). The duty imposed by the law of negligence to avoid creating unreasonable risks is vague, to be sure, but liability does not turn on whether the actor did his best. *See* Vaughan v. Menlove, 3 Bing., N.C. 468, 132 Eng. Rep. 490 (C.P. 1837). *See also* RESTATEMENT (SECOND) OF TORTS § 283B (1965) (mental deficiency of an actor not relevant to the issue of negligence). Furthermore, in many instances, the duty to refrain from acting unreasonably is given much more specific content by reference to custom and statutes.

7. As a rule, neither the criminal law nor tort law in this country imposes a general duty to rescue. *See* W. LAFAVE & A. SCOTT, HANDBOOK ON CRIMINAL LAW 183 (1972); W. PROSSER, *supra* note 6, at 340-43. *But see* VT. STAT. ANN. tit. 12, § 519 (1973). The typical American approach has been to encourage, rather than to attempt to compel, rescue efforts by altering the tort rules of liability for injuries caused to the rescued person by the rescue attempt. *See* J. HENDERSON & R. PEARSON, THE TORTS PROCESS 399 (1975).

8. *See generally* 5A A. CORBIN, CONTRACTS § 1184, at 342 (1964).

9. *See* L. JAFFE, JUDICIAL CONTROL OF ADMINISTRATIVE ACTION ch. 9 (1965); Stewart, *The Reformation of Administrative Law*, 88 HARV. L. REV. 1667, 1687 (1975).

10. One commentator has observed:

> Federal law often says to the states, "Don't do any of these things," leaving outside the scope of its prohibition a wide range of alternative courses of action. But it is illuminating to observe how rarely it says, "Do *this* thing," leaving no choice but to go ahead and do it. The *Federalist* papers bear ample witness to the Framers'

This does not mean that the American legal system is indifferent to the importance to society of aspirational conduct. However, it operates to encourage such conduct indirectly, rather than to compel it directly. The major legal institutions which the American system has traditionally relied upon to maintain sufficient levels of individual incentive have been property and contract.[11] Together, they provide the basic common-law framework for an economic marketplace in which decisions affecting resource allocations are made by means of contract bargaining. Bargaining is a voluntary process[12] in which each participant seeks to maximize the benefits to himself which flow from exchange transactions.[13] The benefits which a participant derives from this process are then generally protected by the law of property. As a result, individuals are encouraged to use best efforts in their own self-interest.[14] Building upon the common-law institutions of contract and

---

awareness of the delicacy, and the difficulties of enforcement, of affirmative mandates from a federal government to the governments of the member states.

Hart, *The Relations Between State and Federal Law*, 54 COLUM. L. REV. 489, 515 (1954).

Whatever the constitutional limitations upon the power of the federal government to regulate state activities may be, *see* National League of Cities v. Usery, 426 U.S. 833 (1976), most instances in which the federal government has attempted to control state governments by affirmative, aspirational commands, have been substantial failures. One of the most notable of the federal efforts was the attempt to assign to the states responsibility for enforcing the national prohibition laws. While the traditional reasons for the failure of prohibition have centered around the substantial refusal of citizens to obey the laws, it has also been recognized that the inability of the federal government to get the states to act affirmatively to discharge their enforcement responsibilities contributed to the failure. *See* A. SINCLAIR, PROHIBITION: THE ERA OF EXCESS 192-93 (1962). A similar inability of the federal government to compel state officials to discharge their responsibilities in connection with the return of fugitive slaves and fugitives from justice has also been noted. *See* Hart, *supra*, at 515.

The experience has been somewhat different in connection with the obligation of state court judges to apply and enforce federal law. Judges normally act conscientiously in this regard, perhaps out of the sense of professionalism that judges are expected to bring to their work. *See* K. LLEWELLYN, THE COMMON LAW TRADITION 45-51 (1960). On occasion, however, state court judges have deliberately refused to implement the clear commands of federal law when the values underlying state law are markedly different from those of federal law. This appears to have been the case in the ultimately successful challenge to a Utah statute which set different ages of adulthood for males and females. *See* Stanton v. Stanton, 30 Utah 2d 315, 517 P.2d 1010 (1974), *rev'd and remanded*, 421 U.S. 7 (1975), *original judgment adhered to*, 552 P.2d 112 (Utah 1976), *vacated and remanded*, 429 U.S. 501 (1977), *judgment in accordance with Supreme Court opinion*, 564 P.2d 303 (Utah 1977). Even when state court judges act in good faith to apply federal law, however, they may tend to exercise the discretion that inheres in applying the law in ways that are consistent with their own values and inconsistent with federal values. *See* Neuborne, *The Myth of Parity*, 90 HARV. L. REV. 1105, 1119 (1977). The same problems can also occur within the hierarchy of a single judicial system. *See* Note, *Judicial Performance in the Fifth Circuit*, 73 YALE L.J. 90 (1963).

11. *See* L. FULLER, *supra* note 5, at 28.

12. Only in rare instances, such as labor law, are persons directly compelled to bargain. *See* 29 U.S.C. § 158(a)(5), (b)(3) (1976). Even in the field of labor law, however, courts have avoided attempting to enforce such an aspirational command by requiring proof of bad faith to show that this section has been violated, rather than requiring proof of good faith to show that it has been satisfied. Furthermore, bad faith is not established by an examination of the negotiators' states of mind, but by examination of the conduct of the parties and through the use of per se rules. *See generally* R. GORMAN, BASIC TEXT OF LABOR LAW 399 (1976); Cox, *The Duty to Bargain in Good Faith*, 71 HARV. L. REV. 1401 (1958); Gross, Cullen & Hanslowe, *Good Faith in Labor Negotiations: Tests and Remedies*, 53 CORNELL L. REV. 1009 (1968).

13. "The economic test in [deciding whether to impose liability for breach of an undertaking] is whether the imposition of liability will create incentives for value-maximizing conduct in the future." R. POSNER, ECONOMIC ANALYSIS OF LAW 68 (2d ed. 1977).

14. "[T]he legal protection of property rights has the important function of creating incentives to use resources efficiently." R. POSNER, *supra* note 13, at 28.

property, legislatures and courts have intervened to assure the continued viability of, and freedom of choice within, the marketplace. These interventions have tended to assume forms which permit and encourage, but do not directly attempt to compel, the exercise of aspiration in the marketplace.[15] Thus, while the legal system has encouraged aspiration through the creation of incentives, it has not sought directly to compel persons to aspire.

Nevertheless, there have been times when lawmakers have overcome their traditional reluctance to rely upon aspirational commands. Perhaps the greatest number of these have involved attempts by federal courts to enforce civil rights. In large measure, this use of aspirational commands is attributable to the fact that there have been substantial pressures upon federal courts to compel the states to cooperate in the attainment of the goals embodied in the Constitution. For reasons peculiar to the field of civil rights, aspirational commands have occasionally met with some success.[16] In areas such as criminal procedure[17] and school desegregation,[18] however, courts have

15. These legal interventions include: (1) laws imposing constraints upon conduct in the marketplace considered destructive of free competition, such as antitrust laws and the law of fraud and misrepresentation; (2) laws imposing specific affirmative obligations designed to compel conduct supportive of competition, primarily conduct involving the flow of important information—*e.g.*, the disclosure requirements of securities laws and truth-in-lending laws; (3) laws creating property interests in intangibles designed to provide incentives for artistic and technological creativity—*e.g.*, copyright and patent laws; and (4) laws designed to influence, by means of subsidies and penalties, a wide range of decisions affecting resource allocations—*e.g.*, tax incentives and grants-in-aid. To some extent these interventions may involve aspirational commands—*e.g.*, the requirements of the securities laws that certain "material" information be disclosed. But they are less aspirational than would be direct commands to engage in the bargaining process. *See* note 4 *supra.*

16. As the next section indicates, the major difficulty involved with aspirational commands stems from a divergence in values between addressee and addressor. Aspirational commands, however, though difficult to enforce in the short run, may in the long run be an important force which helps to shape and alter attitudes. *See* note 2 *supra.* This is especially so when, over a period of time, the Supreme Court consistently proclaims that certain aspirational commands are embodied in the Constitution. The respect accorded to the Constitution and the Court in this country may help alter an addressee's values over time. In addition, civil rights matters do not ordinarily involve "the tragedy of the commons," which operates to lead persons to maximize their own short run self-interests at the expense of their long run welfare. *See* text accompanying notes 57-59 *infra.*

17. One example is the rule of Miranda v. Arizona, 384 U.S. 436 (1966), directing police to warn persons in their custody of the right to remain silent and the right to an attorney. Communication of the sort involved in giving such warnings is an aspirational activity, *see* W. ALSTON, THE PHILOSOPHY OF LANGUAGE 42-43 (1964), since the warning, if it is to be effective, must not be given simply as "a preliminary ritual to existing methods of interrogation," 384 U.S. at 476, but must "show the individual that his interrogators are prepared to recognize his privilege should he choose to exercise it." *Id.* at 468. As one study of the impact of *Miranda* concluded: "A . . . difficult—and probably insolvable—problem is to insure that warnings will be full and fair. The tone of a detective's voice, a few words added or omitted, the context in which a warning is given—all are factors difficult to review, and hence to control, but each may profoundly affect the suspect's understanding of his rights." Project, *Interrogations in New Haven: The Impact of* Miranda, 76 YALE L.J. 1519, 1614 (1967). This study, and others, have concluded that the requirements of *Miranda* have had little effect upon the day-to-day criminal process. *See* Medalie, Zeitz & Alexander, *Custodial Police Interrogation in Our Nation's Capital: The Attempt to Implement* Miranda, 66 MICH. L. REV. 1347 (1968); Seeburger & Wettick, Miranda *in Pittsburgh—A Statistical Study*, 29 U. PITT. L. REV. 1 (1967).

18. Frustration has often been the lot of federal judges attempting to compel school officials to act affirmatively to develop and implement plans to achieve racial integration. Orders to school officials to so act will succeed only to the extent that school officials share the same basic values as the court. *See* U.S. COMM'N ON CIVIL RIGHTS, FULFILLING THE LETTER AND SPIRIT OF THE LAW: DESEGREGATION OF THE NATION'S PUBLIC SCHOOLS 92-102

encountered substantial difficulties whenever they have yielded to a felt necessity to rely upon aspirational commands to attain constitutional goals.

B. *The Difficulty of Enforcing Aspirational Commands*

It is important to distinguish the difficulties inherent in the enforcement of aspirational commands from the problems involved in the enforcement of law generally. Even nonaspirational commands will be difficult to enforce if the resources devoted to law enforcement are inadequate to the task, or if there is a general disrespect for the source of the law.[19] Aspirational commands present problems of a different order, however. These difficulties stem from the divergence of values between addressor and addressee, a condition which is likely to occur when a lawmaker relies upon threats of sanctions. Thus, when the addressee of an aspirational command is indifferent to, or hostile toward, the values and objectives reflected in an assigned task, aspiration of the sort desired by the addressor will typically be absent. Instead of seeking to maximize the accomplishment of the addressor's values, such an addressee may be expected to respond by either secretly resolving not to aspire in the performance of the task, masking his unwillingness with feigned sincerity, or by honestly misperceiving the addressor's objectives, which typically will only be vaguely described in an aspirational command, and consequently aspiring to perform in a manner which is only marginally useful to the addressor. Indeed, these responses have been characteristic of the experience in civil rights cases.[20]

It must be emphasized that the addressor's problems are not ameliorated by threats of sanctions.[21] The addressor cannot determine, with sufficient accuracy to support a consistent application of sanctions, whether the addressee has secretly refused to aspire. Furthermore, he cannot reduce the risk of the addressee's misinterpretation of his intent because generally he must keep his instructions vague if he is to leave the addressee free to aspire. Of course, both risks could be reduced by telling the addressee specifically what to do. If the addressor could have been specific, however, there would have been no need to rely upon an aspirational command.[22] Thus, there are two basic and unavoidable problems with employing sanction-backed aspirational

---

(1976). Of course, were such a concurrence of values to exist, it is unlikely that court-ordered integration would have been necessary to begin with. In extreme circumstances, courts may have to take over much of the day-to-day operation of school systems to accomplish the desired integration. *See, e.g.*, Morgan v. McDonough, 540 F.2d 527 (1st Cir. 1976), *cert. denied*, 429 U.S. 1042 (1977).

19. *See generally* Evan, *Law as an Instrument of Social Change*, in APPLIED SOCIOLOGY 285-89 (A. Gouldner & S. Miller eds. 1965); Trubeck, *Max Weber on Law and the Rise of Capitalism*, 1972 WIS. L. REV. 720.

20. *See* notes 17-18 *supra*.

21. The threat of a sanction may discourage open defiance, but this effect is not unique to aspirational commands. Even the addressor of a nonaspirational command may have enforcement problems if the command is not backed by a sanction.

22. Indeed, to the extent that the command tells the addressee specifically what to do, it ceases to be aspirational.

commands. These are, first, the problem of nonverifiability, inhering in the addressor's inability to determine whether the addressee has actually aspired in performing an assigned task; and second, the problem of vagueness, inhering in the characteristic openendedness of aspirational commands.

1. *Nonverifiability.* The problem of nonverifiability in connection with legal commands to aspire is especially acute because it threatens one of the conditions necessary to the efficacy of a system of sanction-backed legal commands—the requirement that sanctions generally be imposed in response, and only in response, to nonconforming behavior.[23] To be sure, the addressor will be able to detect egregious instances of noncooperation—open defiance by the addressee, for example, will not pass unnoticed. However, there will usually be a range of responses available to the addressee that fall short of obvious bad faith, but that also fall considerably short of aspiration. Even assuming that the sanction is sufficient to discourage obvious bad faith responses, the addressor of a command to aspire will nevertheless be unable generally to determine whether the addressee has responded aspirationally. In a substantial majority of instances, the addressee will plausibly be able to assert that he has done his best under the circumstances, and the addressor will be unable to establish the contrary.

Thus far it has been assumed that the addressee of an aspirational command is an individual. Because most addressees of such commands in the context of environmental regulation are organizations such as business firms and governmental agencies, it is necessary to consider whether the problem would differ significantly if the addressee were such an organization. The answer depends upon the extent to which any attempt to dissemble requires the cooperation of large numbers of people. When many persons must cooperate in putting up an organizational false front, the relatively greater risks of being exposed tend to render attempts at pretense unattractive. Of course, management may frequently be in a position to dissemble effectively on behalf of an organization, and to that extent the problem of nonverifiability may threaten the efficacy of aspirational commands.[24] It is improbable, however, that large numbers of persons in an organization could effectively be involved in collective deceit.[25]

2. *Vagueness.* The nonverifiability problem is starkest in the relatively rare instance in which there is a direct command to aspire in the performance of a simple and concretely defined task. In connection with most aspirational commands, however, the addressor will be unable to describe the task specifically, and accordingly will deliberately allow the addressee substantial discretion in the choice of how to perform. Although the problem of non-

23. *See* L. FULLER, *supra* note 5, at 81-91.

24. *See, e.g.*, note 98 *infra.*

25. This point is largely intuitive. It would appear that the more people who are involved in collective deceit, the more likely it is that someone will expose it. The risk of exposure is increased by the fact that intraorganizational communication tends to be in writing, thus providing a record that is potentially open to greater outside scrutiny.

verifiability will still be present in such circumstances, vagueness adds another dimension to the addressor's problems in relying upon aspirational commands. In exercising his discretion in choosing among the alternative methods of performance, the addressee will tend to select alternatives consistent with his own values. It follows that in ways important to the addressor, the objectives sought by him will not be accomplished. This will generally occur even though the addressee honestly maintains that he is aspiring in the performance of the assigned task. The addressee may make a conscious effort to substitute the addressor's values for his own, but the more complicated the task to which he is assigned, the less likely he is to succeed with such a substitution, and the less likely it is that the performance will meet the addressor's own objectives. Nevertheless, in these circumstances the addressor could not fairly impose a sanction, although the addressee's performance departs substantially from what the addressor desired.[26]

The problems that arise in connection with the unavoidable vagueness of aspirational commands tend to be more subtle than the problems associated with nonverifiability. A hypothetical example for purposes of clarification will be useful. Assume that a powerful but artistically inept monarch commands a poet to do his best, under threat of sanction, to write a poem that will please the monarch. Of course, such a command would present the poet with an opportunity to dissemble. However, unless the monarch's and the poet's aesthetic tastes coincide (which would be unlikely given the monarch's reliance upon a threat of sanction), the command would place even an honest poet in a quandary about what to do. Should the poem be long? Short? Lyric? Tragic? Presumably, basic parameters covering these elements could be established. But even if the monarch were to narrow the poet's choices by a general description of his preferences, the remaining possibilities would be practically limitless. Assuming a time limit has been imposed, and given the difficult task of determining the mix of aesthetic values peculiar to the monarch with any degree of precision, eventually the poet would be compelled to sit down and write with only minimal guidance from the mandate. Bearing in mind that the poet is not required to please the monarch, but only to try his best to please him, the poet should be safe from sanction.[27] But given the inherent vagueness of the command, the monarch would run a substantial risk of being disappointed with the results, even assuming a skillful poet, aspiring to please the monarch, and satisfied in his own mind with the work product.

The core of the problem threatening the efficacy of the aspirational command in this example resides in a mismatching of skills and values. The poet possesses the skills, but lacks the "proper" (*i.e.*, the monarch's) aesthetic values. By contrast, the monarch possesses the proper values, but lacks

---

26. *See* L. FULLER, *supra* note 5, at 63-65.

27. This assumes a monarch sensitive to the necessity for clarity in his official expressions and to the requirements of a rational and consistent application of sanctions. *See* notes 23, 26 and accompanying text *supra*.

poetic skills. In effect, the monarch is attempting to commandeer the poet's skills and bend them to his own aesthetic value structure. Because the monarch can only communicate his aesthetic preferences in vague terms, however, the end result is very likely to be poetry which, aside from the fact that it may fit some clumsy, monarch-imposed parameters of being long and tragic, or short and lyric, does not accurately reflect the monarch's aesthetic values. A dilemma is thus presented: the monarch lacks the skills to be sufficiently specific in his task description, and the poet lacks the ability to substitute the monarch's values for his own. Moreover, assuming a monarch with an appetite for poetry in a kingdom in which poets do not share the monarch's tastes,[28] the dilemma is largely unavoidable. The same factors which necessitate the monarch's commanding the poet to aspire to write poetry also prevent him from telling the poet specifically what to do.

Since aspirational commands in the context of environmental regulation are more likely to be addressed to organizations than to individuals, it is necessary to consider whether the vagueness problem changes with organizational addressees. It will be recalled from the earlier discussion of the nonverifiability problem that shifting from an individual to an organizational addressee tends to reduce the problems confronting the addressor of an aspirational command.[29] With respect to the problem of vagueness, however, the opposite result is likely to occur: such a shift exacerbates the difficulties encountered in attempting to compel aspiration. The reasons for this may best be understood by returning briefly to the example of the monarch and the poet. In that example, the problem of vagueness stemmed from the monarch's inability to communicate his aesthetic value structure to the poet. To some extent, this inability might be overcome if the addressee were an individual. Thus, were the poet to spend considerable time with the monarch, he might come to appreciate the monarch's values intuitively, and by a conscious act of will he might be able to substitute many of those values for his own.

In contrast, where the addressee of an aspirational command is an organization, especially a large organization structured along traditional, hierarchical lines of authority and responsibility, the possibility of achieving such a substitution of values is significantly reduced. The organization's values are often intrinsically and inseparably fused with its structure;[30] as such, the organization lacks the separate consciousness necessary to substitute the addressor's values for its own.[31] To be sure, organizations are made up

---

28. In the actual world, the monarch would have a choice of poets, and presumably would choose one whose work he admired. But in the analogous context of government attempts to channel technology development, the conditions described in the text often exist —the government needs certain development, and the range of choice available to it is relatively narrow.

29. *See* text accompanying notes 23-25 *supra*.

30. *See* H. KAUFMAN, THE LIMITS OF ORGANIZATIONAL CHANGE 5-40 (1971); C. PERROW, ORGANIZATIONAL ANALYSIS: A SOCIOLOGICAL VIEW 171-74 (1970).

31. "The corporation *itself*, it is said, 'does no act, speaks no word, thinks no thoughts.'" C. STONE, WHERE THE LAW ENDS 3 (1975). For a description of the ways in which attempts

of individuals who exert personal influence in determining patterns of organizational behavior.[32] But the structural constraints upon organizational change are just as important to an understanding of an organization's potential for adapting to outside directives.[33] A complex hierarchical organization inevitably responds to aspirational commands in ways more consistent with its standard operating procedures than with the values of either the addressor or the individuals making up the organization.[34]

C. *Aspirational Commands and Regulatory Agencies*

The foregoing analysis of the limits of aspirational commands is supported by the existence of a phenomenon much commented upon by observers of American administrative law—the capture of regulatory agencies by those persons and organizations that the agencies are supposed to regulate.[35] A major function of administrative agencies is to translate vague and aspirational mandates of the legislature into specific, nonaspirational rules of conduct for those to be regulated. In technically complex matters, which are often the subject of administrative regulation, agencies often lack the expertise necessary to promulgate regulations that are specific and nonaspirational. In these circumstances, the agencies must rely upon those possessing the expertise—in most instances, the same firms which are to be regulated—for substantial assistance in the rulemaking process. And because the firms will not, and to a large extent cannot, effectively separate their technical expertise from their values, the regulations which emerge from such a process tend to reflect the values of the firms rather than any independent, congressionally imposed values. In this respect, the agencies are in very much the same position as was the monarch who attempts to capture the poet's skills without accepting the poet's aesthetic values.[36] In the end, both the monarch and the regulatory agencies are themselves captured by their dependence upon the expertise of those whom they seek to regulate. Even agencies established by Congress for the express purpose of asserting regulatory independence are unavoidably exposed to this risk of capture.[37]

---

to introduce change in an organization fail because of the "calculated resistance" and "programmed behavior" of its members, see H. KAUFMAN, *supra* note 30, at 10-23.

32. *See* G. ALLISON, ESSENCE OF DECISION 3, 10-14 (1971); C. PERROW, *supra* note 30, at 2-7.

33. *See* G. ALLISON, *supra* note 32, at 67-78; H. KAUFMAN, *supra* note 30, at 5-40, 68-91.

34. *See* H. KAUFMAN, *supra* note 30, at 5-40, 68-91. *See also* K. ARROW, LIMITS OF ORGANIZATION 28-29, 39-43 (1974).

35. A variety of causes have been suggested for this phenomenon. *See, e.g.*, M. BERNSTEIN, REGULATING BUSINESS BY INDEPENDENT COMMISSION 74-102 (1955); Cutler & Johnson, *Regulation and the Political Process*, 84 YALE L.J. 1395 (1975); Huntington, *The Marasmus of the ICC: The Commission, the Railroads, and the Public Interest*, 61 YALE L.J. 467 (1952); Noll, *The Economics and Politics of Regulation*, 57 VA. L. REV. 1016 (1971). The analysis suggested here is supported by Stewart, *supra* note 9, at 1686. Indeed, something close to "capture" of Congress by agencies, because of the relative expertise of the latter, is suggested by Ribicoff, *Congressional Oversight and Regulatory Reform*, 28 AD. L. REV. 415 (1976), and by Scher, *Conditions for Legislative Control*, 25 J. POL. 526, 532-33 (1963).

36. *See* text accompanying notes 26-28 *supra*.

37. The Consumer Product Safety Commission is a case in point. The Commission's need to rely upon industry-generated technical information in the development of product

The typical vagueness of mandates from Congress to federal agencies presents problems not only for agencies, but also for Congress and the federal executive (hereafter the Congress/Executive) in regulating the behavior of the agencies. The fact that agencies often respond affirmatively, even enthusiastically, to their mandates is due in substantial measure to a coincidence in the values of the agencies and of the Congress/Executive. Because the Congress/Executive are responsible for establishing, staffing, and maintaining the federal administrative agencies, they will often aspire in directions compatible with expressions of congressional and executive intent.[38] Viewed in this way, the agencies are not being compelled to aspire, but rather are being allowed to do so. Thus, the paramount concern of federal administrative law has been directed not at stimulating agency action in pursuit of congressionally established objectives, but rather at correcting instances of agency overzealousness by confining exercises of administrative discretion within the bounds established by Congress.[39] Consistent with the foregoing analysis, however, where the values of an agency are perceived to diverge from those of the Congress/Executive, efforts by the latter to assert meaningful control over agency values have generally been met with considerable resistance.[40]

D. *Possible Alternatives?*

1. *Rewards, Not Punishments.* Although the preceding discussion demonstrates the unworkability of direct commands to perform tasks aspirationally, backed by threats of sanction, it might be thought that there are alternative methods by which aspiration could be compelled. One possible method would be to change the sanction from formal punishment—

---

safety standards has been a focus of criticism of the Commission. *See* D. ROTHSCHILD & D. CARROLL, CONSUMER PROTECTION: TEXT AND MATERIALS 367 n.24, 383-87 (2d ed. 1977).

38. *See* Stewart, *supra* note 9, at 1682.

39. *See* note 9 *supra.*

40. The divergence in values may occur because of a shift in agency values, perhaps due to the "capture" phenomenon discussed above, or because the Congress/Executive establishes a new mission for the agency which is inconsistent, at least in part, with the old mission. In such instances, efforts of the Congress/Executive to bring the agency values in line have generally met considerable resistance. *See* Robinson, *On Reorganizing the Independent Regulatory Agencies*, 57 VA. L. REV. 947, 983 (1971). The problems of legislative oversight are analyzed in J. HARRIS, CONGRESSIONAL CONTROL OF ADMINISTRATION (1964). The difficulties of control are exacerbated by conflicts between the President and Congress. Once an agency is created and in operation, the President and Congress may compete, rather than cooperate, in their control efforts. *See* M. BERNSTEIN, *supra* note 35, at 133-34.

Of course, the difficulties will be ameliorated if the Congress/Executive avoid the use of aspirational directives and address the agencies in relatively specific, nonaspirational terms. But this is not only difficult to achieve, *see* Ribicoff, *supra* note 35, at 419-20, but is also inconsistent with the premise upon which the existence of most agencies is based—the necessity of leaving the agencies free to exercise broad administrative discretion, *see* J. HARRIS, *supra* at 284. Although the Congress/Executive could withhold financial support from a recalcitrant agency, it will be recalled that the threat of sanctions adds little to the efficacy of aspirational commands. *See* notes 21 & 26 and accompanying text *supra.* Moreover, the risk that other important agency objectives would be impaired by the withholding of funds also serves as a deterrent to the use of the budget as a means of attempting to compel a shift in patterns of agency decisionmaking. *See* M. DERTHICK, THE INFLUENCE OF FEDERAL GRANTS 205-06 (1970).

the form which the analysis has thus far tacitly assumed it to be—to the withholding of a promised reward. Where the values of the addressor and the addressee are similar, the shift from punishment to reward may help to reduce the risk of a "backlash" effect—that is, a negative response out of resentment at being threatened where a positive response might have been expected absent such threats. But even in such instances, the distinction between punishments and rewards tends to blur, especially where rewards have been given on a sufficiently regular basis to create expectations that they will continue. In any event, where the values of addressor and addressee diverge substantially, the shift from punishments to rewards makes little difference, for it does not enhance the addressor's ability to determine if the addressee has acted aspirationally. Thus, an addressee otherwise motivated to dissemble will find it just as easy to do so regardless of the form of the sanction. Furthermore, the use of rewards does not enable the addressee to determine the addressor's values more accurately, and thus does not increase the likelihood that an addressee will succeed in implementing the addressor's values even if he acts in good faith.

Although this conclusion may at first appear counterintuitive, its validity is borne out by the experience in recent years with federal grants-in-aid to the states.[41] Typically, these grants-in-aid have been offered to the states "with strings attached," and in many instances the federal "strings" have sought to induce aspirational conduct on the part of the addressee-states. Studies reveal that where the states have been antagonistic to the values reflected in vaguely stated federal objectives, efforts to lead the states to cooperate in the attainment of these objectives have succumbed to a combination of good faith misunderstanding of federal objectives and bad faith misappropriation of federal funds.[42] In these circumstances, the states have been able to "take the money and run," and the federal administrators have been substantially helpless to stop them.[43] Consistent with the analysis in this Article, the difficulties can be avoided only to the extent that either the states share the values reflected in the programs,[44] or the directives are stated in specific, nonaspirational terms.[45] Thus, the ineffectiveness of aspirational commands is not affected by either the existence of, or the form taken by, sanctions. Rather, their ineffectiveness stems from the fact that they are aspirational.

---

41. *See generally* M. DERTHICK, *supra* note 40; Fisher, *The Carrot and the Stick: Conditions for Federal Assistance*, 6 HARV. J. LEGIS. 401 (1969); Tomlinson & Mashaw, *The Enforcement of Federal Standards in Grant-In-Aid Programs: Suggestions for Beneficiary Involvement*, 58 VA. L. REV. 600 (1972).

42. *See* M. DERTHICK, *supra* note 40, at 193-218; Tomlinson & Mashaw, *supra* note 41, at 619-29.

43. The federal disbursement agency could withhold the funds. But more often than not this is viewed as a worse result than allowing a certain amount of misappropriation to occur. *See* M. DERTHICK, *supra* note 40, at 207-14; Tomlinson & Mashaw, *supra* note 41, at 620.

44. *See* M. DERTHICK, *supra* note 40, at 203-04.

45. *Id.* at 200. *See also* Tomlinson & Mashaw, *supra* note 41, at 610-11.

2. *Establishing Specific Objectives.* The addressor might be able to remove the requirement of aspiration from the command by first estimating the range of performance reasonably to be expected from an addressee, and then insisting that a specifically described, readily verifiable performance objective within the upper reaches of that range be achieved.[46] In theory, such an approach would remove both impediments to the effectiveness of aspirational commands. As long as the addressor is able to describe the objectives to be achieved with adequate specificity, and as long as those objectives are within the upper ranges of the addressee's capabilities, sanction-backed performance objectives should succeed in compelling aspiration. Indeed, this alternative approach has been suggested as one solution to the difficulties encountered in attempting to enforce the affirmative action obligations imposed by federal law.[47]

The obvious limitation of this technique lies in the inability of the addressor to assess the addressee's performance potential accurately. If the declared objectives are set too low, best efforts will not be stimulated; if set too high, sanctions will be imposed upon addressees who tried their best. Of course, if the addressor's purpose is to achieve the stipulated objective irrespective of whether or not the addressee aspires in the performance of the task, the risk of setting objectives too low will not be presented. But the risk of setting objectives too high will remain in spite of the addressor's indifference to whether or not the addressee aspires. The threat to the viability of a system of governance by declared rules, presented by the possibility of routinely demanding the impossible, places severe constraints upon the addressor's ability to set ambitious objectives.[48] Thus, substantial problems will be encountered whenever the addressor's objectives fall in the upper range of the addressee's capabilities.

---

46. The setting of a specific performance objective is not the same as telling the addressee specifically what to do. With a performance objective, the addressor focuses on the outcome of the performance, and leaves the choice among alternative methods of performance to the addressee.

47. For example, Executive Order 11246 requires persons contracting with the federal government to agree to take "affirmative action" to employ persons "without regard to their race, color, religion, sex, or national origin." 3 C.F.R. § 402 (1970). In the event that any of these classes of persons is "underutilized" by the contractor, that contractor must act affirmatively—use his best efforts—to recruit and employ persons from that group. *See Developments in the Law—Employment Discrimination and Title VII of the Civil Rights Act of 1964*, 84 HARV. L. REV. 1109, 1295-96 (1971). It has been observed that the enforcement of affirmative action obligations will require the establishment of specific performance objectives in the form of numerical quotas, as this will be "the only feasible mechanism for defining with any clarity the obligations of federal contractors to move their employment practices in the direction of true neutrality." *Id.* at 1304. *See also* Sape, *The Use of Numerical Quotas to Achieve Integration in Employment*, 16 WM. & MARY L. REV. 481, 496 (1975).

48. *See* L. FULLER, *supra* note 5, at 70-79. Variations of the basic performance objective approach are available, but are likely to be ineffective in many situations. For example, a schedule of objectives, with additional compensation at each incremental performance level, could be established as a means of placing constant pressure upon an addressee to excel. The theory is that an addressee who attains a particular level of performance will not rest on his oars, but will be encouraged to aspire by the additional reward to attain the next level, and then the next, and so on until he has reached the limit of his capacity. However, if the rewards increase arithmetically rather than geometrically, the marginal benefit to the addressee as he approaches the limits of his capacity may be less than the increasing marginal effort

To ease these constraints, addressees might be encouraged to participate in the preliminary process of establishing the objectives. In fact, this has been an important part of the federal efforts to compel affirmative action.[49] Of course, where the activity sought to be encouraged would not inspire best efforts on its own merits, it can be expected that pretense and dissembling by addressees will occur at the objectives-setting session, although such a session perhaps would not be characterized by the same intense pressures as would be present later in the context of threatened imposition of sanctions. This might diminish the perceived need of the addressee to dissemble, but is unlikely to prove fruitful on many occasions. Another method of avoiding the imposition of sanctions in connection with overly ambitious performance objectives might be to recognize the excuse, "I tried my best, but failed." However, recognizing that excuse would build back into the system of performance objectives the difficulties of reviewing conduct on a "best efforts" basis discussed earlier.[50]

In short, an addressor who desires that an addressee do his best in the performance of a task cannot accomplish this by either relying on promised benefits or by setting specific objectives for the addressee to achieve. The addressor can avoid the difficulties inherent in the use of aspirational commands only by resorting to commands that will not necessarily require that an addressee use his best efforts to achieve the desired result, *i.e.*, commands that are not aspirational.

II. Aspirational Commands in Environmental Regulation

Aspirational commands only relatively recently have been substantially relied upon in the field of environmental regulation. Before the dramatic rise in public concern, responsibility for environmental management generally was left to the earlier described combination of common-law property and contract principles.[51] To be sure, these basic principles were supplemented by tort concepts designed to protect what are viewed today as environmental

---

necessary to move to higher levels of performance. Geometrically increasing rewards, however, are likely to be too costly to the addressor when balanced against the additional benefits gained.

Another method of applying constant pressure is to establish the objective of winning in competition, supported by adequate incentives. This will stimulate best efforts if the competitors perceive themselves to be of roughly equal ability. However, where such equality is not present, best efforts may not occur for the same reasons as were recognized in connection with the basic performance objectives technique just discussed—for the more able competitors, the performance objectives will be too low; for the less able, too high.

49. For example, employers have been required to submit affirmative action programs as a part of minority recruitment efforts. *See Developments in the Law*, *supra* note 47, at 1291-97.

50. *See* text accompanying notes 19-34 *supra*. It might be supposed that recognizing the "I tried my best, but failed" excuse could be rendered workable and useful by placing a more substantial burden of proof upon the addressee. Nonetheless, the choice would inevitably come down to whether to believe him or not. It is difficult to see how the addressor's problem of nonverifiability is ameliorated when the choice is essentially one of the either-or variety.

51. *See* text accompanying notes 11-15 *supra*.

interests,[52] and statutes performing the same function were not uncommon.[53] But these measures were consistent with the traditional patterns observed above—they placed specific, negative constraints upon what was otherwise a laissez faire marketplace approach to the allocation and use of environmental resources. Moreover, some of the environmental resources of greatest concern today—*e.g.*, the ambient air and many of the great bodies of navigable water—were not recognized as resources in the economic sense, and thus were subject to no significant legal constraints regarding their appropriation and use.[54]

It is now generally recognized that this traditional, laissez faire approach to environmental management fails to prevent the harmful and perhaps disastrous waste of precious natural resources.[55] The recent tendency toward environmental degradation can be explained, on two separate levels, by a destructive phenomenon often referred to by environmental commentators as "the tragedy of the commons."[56] At the level of citizen conduct, the absence of adequate legal controls leaves persons free to behave individually in ways which, though marginally beneficial to their short run individual interests, leave them worse off in the long run than they would have been had they been subject to collectively imposed constraints.[57] At the governmental level, individual states are induced by the pressures of interstate competition to maintain systems of environmental regulation which, though marginally beneficial to each individual state's short run economic interests, encourage patterns of conduct wastefully destructive of the resources crucial to the continued health and prosperity of the nation as a

---

52. The laws of trespass and nuisance, both public and private, furnish some protection to environmental values. *See generally* J. HENDERSON & R. PEARSON, *supra* note 7, ch. 10.

53. *See, e.g.*, Refuse Act of 1899, ch. 425, § 13, 30 Stat. 1121 (codified at 33 U.S.C. § 407 (1976)). Although primarily concerned in its early years with navigation, this statute has become an important water pollution control measure.

54. The one obvious exception has been the development of a body of law governing rights to water in areas where water represents a scarce resource. *See generally* 1 R. CLARK, WATERS AND WATER RIGHTS 60-175 (1967).

55. *See, e.g.*, B. COMMONER, THE CLOSING CIRCLE (1971); C. REICH, THE GREENING OF AMERICA (1970); Boulding, *The Economics of the Coming Spaceship Earth*, in ENVIRONMENTAL QUALITY IN A GROWING ECONOMY (H. Jarrett, ed. 1971).

56. *See* Hardin, *The Tragedy of the Commons*, 162 SCIENCE 1243 (1968). Professor Hardin illustrates the tragedy through the example of several sheep herders using a common grazing field. Each herdsman continues to add sheep until the optimum number of sheep for the field is reached. The rational herdsman does not stop adding to his herd at this point, however, since the benefit of adding an additional sheep accrues solely to the herdsman, while the costs —the effects of overgrazing—are spread among all herdsmen. If each herdsman is rational, each will keep adding sheep. Thus, each herdsman "is locked into a system that compels him to increase his herd without limit . . . . Ruin is the destination toward which all men rush, each pursuing his own best interest in a society that believes in the freedom of the commons." *Id.* at 1244.

57. Hardin notes:

> [T]he rational man finds that his share of the cost of the wastes he discharges into the commons is less than the cost of purifying his wastes before releasing them. Since this is true for everyone, we are locked into a system of "fouling our own nest," so long as we behave only as independent, rational free-enterprises.

Id. at 1245.

whole.[58] Thus, from the federal viewpoint, environmental degradation presents a twofold problem: the traditional approaches to environmental management by regulation of individual conduct have proven inadequate, and the states acting separately are discouraged from initiating meaningful reform.

Departing substantially from the traditional patterns observed in the preceding section, federal responses to this environmental impasse have in recent years taken the form of attempts to compel the aspiration of both citizens and state governments—and even federal administrative agencies—in working out solutions. Why has this approach to environmental regulation been adopted so frequently in recent years? The answer may lie in the apparent lack of viable alternatives in the face of what many observers perceive to be impending environmental crises. The most obvious alternative —reliance upon specific, nonaspirational directives—can be, and has been, implemented.[59] However, the federal government often has lacked the expertise necessary for the imposition of specific solutions to many of the complex environmental problems.[60] In such circumstances, the federal emphasis has been upon aspirational programs aimed at compelling the development of technology. With respect to the relationship between the federal government and the states, the difficulties are compounded by significant practical limits upon federal enforcement capabilities. Traditionally, the individual states have been primarily responsible for enforcing regulations aimed at controlling the conduct of private citizens, and they possess by far the larger enforcement capacity. It would be prohibitively inefficient for the federal government to attempt to duplicate state enforcement mechanisms. Thus, even if sufficient specificity in environmental regulations were somehow achieved, federal regulators would feel pressured to attempt to compel state cooperation in enforcing federal regulatory schemes.[61]

Alternative regulatory approaches appear to provide little encouragement. For example, adjustments in the economic marketplace, aimed at forcing firms to internalize environmental costs as an indirect means of achieving more rational allocations of environmental resources, have proven

---

58. *See* Stewart, *Pyramids of Sacrifice? Problems of Federalism in Mandating State Implementation of National Environmental Policy*, 86 YALE L.J. 1196, 1211-12 (1977); Note, *Clean Air Act Amendments of 1970: A Congressional Cosmetic*, 61 GEO. L.J. 153, 161, 164-65 (1972).

The dampening effect of interstate competition has been recognized in connection with a variety of social welfare programs, such as unemployment compensation, *see* Steward Machine Co. v. Davis, 301 U.S. 548, 588 (1937), and workmen's compensation, *see* REPORT OF THE NATIONAL COMMISSION ON STATE WORKMEN'S COMPENSATION LAWS 124-25 (1972). In situations such as this, appeals to conscience will not offset the force of interstate competition. Indeed, it is obvious that those states that respond to such an appeal will be penalized competitively. *See generally* Hardin, *supra* note 56, at 1246.

59. For example, the performance standards for new stationary sources under § 111 of the Clean Air Act have been developed by the EPA into relatively specific emission control requirements. *See generally* W. RODGERS, JR., HANDBOOK ON ENVIRONMENTAL LAW 267-76 (1977).

60. *See* La Pierre, *Technology-Forcing and Federal Environmental Protection Statutes*, 62 IOWA L. REV. 771, 773 n.16 (1977). *See also* note 85 *infra*.

61. *Cf.* A. SINCLAIR, *supra* note 10, at 183 (need for federal government to rely on states for effective enforcement of prohibition laws).

difficult to accomplish, especially on a national scale.[62] Also, the possibility of the federal government restructuring the most important institutional addressees of environmental directives—the large business firms and state governmental agencies—appears politically remote and difficult to achieve.[63] Thus, given the mounting pressures to act, aspirational mandates directed at institutional addressees, both private and governmental, have been increasingly relied upon to solve the environmental problems confronting the nation.

In the sections which follow, four recent examples of this unusual mode of regulation will be examined and evaluated in light of the preceding analysis. They are: (1) the auto emission reduction provisions in the 1970 and 1977 amendments to title II of the Clean Air Act; (2) the discovery orders and injunctions issued in the *Reserve Mining* litigation; (3) the planning responsibilities of federal agencies under the National Environmental Policy Act of 1969; and (4) the enforcement responsibilities of the states under the 1970 and 1977 amendments to title I of the Clean Air Act. With respect to all four, aspirational commands have failed to achieve the desired goals.

A. *Regulation of Auto Emissions Under the 1970 and 1977 Amendments to the Clean Air Act*

The major provisions of federal law aimed at forcing manufacturers of new automobiles sold in this country to reduce environmentally harmful vehicle emissions are contained in part A of title II of the Clean Air Act as amended.[64] The 1970 amendments did not specify the control devices required to be installed on motor vehicles, but rather established performance objectives calling for ninety percent reductions by 1975 in hydrocarbon and carbon monoxide emission levels compared with the 1970 levels of emissions for similar vehicles,[65] and the same percentage reduction in nitrogen oxide emission levels compared with the 1971 levels.[66] Failure to achieve these reductions would bring fines of up to $10,000 per nonconforming vehicle sold.[67] The legislative history of the 1970 amendments indicates that Con-

---

62. *See, e.g.*, Roberts, *River Basin Authorities: A National Solution to Water Pollution*, 83 HARV. L. REV. 1527 (1970); Russell, *Effluent Changes*, *in* ECONOMICS OF AIR AND WATER POLLUTION 27-55 (W. Walker ed. 1969); Wolozin, *The Economics of Air Pollution: Central Problems*, 33 LAW & CONTEMP. PROB. 227 (1968).

63. Substantial restructuring of business firms would be a practical and political impossibility. Any attempt at federal restructuring of state governments would encounter substantial constitutional problems, *see, e.g.*, National League of Cities v. Usery, 426 U.S. 833 (1976), even if the attempt were made through grants-in-aid. *See* text at note 199 *infra*.

64. The 1970 amendments to part A of title II are codified at 42 U.S.C. §§ 1857f-1 to -8 (1976) (current version at 42 U.S.C.A. §§ 7521-7525, 7541-7547, 7550 (West 1977)). These provisions were further amended in 1974 and 1977. *See* notes 79-81 *infra*.

65. 42 U.S.C. § 1857f-1(b)(1)(A) (1976) (current version at 42 U.S.C.A. § 7521(b)(1)(A) (West 1977)).

66. 42 U.S.C. § 1857f-1(b)(1)(B) (1976) (current version at 42 U.S.C.A. § 7521(b)(1)(B) (West 1977)).

67. 42 U.S.C. § 1857f-4 (1976) (current version at 42 U.S.C.A. § 7524 (West 1977)).

gress intended to depart from a prior tendency to speak in patently aspirational terms of "encourag[ing] . . . efforts on the part of the automotive and fuel industries to develop devices and fuels to prevent pollutants from being discharged from the exhaust of automotive vehicles,"[68] and instead to require, under the threat of heavy sanctions, the accomplishment of specifically described emission reductions.

On a first reading, the Act does not appear to be aspirational—that is, it does not appear to require auto companies to cooperate in good faith to attain the emission reductions. Rather, the 1970 amendments established specific performance objectives which the auto companies were commanded to achieve. As will be recalled from the prior discussion, the performance objective approach is effective when the addressor will accept performance levels within the addressee's capability.[69] Congress, however, was unaware of what reductions could realistically be achieved,[70] and obviously could not allow the auto industry to set its own objectives, for fear that they would be set too low. Thus, to guard against the very real possibility that the 90 per cent reduction objectives were too high, the Act authorized the Administrator of the Environmental Protection Agency (EPA) to grant a one-year suspension of the reduction requirements to any manufacturer which demonstrated that good faith efforts had failed to produce the necessary control technology.[71] This suspension provision effectively transformed the specific performance objectives into aspirational commands. As observed earlier, because a demonstration of good faith effort will suffice to avoid the threat of sanctions, inclusion of a "He tried his best, but failed" excuse inevitably works such a transformation.[72]

Experience under title II confirms that the emission reduction program originally established by Congress has been substantially transformed in this manner, and that the sorts of difficulties which one might have expected on the basis of the earlier analysis have been encountered. In June, 1971, the EPA Administrator issued regulations translating the congressional objectives into specific emission standards.[73] Early in 1972, the five major motor vehicle manufacturers applied for one-year suspensions of the hydrocarbon and carbon monoxide emission standards. In May, 1972, the Administrator determined that the manufacturers had failed to carry their statutory burden of proving that adequate control technology was not available, and denied the applications.[74] Thereafter, the United States Court of Appeals for the District of Columbia reversed the Administrator

68. Clean Air Act of 1963, Pub. L. No. 88-206, § 6(a), 77 Stat. 392, 399.

69. *See* text accompanying notes 46-50 *supra* for a general discussion of the performance objective technique.

70. *See* note 86 *infra.*

71. 42 U.S.C. § 1857f-1(b)(5)(A)-(E) (1970) (current version at 42 U.S.C.A. § 7521(b)(5)(A)-(C) (West 1977)).

72. *See* note 50 and accompanying text *supra.*

73. *See* 36 Fed. Reg. 12,657 (1971).

74. Applications for Suspension of 1975 Motor Vehicle Emission Standards, Decision of the Administrator, 37 Fed. Reg. 15,193 (1972).

and remanded the case for further consideration.[75] The court concluded that, notwithstanding language in the Act purporting to place the burden of proof upon the manufacturers, "the Administrator must sustain the burden of adducing a reasoned presentation supporting the reliability of EPA's methodology." [76] In effect, the Administrator was required to demonstrate how adequate technology would become available in time to meet the deadlines before he could reject the manufacturers' contentions to the contrary. The risks of an improper granting of a suspension were perceived to be outweighed by the costs of an improper denial, and the court refused to impute to Congress the intent to play such a high stakes game in a "hard nosed" fashion.[77]

On remand, the Administrator granted the suspension and imposed interim emission standards more lenient that the ninety percent reductions required in the Act.[78] Subsequently, Congress amended title II to postpone the final compliance deadlines until 1977-78, and to allow manufacturers to petition for another one-year suspension.[79] In March, 1975, in response to petitions brought under these amendments, the Administrator suspended the emission standards for hydrocarbons and carbon monoxide, due to take effect in 1977, for one year.[80] In 1977, Congress again amended title II, this time to postpone the final compliance deadlines until 1981.[81] These most recent amendments provide for the step-wise accomplishment of emission reductions in the years 1977-79, 1980, and 1981, and include limited opportunities for manufacturers to obtain waivers of emission standards.[82] Thus, the 1975 deadline originally imposed upon the manufacturers has been extended for at least six years, with no guarantee that further extension will not occur.

Commentators upon these developments have offered a variety of explanations for the failure to achieve the statutorily imposed auto emission objectives, typically accompanied by expressions of frustrated disappointment. Some have taken the view that Congress destined emission control efforts to defeat by combining foolishly stringent emission standards with sanctions so unrealistically severe that it was apparent from the outset they would never be imposed.[83] Other writers have argued that the court of

---

75. International Harvester Co. v. Ruckelshaus, 478 F.2d 615 (D.C. Cir. 1973).
76. *Id.* at 648.
77. *Id.* at 649.
78. Applications for Suspension of 1975 Motor Vehicle Emission Standards, Decision of the Administrator, 38 Fed. Reg. 10,317, 22,474 (1973).
79. Energy Supply and Environmental Coordination Act of 1974, Pub. L. No. 93-319, § 5, 88 Stat. 258 (codified at 42 U.S.C. § 1857f-1 (1976)).
80. Applications for Suspension of 1977 Motor Vehicle Exhaust Emission Standards, Decision of the Administrator, 40 Fed. Reg. 11,900 (1975).
81. Clean Air Act Amendments of 1977, Pub. L. No. 95-95, 91 Stat. 686, 687 (codified at 42 U.S.C.A. §§ 7401-7642 (West 1977)).
82. 42 U.S.C.A. § 7521 (West 1977).
83. The authors of a provocative critique of federal emission control efforts liken these sanctions to "the hydrogen bomb—too damaging for use against moderate provocations." Jacoby & Steinbruner, *Salvaging the Federal Attempt to Control Auto Pollution*, 21 PUB. POL'Y 1, 3 (1973).

appeals weakened the federal regulatory efforts by placing unrealistic burdens of proof upon the EPA to demonstrate the availability of control technology.[84] Still others have insisted that federal pollution control objectives have been frustrated by the unwillingness of Congress to authorize sufficiently severe criminal penalties against corporate management.[85]

This Article's analysis of the limits of aspirational commands suggests a more basic explanation for the delays, one which, to some extent at least, regards the frustration of congressional intent as unavoidable under the circumstances. It was fairly clear from the outset that the technology necessary to achieve conformance to the standards did not exist at the time of their promulgation and that the federal government itself lacked sufficient technical expertise to determine with any specificity the steps which should be taken to reduce emissions.[86] Thus, the Act imposing the ninety percent reduction requirements was "technology forcing" in that it assigned to the auto manufacturers the obligation to develop the necessary control technology under the threat of heavy sanction.[87] Given the necessary severity of the threatened sanctions and the unavoidable uncertainties surrounding the question of whether the congressionally imposed objectives could be reached, a safety valve—the one-year suspension provision—was necessary. But with this provision the regulatory scheme of setting specific performance objectives was inevitably transformed into a scheme calling for the manufacturers' best efforts, under which the manufacturers' values would substantially dictate the course of technology development.

The inevitability of the frustration of congressional hopes is suggested by the reaction of the court of appeals to the manufacturers' appeal from the Administrator's denial of their suspension applications under the 1970

---

84. *See, e.g.*, Comment, *The Automobile Controversy—Federal Control of Vehicular Emissions*, 4 ECOLOGY L.Q. 661, 667-68 (1975).

85. Clearly, the amendments to the Clean Air Act since 1970 have contemplated that manufacturing corporations, rather than corporate management will be liable for the fines imposed in part A of title II relating to the first sale or delivery of new vehicles. These fines are imposed upon "[a]ny person who violates paragraph (1) . . . of section 7522(a) of this title . . . ." 42 U.S.C.A. § 7524 (West 1977). The section referred to, however, prohibits the sale or introduction into commerce of vehicles which do not meet prescribed emission standards, if done by a "manufacturer." *See* 42 U.S.C.A. § 7522(a)(1) (West 1977). Thus, the only "person" who can violate this prohibition is a corporation. For an analysis urging that corporate management be held liable criminally for acts knowingly contributing to environmental pollution, see Comment, *The Criminal Responsibility of Corporate Officials for Pollution of the Environment*, 37 ALB. L. REV. 61 (1972). For a similar suggestion in the context of the 1970 amendments to title II of the Clean Air Act, see Ditlow, *Federal Regulation of Motor Vehicle Emissions Under the Clean Air Amendments of 1970*, 4 ECOLOGY L.Q. 495, 508 (1975).

86. It is obvious that the 90% reduction requirements were reached by a process of reasoning backwards from presumed health-based standards, and do not reflect a congressional judgment regarding what might actually be accomplished. *See* Gubrud, *The Clean Air Act and Mobile-Source Pollution Control*, 4 ECOLOGY L.Q. 523, 526-28 (1975).

87. Senator Muskie, a chief proponent of the measure, characterized these provisions as "drastic medicine." 116 CONG. REC. 32,904 (1970). In a newspaper report introduced into the record by Senator Muskie, Senator Eagleton was quoted as stating, "I am trying to force the state of the art." *Id.* at 33,120. Senator Griffin asserted: "[T]his bill . . . introduces a novel concept to automotive emission control—the concept of brinksmanship. An industry pivotal to the U.S. economy is to be required by statute to meet standards which the committee itself acknowledges cannot be met with existing technology." *Id.* at 33,080.

legislation. Given the vagueness of the suspension provision,[88] the Administrator could not make an independent determination of whether the manufacturers had acted in good faith, and thus could not rebut their insistence that they had tried their best and failed. To be sure, the Administrator could have played a hunch in denying the suspension applications, or he could have assumed a deliberately irrational posture and thereby bluffed the manufacturers into believing he was insane enough to carry the country over the brink of economic disaster.[89] But the court could not allow itself either to play hunches or to feign insanity. Congressional sponsors of the 1970 amendments may have believed that, by purporting to place the burden of proof on the manufacturers, they had provided a safety valve which would only be used when control technology was "really and truly" not available.[90] Such a belief, although no doubt sincere, was unrealistic, given the manufacturers' control over the development of the needed technology.

In addition to the Act's failure to achieve its pollution reduction goals, several other important and possibly counterproductive consequences flowed from its suspension provision approach. The situation confronting Congress in this context was essentially a tragedy of the commons[91]—the auto companies, in competition with one another, had been using the ambient air as a commons, designing their engines upon the premise that the costs associated with auto emissions could almost totally be externalized. As a result, it soon became obvious that the companies which would be hurt the most severely by the granting of a last minute suspension would probably be those which took the emission requirements most seriously and went to great expense in attempts to meet them, since the competitive position of those companies would be compromised. The public record makes clear that this implication was not lost on the parties most directly affected by this approach to auto emission controls.[92]

---

88. The Administrator shall grant such suspension only if he determines that (i) such suspension is essential to the public interest or the public health and welfare of the United States, (ii) all good faith efforts have been made to meet the [emission] standards established by this subsection, (iii) the applicant has established that effective control technology, processes, operating methods, or other alternatives are not available or have not been available for a sufficient period of time to achieve compliance prior to the effective date of such standards . . . .

42 U.S.C. § 1857f-1(b)(5)(C) (1976).

89. Former EPA Administrator Ruckelshaus explains his use of this tactic in this way: "I started out with a fairly arbitrary stance that must have appeared to be very unreasonable, if not irrational, to a lot of the people I was regulating . . . . [I]f some of the things I said struck them as just a little bit irrational, I thought that would stimulate them more than anything else I could do. So, I would purposely from time to time make statements that went over the edge." 3 William Ruckelshaus & EPA, Preliminary Draft of Teaching Materials, Public Policy Program at the Kennedy School of Government, Harvard University 12 (1974) (copy on file with the authors).

90. Senator Muskie explained his views of the suspension provisions in this manner: "We wanted the provision for appeal to be made available late enough in this 5-year time frame so that the industry would make, and be forced to make, a good faith effort toward achieving the objectives of the bill before resorting to the courts." 116 CONG. REC. 33,087 (1970).

91. *See* notes 56-57 and accompanying text *supra*.

92. In International Harvester Co. v. Ruckelshaus, 478 F.2d 615 (D.C. Cir. 1973), the court observed: "This case is haunted by the irony that what seems to be Ford's technological lead may operate to its grievous detriment, assuming the [adoption of a] relaxation-if-necessary approach . . . ." *Id.* at 637 (footnote omitted).

This suspension provision approach also may have worked to undercut the technology forcing aspects of the auto emission provisions in another way. Given the reality that the most convincing way for the manufacturers to demonstrate good faith when applying for a suspension would be to show some effort coupled with some progress toward the stated objectives, it was inevitable that the transformation of the stringent reduction requirements into aspirational commands would, in turn, be transformed into the now familiar pattern of incremental emission reductions followed by periodic suspensions of the more drastic requirements. Although congressional sponsors of the amendments were concerned with minimizing the possibility that the suspension provision might undermine the technology forcing effects of title II,[93] such undermining could have been avoided only by the politically and logically unacceptable alternative of eliminating any chance for a suspension.

Most critics have attempted to explain the failure of the amendments to title II by suggesting that Congress should have enacted better enforcement mechanisms. These explanations are inadequate, since they focus upon the means of enforcement rather than upon the aspirational nature of the commands. For example, would it have made a substantial difference, as some have suggested,[94] if the sanctions for noncompliance had been less severe? To answer this question, one must ask another: How much less severe? An intelligent answer to this question requires the sorts of data which Congress lacked—*i.e.,* reliable data concerning not only the externalized costs of the pollution caused by various motor vehicles but also the costs of developing and maintaining a reasonable emission control system.[95] Had these data been available, Congress arguably would have possessed the expertise necessary to tell the manufacturers specifically what to do, and drastic performance objectives would not have been necessary. Lacking the data, Congress had to threaten sanctions that would hurt if they were imposed. That Congress fixed upon a fine of up to $10,000 per nonconforming vehicle sold, instead of $5,000 or $1,000, is beside the point. Assuming the sanctions were severe enough to hurt, Congress had to provide a safety valve to cover the very real possibility that the ninety percent reductions were unattainable; and once the safety valve was provided, the limited efficacy of aspirational commands came into play to defeat the attainment of these reduction objectives.

One of the most interesting explanations of the auto manufacturers' failure to achieve the emission reduction objectives suggests that the manu-

---

93. *See* 116 CONG. REC. 32,920-21 (1970).

94. *See* note 83 and accompanying text *supra.*

95. When a decision is reached that a specific emission control device is to be required by law, fines for noncompliance can effectively be established at levels equal to, or slightly in excess of, the costs of compliance. *See, e.g.,* 1 CONNECTICUT ENFORCEMENT PROJECT, ECONOMIC LAW ENFORCEMENT (1975). Section 118 of the Clean Air Act Amendments of 1977 provides for this same technique in connection with civil penalties for noncompliance by stationary sources. *See* 42 U.S.C.A. § 7420(d)(2) (West 1977).

facturers somehow sabotaged the achievement of those objectives, and that the imposition of more severe criminal penalties on corporate management would have gone a long way toward hastening the development of control technology.[96] It is possible, of course, that auto company management have to some extent deliberately set about to frustrate the development of control technology. Indeed, the ability of addressees to dissemble in response to aspirational commands is one of the basic tenets supporting the present analysis,[97] and there is evidence that this has occurred in response to federal efforts to reduce auto emissions.[98] However, it will be recalled that an equally serious problem is presented by the characteristic vagueness of such commands, especially where, as in this instance, the addressees are hierarchically organized business firms.[99] For example, when an American auto manufacturer is told by Congress, in effect, to try its best to achieve a ninety percent reduction in hydrocarbon emissions, inevitably this message is accompanied by a number of unstated, but very real and necessary, qualifications—*e.g.*, without unnecessary or unreasonable dislocation costs, and without drastic reductions in engine efficiency. (Indeed, it is only on the assumption that qualifications of this sort accompany the command to reduce emissions that any technological problem is presented.[100]) In effect, Congress wanted to achieve maximum emissions reduction with a minimum disruption in "business as usual." It follows that in interpreting and reacting to such a command, an addressee must make value judgments as well as technical judgments. And the value judgments of a bureaucratic organization inevitably reflect its own built-in values, rather than those sought to be imposed upon it from the outside. Therefore, whether or not the executive officers of an American auto company engage in clandestine efforts to thwart the development of control technology, the company as a bureaucracy cannot be made to alter significantly the direction and momentum of its activities by vague, aspirational commands.[101] This will be especially true in situations such as this, where conformance to the aspirational commands would put the addressee at a distinct competitive disadvantage.[102] However much it might assuage the moral outrage which some environmentalists understandably feel when confronted with apparent footdragging on the part of corporate polluters, imposing criminal sanctions upon management based upon an inference of deliberate sabotage drawn from the mere fact of non-

96. *See* note 85 *supra.*

97. *See* text accompanying notes 23-25 *supra.*

98. For example, the major American auto manufacturers were defendants in a Justice Department antitrust suit alleging a conspiracy to delay and obstruct development of motor vehicle pollution control equipment. United States v. Automobile Mfrs. Ass'n, 307 F. Supp. 617 (C.D. Cal. 1969), *aff'd per curiam*, 397 U.S. 248 (1970). The action ended in a consent decree. *See Hearings on S. 3229, S. 3466, S. 3546, Before the Subcomm. on Air and Water Pollution of the Senate Comm. on Public Works*, 91st Cong., 2d Sess. 1682-95 (1970).

99. *See* text accompanying notes 26-34 *supra.*

100. Thus, the present levels of auto emissions could be reduced by nearly 100% by shifting to foot pedal power.

101. *See* text accompanying notes 29-34 *supra.*

102. *See* notes 56-57 *supra* and text accompanying notes 90-91 *supra.*

accomplishment would do little to change the just-described bureaucratic reality.

That some motor vehicle emission reductions have been achieved in recent years in response to the requirements of the Clean Air Act[103] detracts from neither the validity nor the utility of this analysis. Clearly, the fact that reductions have occurred does not support a conclusion that manufacturers have aspired to solve the problem of controlling air pollution caused by motor vehicles. More importantly, it is not clear whether the reductions which have been achieved actually constitute substantial progress.

Earlier, the pattern of incremental emission reductions followed by periodic suspensions of more drastic reduction requirements was observed as a more or less inevitable consequence of the aspirational scheme of regulation of title II of the Clean Air Act. Whatever the short run benefits from such an incremental approach, they may be offset by harm caused to long range pollution control efforts. Thus, it may be argued that what has been required to achieve substantial reductions in motor vehicle emissions has been creative long range planning to arrive at acceptable alternatives to the gasoline powered internal combustion engine.[104] To succeed in demonstrating good faith reduction efforts under title II of the Clean Air Act, however, auto manufacturers have been compelled to achieve periodic incremental reductions on a short run basis. To achieve these reductions, they have been required to retain their basic engine design and to be content with relatively superficial, "bolt-on" tinkering.[105] To be sure, some research toward developing basic alternatives to the traditional engine may be taking place.[106] The Clean Air Amendments of 1970 provided for federal support for such research.[107] But the federal funding has been insubstantial,[108] and from the companies' competitive viewpoint these efforts are tangential to their core enterprise.[109] Indeed, a commitment to such basic research might actually interfere with the efforts being made to meet the short run emission requirements. As a result, it can be argued that the emission reductions up to now, and even ultimate compliance by the early 1980's, will in fact have

---

103. *See* N.Y. Times, Dec. 22, 1977, at 41, col. 5. *See also* 6 NATIONAL RESEARCH COUNCIL, IMPLICATIONS OF ENVIRONMENTAL REGULATIONS FOR ENERGY PRODUCTION AND CONSUMPTION 86 (1977).

104. *See generally* Jacoby & Steinbruner, *supra* note 82.

105. *Id.* at 2. *See also* La Pierre, *supra* note 60, at 796.

106. *See, e.g., Car Engines That Are Really Different,* U.S. NEWS & WORLD REP., June 28, 1976, at 66-67.

107. 42 U.S.C. § 1857b-1 (1976) (current version at 42 U.S.C.A. § 7404(a) (West 1977)). The long run shortage of petroleum as a fuel is also, of course, a factor in the development of alternatives to the internal combustion engine.

108. Although Congress authorized 400 million dollars for research over a five-year period in 1976, *see Car Engines That Are Really Different, supra* note 106, at 66, col. 2, "there is still a sizeable body of opinion in the auto industry which holds that the [internal combustion engine] will continue to dominate until or unless outside circumstances dictate otherwise." *Id.* at 67, col. 3.

109. The auto industry is engaging in some basic research into possible replacements for the internal combustion engine, but primarily out of concern over the energy problem. The Department of Energy has also provided modest funding for research. *See* N.Y. Times, May 17, 1978, § D, at 6, col. 3.

impeded the chances for long range progress by increasing the reliance upon, and the commitment of resources to, the traditional internal combustion engine.[110] Thus, Congress's attempt to use aspirational commands to achieve reductions in automotive emissions has generally been unsuccessful and may even have been counterproductive.

B. *The* Reserve Mining *Litigation*

In the preceding section, the aspirational commands were contained in federal statutes. This portion of the Article considers such commands as they emanated from the federal judiciary in a nuisance action brought to enjoin environmentally harmful conduct. These commands fall into two basic categories: discovery orders issued during trial to redress imbalances between the parties' relative access to technical data, and injunctions issued at trial's end to afford relief to successful plaintiffs. The federal district court decision in *United States v. Reserve Mining Co.*[111] epitomizes the sorts of difficulties likely to be encountered when courts rely upon both types of aspirational commands.

In the summer of 1972, the United States and others[112] brought an action against Reserve Mining Company (Reserve) in the United States District Court for Minnesota to enjoin the company from discharging taconite tailings, waste materials from its mining operation, into Lake Superior. The plaintiffs alleged that the defendant's activities violated the Federal Water Pollution Control Act,[113] and the Federal Refuse Act,[114] and constituted a public nuisance under federal common law.[115] Plaintiffs claimed that these waste materials contained asbestos-like amphibole fibers which exposed surrounding communities to significant health hazards. Reserve denied the allegations, and further maintained that the injunction sought by the plaintiffs would require it to shut down its operations and would threaten a substantial work force with economic hardship.[116] After a lengthy trial the district court made findings and conclusions favorable to the plaintiffs and ordered Reserve to cease the discharges immediately. Concluding that the defend-

---

110. *See* Jacoby & Steinbruner, *supra* note 83, at 2, 8.

111. 380 F. Supp. 11 (D. Minn. 1974). The subsequent litigation in this and related cases has been extensive, including dozens of reported decisions in federal and state courts. For a recent summary of the litigation, see Reserve Mining Co. v. Herbst, — Minn. —, 256 N.W.2d 808 (1977).

112. The states of Minnesota, Michigan, and Wisconsin were made parties plaintiff and Reserve's corporate parents were joined as defendants. Public interest groups on both sides were permitted to intervene. *See* 380 F. Supp. at 21-23.

113. 33 U.S.C. §§ 1151-1175 (1976). Specifically, Reserve's discharge was alleged to be in violation of water quality standards referred to as Minnesota Regulation WPC 15(a)(4), (c)(2), (c)(6). 380 F. Supp. at 23.

114. 33 U.S.C. § 407 (1976).

115. *See, e.g.*, Illinois v. City of Milwaukee, 406 U.S. 91 (1972). *See generally* Note, *Federal Common Law and Interstate Pollution*, 85 HARV. L. REV. 1439 (1972).

116. The work force potentially affected by a shutdown numbered approximately 3,000. The district court noted that it "would be the first to agree that the work force of Reserve would suffer immensely if the plant is shut down and they are thrown out of work." 380 F. Supp. at 70. The court, however, went on to insist that such dislocations could be minimized were the defendant to develop a middle ground abatement process. *Id.* at 70 n.52, 87-88.

ant's activities substantially endangered the exposed population, and observing that Reserve had steadfastly refused to cooperate in working out a middle ground solution, the district court stated that it had no alternative but to order defendants to shut down their disposal operations.[117]

From the outset, it was apparent to the court that forcing the defendants to shut down would visit severe economic dislocation upon a substantial number of persons who relied upon Reserve, directly or indirectly, for their livelihoods. It was also clear that, if the plaintiffs' medical experts were to be believed, Reserve's operations exposed substantial numbers of persons to serious, long range health hazards.[118] As the district court recognized, it was imperative that a middle ground solution be worked out if the very difficult choice between the extremes of shutting down entirely or continuing to conduct business as usual were to be avoided.[119] The only party to the proceedings possessing sufficient technical expertise to work out a solution was Reserve itself. Reserve, however, discounted the accuracy of the plaintiffs' medical evidence, and saw no advantage in cooperating voluntarily in developing alternative waste disposal methods which would add substantially to its operating costs. As Reserve must have viewed the situation, it was unlikely that the plaintiffs would be able to present workable alternatives on their own and, absent such alternatives, it was unlikely that the federal courts would order Reserve to shut down.

Thus, the district court faced the dilemma of the governmental regulator confronting potentially life-threatening, but economically important, applications of industrial technology. To choose either extreme of shutting down or permitting business as usual appears untenable, but middle ground alternatives can only be developed by somehow compelling the regulatee to cooperate in their development. The district court's efforts to compel the defendant's cooperation in this case took the form of discovery orders aimed at pressuring Reserve to develop alternative methods of waste disposal.[120] Consistent with the preceding analysis of the limits of aspirational

---

117. *Id.* at 71.

118. The district court found that "[t]he discharge into the water substantially endangers the health of the people who procure their drinking water from the western arm of Lake Superior including the communities of Beaver Bay, Two Harbors, Cloquet, Duluth, and Superior, Wisconsin." *Id.* at 16. The health risk referred to was the risk of contracting cancer. *See id.* at 39-54.

119. *Id.* at 17-18. Because the aspirational commands in *Reserve Mining* emanated from a court, additional difficulties arising from the inherent limits upon adjudication as a method of solving complex technological problems were necessarily encountered. *See generally* Henderson, *Expanding the Negligence Concept: Retreat from the Rule of Law,* 51 IND. L.J. 467, 484-501 (1976). In such a case, the judge inevitably is pressured to assume the role of planner and manager, relying less upon rules of law than upon hunch and intuition. *Reserve Mining* presented complex technological issues and the stakes were high. That the district judge succumbed to the pressures to abandon the traditional judicial role was recognized by the court of appeals in the decision to remove the district judge from the case. *See* Reserve Mining Co. v. Lord, 529 F.2d 181, 185-86, 188 (8th Cir. 1976).

120. The district court's description of these discovery orders appears in 380 F. Supp. at 65-69. These orders were not expressly couched in aspirational terms, but instead called for disclosure of existing plans and documents. It is clear from the district court's opinion, however, that they were part of the district judge's efforts to pressure defendants to cooperate.

commands, these efforts failed. The court's frustration over its helplessness to prevent this failure is clearly reflected in its opinion:

> After listening to testimony for over nine months the Court has formed the opinion that the credibility of the defendants collectively in this case is seriously lacking. They have misrepresented matters to the Court, they have produced studies and reports with obvious built-in bias, they have been particularly evasive when officers and agents were cross examined.
>
> . . . .
>
> . . . . It is interesting to note that although the defendants claimed that the calcium situation was a problem that precluded them from developing an on land system of disposal and although they had at their disposal over 400 chemists, they had conducted no engineering studies in an effort to solve the problem. . . . It is interesting to note that within three days of March 1, when Reserve's hidden secret documents were exposed in open court, they were able to develop [an] on land disposal system for the tailings. . . .
>
> . . . [T]he nature of the defendant's conduct causes the Court to closely examine every statement made by the defendants as well as every representation to assure the Court of the factual basis to suport such statement or representation.
>
> . . . At the culmination of the trial, after all of the discoveries of the actual ability of defendants to implement an on land disposal system, the chief executives . . . were directly asked by the Court if they would abate the public health problem, and implement a program for on land disposal . . . The answer to the question posed by the Court was no. . . . At this point the Court has only two alternatives. . . . [T]here is no middle ground.[121]

As these excerpts suggest, revelations during the trial supplied the basis for a later district court order requiring defendants to pay $200,000 of plaintiffs' attorneys fees for having contributed to delay in the trial by misrepresenting to the court that certain tentative plans, which had been substantially developed prior to trial, did not exist.[122] But with respect to the broader question of developing a workable on-land disposal alternative, the court's efforts to compel defendants to cooperate in good faith were almost certainly bound to fail. In a manner reminiscent of the stance of Congress with respect to the reduction of auto emissions,[123] the district court in this case was asking Reserve to behave less competitively, in the interests of the public welfare. Indeed, within the peculiar context of a lawsuit, the court was asking a litigant to behave less litigiously.[124] That

121. 380 F. Supp. at 64, 68-69.

122. United States v. Reserve Mining Co., 412 F. Supp. 705 (D. Minn. 1976).

123. *See* text accompanying notes 91-92 *supra.*

124. For the suggestion that litigants should behave less litigiously in analogous cases involving technically complex questions of products liability by no longer adopting the polar positions of adversaries, see Twerski, Weinstein, Donaher & Piehler, *The Use and Abuse of*

Reserve failed to respond affirmatively to either of these demands is hardly surprising.

The order of the district court enjoining Reserve's operations was modified by the court of appeals to allow the company time to develop an alternative disposal system.[125] Given the fact that the court of appeals must have known even less about feasible alternatives than did the district court, it is not surprising that its stay of the injunction was couched in patently aspirational terms:

> Reserve shall be given a reasonable time to stop discharging its wastes into Lake Superior. A reasonable time includes the time necessary to . . . come to agreement on some other site acceptable to both Reserve and the state. . . . Upon receiving a permit from the State of Minnesota, Reserve must utilize every reasonable effort to expedite the construction of new facilities. . . . If at any time during negotiations between Reserve and Minnesota for a disposal site, the United States reasonably believes that Minnesota or Reserve is not proceeding with expedition to facilitate Reserve's termination of its water discharge, it may apply to the district court for any additional relief necessary to protect its interests.[126]

Consistent with the pattern observed earlier in connection with congressional attempts to abate motor vehicle emissions, grudging progress towards accomplishing a middle ground compromise has been made since the issuance of that order.[127] According to the latest district court decision in this case, Reserve will be allowed until 1980 to build an on-land disposal system.[128] At least until that date, Reserve will continue dumping its wastes in Lake Superior notwithstanding the district court's finding that "[t]he discharge into the water substantially endangers the health of the people who procure their drinking water from the [lake]."[129] Thus, the court's attempts to force Reserve to aspire to alleviate the problem have not yet yielded lasting benefits.

C. *The Responsibilities of Federal Agencies Under the National Environmental Policy Act of 1969*

The National Environment Policy Act of 1969 (NEPA) [130] provides a unique opportunity to examine the effectiveness of aspirational commands in

---

Warnings in Product Liability—Design Defect Litigation Comes of Age, 61 CORNELL L. REV. 495, 535-36 (1976). For a critical commentary on the suggestion, see Henderson, *Design Defect Litigation Revisited*, 61 CORNELL L. REV. 541, 551-55 (1976).

125. Reserve Mining Co. v. EPA, 514 F.2d 492 (8th Cir. 1975).

126. *Id.* at 538.

127. A summary of progress to date appears in Reserve Mining Co. v. Herbst, — Minn. —, 256 N.W.2d 808 (1977). In effect, the courts are pressuring Reserve and the state of Minnesota to work out a compromise solution. *See* text accompanying note 126 *supra*.

128. United States v. Reserve Mining Co., 431 F. Supp. 1248 (D. Minn. 1977).

129. 380 F. Supp. at 16.

130. 42 U.S.C. §§ 4331-4335, 4341-4344 (1976).

the context of intragovernmental relationships. The provisions of NEPA relevant to the present analysis are section 101, which imposes in patently aspirational terms the "substantive" requirement that federal agencies weigh environmental values in their decisionmaking,[131] and section 102, which imposes the "procedural" or "action-forcing" requirement that agencies prepare Environmental Impact Statements (EIS's) in connection with proposals for federal action significantly affecting the human environment.[132] Prior to the Act, courts had occasionally interpreted federal regulatory statutes to impose such obligations,[133] but with NEPA, Congress explicitly extended this responsibility to all federal agencies. The hope expressed by some of NEPA's sponsors that the Act, though aspirational, would have its intended effect upon agency decisionmaking [134] was based upon two assumptions: first, that NEPA's aspirational commands would be understood by the agencies; and second, that political and budgetary leverage would provide sanctions sufficient to compel compliance.[135]

To the extent that the substantive provisions of NEPA constitute aspirational mandates, however, their implementation could be expected to encounter the same difficulties as have been observed in connection with similar mandates directed at business firms. In fact, governmental bureaucracies might be expected to be more resistant to change than would be addressees in the private sector.[136] Certainly the agencies compete with one another for scarce budgetary resources, and to comply with NEPA's substantive requirements might cause some agencies to experience disruptions which could place them at a competitive disadvantage.[137] Moreover, the vague substantive mandates of NEPA [138] could be interpreted as seeking, in

---

131. The section provides in pertinent part that:

> it is the continuing responsibility of the Federal Government to use all practicable means, consistent with other essential considerations of national policy, to improve and coordinate Federal plans, functions, programs, and resources to the end that the Nation may—
>
> . . . .
>
> (2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings.

42 U.S.C. § 4331(b) (1976).

132. The section requires: "[T]o the fullest extent possible . . . all agencies of the Federal Government shall—. . . . (c) include in every recommendation or report on proposals for legislation and other major Federal actions significantly affecting the quality of the human environment, a detailed statement . . . on—(i) the environmental impact of the proposed action." 42 U.S.C. § 4332 (1976).

133. *E.g.*, Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402 (1971) (agency action taken prior to the effective date of NEPA); Scenic Hudson Preservation Conf. v. FPC, 354 F.2d 608 (2d Cir. 1965), *cert. denied*, 384 U.S. 941 (1966).

134. *See, e.g.*, Caldwell, *Authority and Responsibility for Environmental Administration*, 329 ANNALS 107, 112 (1970).

135. *See Hearings on S. 1075, S. 237 and S. 1752 Before the Senate Comm. on Interior and Insular Affairs*, 91st Cong., 1st Sess. 32 (1969). *See also* Cortner, *A Case Analysis of Policy Implementation: The National Environmental Policy Act of 1969*, 16 NAT. RESOURCES J. 323, 327-28 (1976).

136. *See* Drucker, *What Results Should You Expect? A Users' Guide to MBO*, 36 PUB. AD. REV. 12 (1976).

137. *See generally* Cortner, *supra* note 135.

138. *See* note 131 *supra*.

a manner similar to the vehicle emission reduction provisions of the Clean Air Amendments of 1970,[139] only so much change as could be accomplished without costly disruptions in agency "business as usual." Thus, the agencies could be expected to implement NEPA's substantive provisions in ways conforming to, rather than departing from, their traditional orientations and standard operating procedures.[140] To be sure, section 102's action-forcing procedural requirement[141] that agencies prepare EIS's could be expected to produce more definite patterns of agency response.[142] But unless the courts would be willing to review agency action on its merits, the utility of a statute that only imposed the obligation to prepare a statement would seem doubtful.[143]

A review of judicial and agency responses reveal patterns consistent with the foregoing analysis. The action-forcing provisions of section 102 have received most of the emphasis in legal actions brought under NEPA, and the duties imposed by that section have been interpreted as being essentially mechanical and nonaspirational.[144] Courts have required agencies to prepare EIS's in a broad range of cases, and a number of proposals for action by federal agencies have been delayed by injunctions pending their preparation.[145] Over the objections of environmentalists, courts have considered the EIS mechanism to be procedural in nature,[146] and have not

---

139. 42 U.S.C. §§ 1857f-1 to -8 (1976) (current version at 42 U.S.C.A. §§ 7521-7550 (West 1977)).

140. *See* notes 30-34 and accompanying text *supra.*

141. 42 U.S.C. § 4332 (1976).

142. NEPA's main congressional sponsor, Senator Jackson, is generally recognized to be the primary source of the "action-forcing" concept in congressional debate. *See* 115 CONG. REC. 40,416 (1969). *See generally* Hanks & Hanks, *An Environmental Bill of Rights: The Citizen Suit and the National Environmental Policy Act of 1969*, 24 RUTGERS L. REV. 230, 251-65 (1970).

143. *See* text accompanying notes 47-50 *supra.*

144. In one of the leading cases interpreting NEPA's substantive and procedural mandates, Calvert Cliffs Coordinating Comm., Inc. v. AEC, 449 F.2d 1109 (D.C. Cir. 1971), the court explained:

> Thus, the general substantive policy of the Act is a flexible one. It leaves room for a responsible exercise of discretion and may not require particular substantive results in particular problematic instances. However, the Act also contains very important "procedural" provisions—provisions which are designed to see that all federal agencies do in fact exercise the substantive discretion given them. These provisions are not highly flexible. Indeed, they establish a strict standard of compliance.

Id. at 1112. By and large, the courts have followed this approach. *See, e.g.*, City of New York v. United States, 344 F. Supp. 929 (E.D.N.Y. 1972); Daly v. Volpe, 326 F. Supp. 868, 870 (W.D. Wash. 1971). Occasionally a court will purport to review the substantive merits of an agency decision. *See, e.g.*, Environmental Defense Fund, Inc. v. Corps of Engn'rs of the United States, 470 F.2d 289, 297-300 (8th Cir. 1972). The relatively narrow scope of judicial review in such cases assures that the level of the courts' participation in decisions on the merits remains minimal, however.

145. *See, e.g.*, Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), *cert. denied*, 412 U.S. 908 (1973); Greene County Planning Bd. v. FPC, 455 F.2d 412 (2d Cir.), *cert. denied*, 409 U.S. 849 (1972); San Antonio Conservation Soc'y v. Texas Highway Dep't, 446 F.2d 1013 (5th Cir. 1971), *cert. denied*, 406 U.S. 933 (1972).

146. *See, e.g.*, Hanks & Hanks, *supra* note 142; Sax, *The (Unhappy) Truth About NEPA*, 26 OKLA. L. REV. 239 (1973); Note, *Tilting at the Environmental Windmill—The Quest for a Substantive Right to a Clean Environment*, 9 SUFFOLK U.L. REV. 1286 (1975); Note, *NEPA: Full of Sound and Fury . . .?*, 6 U. RICH. L. REV. 116 (1971).

undertaken to review the proposals for agency action to which the EIS's relate on their substantive merits.[147]

Whether NEPA has affected agency attitudes and conduct beyond the direct effects of the judicially enforced EIS requirements is more difficult to determine. Some analysts, emphasizing the gradual, indirect effects of being forced to conform to the procedural requirements of section 102, have concluded that the Act has had a limited, but measurable, impact upon agency behavior.[148] On the other hand, studies focusing upon the effects of NEPA at the agency policymaking level have tended to be more pessimistic.[149] For example, one writer has concluded:

> When a new policy does not demand changes in the agencies' established structural and behavior characteristics, implementation is apt to be facilitated. NEPA, however, demands change. It requires modifications in a number of variables which are rooted in the organizations' basic structure and its established patterns of action. To implement NEPA effectively, agencies would have to become committed to innovative behavior and would have to make alterations in their internal value configurations. Such behavior is too risky for the agencies; resistance and opposition have been the safer course.[150]

On balance, studies of NEPA's substantive effects upon agency decisionmaking are supportive of the conclusions reached earlier regarding the limited effectiveness of aspirational commands. Analysts have been unhappy with the limited, predominantly procedural effects of the Act, and have expressed their frustration in terms which, though failing to recognize the extent to which the failure of NEPA's substantive mandates was inevitable from the outset, are consistent with the basic analysis in this Article.[151]

Perhaps the clearest indication that the difficulties in achieving NEPA's substantive policy objectives are inherent in the Act's reliance upon aspira-

---

147. *See* Kleppe v. Sierra Club, 427 U.S. 390, 410 n.21 (1976). *See also* note 144 *supra*. Obviously, an important part of the explanation of judicial reluctance to address the substantive merits in these cases relates to the limits of adjudication. *See* note 119 *supra*.

148. *See, e.g.*, Wichelman, *Administrative Agency Implementation of the National Environmental Policy Act of 1969: A Conceptual Framework for Explaining Differential Response*, 16 NAT. RESOURCES J. 263 (1976). *See also* U.S. DEP'T OF COMMERCE, PUB. NO. PB-253990, AN ANALYSIS OF SIX YEARS' EXPERIENCE BY SEVENTY FEDERAL AGENCIES 21-26 (1976) [hereinafter cited as SIX YEARS' EXPERIENCE].

149. *See, e.g.*, Andrews, *Agency Responses to NEPA: A Comparison and Implications*, 16 NAT. RESOURCES J. 301 (1976); Cortner, *supra* note 135; Fishman, *A Preliminary Assessment of the National Environmental Policy Act of 1969*, 1973 URB. L. ANN. 209; Hill & Ortolano, *NEPA's Effect on the Consideration of Alternatives: A Critical Test*, 18 NAT. RESOURCES J. 285 (1978).

150. Cortner, *supra* note 135, at 337.

151. *See* authorities cited note 146 *supra*. Professor Sax, after listing "five basic rules of the game," concludes: "These rules tell us that it is nearly certain that airport authorities will continue recommending and building new runways . . . whether or not there is a NEPA and whether or not courts require them to file elaborate, multi-volume impact statements. If we want them to change their behavior, we must give them signals that will register . . . . Until we are ready to face these hard realities, we can expect laws like NEPA to produce little except fodder for law review writers and contracts for that newest of growth industries, environmental consulting." Sax, *supra* note 146, at 248.

tional commands has been the experience in connection with attempts to require the preparation of programmatic EIS's—*i.e.*, EIS's relating to broad agency programs rather than specific component projects. The earlier that planning occurs in the development of any program, and the more comprehensive its scope, the more useful it is.[152] Clearly, planning which is both early in time and comprehensive in scope is essentially and unavoidably aspirational. Thus, the sort of planning which would most effectively accomplish NEPA's substantive policy objectives—broad, programmatic planning undertaken well in advance of commitments to specific projects—is precisely the sort of planning which cannot effectively be compelled by law.[153] As a practical matter, judicial recognition of programmatic EIS responsibilities under NEPA might even discourage agencies from engaging in such long range planning. Under such a regime, as long as an agency did not voluntarily engage in programmatic planning, it would be relatively difficult for plaintiffs to prove or for courts to determine the appropriateness of an EIS prior to the agency's making a concrete proposal for action.[154] On the other hand, if an agency engaged in long range planning on its own initiative, the evidentiary basis of requiring the early preparation of a programmatic EIS, with its associated expense and delay, might thereby be established.[155] Thus, the agencies that would be penalized most frequently by being forced to

---

152. "If NEPA is to accomplish [the end of forcing federal agencies to consider environmental factors equally with economic and technical factors] it is necessary that environmental considerations be integrated into planning starting at the earliest possible point in the process." Hill & Ortolano, *supra* note 149, at 309. *See also* Andrews, *A Philosophy of Environmental Impact Assessment*, 28 J. SOIL & WATER CONSERV. 205 (1973); Comment, *The National Environmental Policy Act Applied to Policy-Level Decisionmaking*, 3 ECOLOGY L.Q. 799 (1973).

153. In a decision generally favorable toward imposing programmatic planning duties upon federal agencies under NEPA, the court in Scientists' Inst. for Public Information, Inc. v. AEC, 481 F.2d 1079 (D.C. Cir. 1973) explained:

> In the early stages of research, when little is known about the technology and when future application of the technology is both doubtful and remote, it may well be impossible to draft a meaningful impact statement . . . . NEPA requires predictions, but not prophecy, and impact statements ought not to be modeled upon the works of Jules Verne or H. G. Wells.

Id. at 1093.

154. In the *Scientists' Institute* case, the court established a four-part test with which to determine the appropriateness of an EIS:

> Determining when to draft an impact statement for a technology development program obviously requires a reconciliation of . . . competing concerns. Some balance must be struck, and several factors should be weighed in the balance. How likely is the technology to prove commercially feasible, and how soon will that occur? To what extent is meaningful information presently available on the effects of application of the technology and of alternatives and their effects? To what extent are irretrievable commitments being made and options precluded as the development program progresses? How severe will be the environmental effects if the technology does prove commercially feasible?

Id. at 1094. Although the court makes the traditional deferral to agency expertise, clearly it anticipates active judicial review of agency decisions in this respect. We submit that such review will be difficult without help from the agency in the form of voluntary planning efforts, and that the problems presented to the courts would clearly exceed the limits of adjudication. *See* note 119 *supra*.

155. Thus, the agency involved in the *Scientists' Institute* case had actually undertaken such planning on its own initiative, and even admitted in argument that a programmatic EIS would eventually be required. 481 F.2d at 1086. The court's decision to require an EIS appears to have been influenced by these factors. *Id.* at 1096-97.

prepare sweeping programmatic EIS's would be those agencies that volunteered to engage in creative, long range planning on their own initiatives. On the other hand, the agencies that would benefit competitively under such a system would be those which most steadfastly resisted going along with NEPA's substantive mandates.

In an opinion strongly supportive of the present analysis, the Supreme Court in *Kleppe v. Sierra Club* [156] recently interpreted the "proposals for . . . federal action" language in section 102 to require the preparation of EIS's only in connection with, and limited by the factual predicates of, specific agency proposals and actions.[157] After *Kleppe,* agencies are still encouraged to take environmental factors into account during the evolution of a proposal,[158] but courts will not step in to compel the preparation of an EIS until the agency formally advances, or acts upon, a specific proposal.[159] The implications of this decision present the important question of whether NEPA's accomplishments have been worthwhile. Some critics have questioned whether the benefits of NEPA, when implemented in an essentially mechanical, nonaspirational manner, justify the costs.[160] Indeed, some have even insisted that NEPA's effects have been counterproductive in some areas of environmental concern.[161] The judicial emphasis, epitomized by the *Kleppe* decision, has been upon reviewing agency procedures in connection with individual projects on an ad hoc, case-by-case basis.[162]

The EIS requirement under section 102 has had some advantageous effects. Some agency actions harmful to the environment have been delayed or abandoned.[163] To some extent NEPA may also function as a disclosure law facilitating public reaction in opposition to environmentally harmful agency actions.[164] But without achievement of its substantive objective of compelling serious consideration of environmental concern in agency decisionmaking, it remains doubtful whether NEPA's accomplishments have been worth its substantial costs.[165]

---

156. 427 U.S. 390 (1976).

157. Although this case is distinguishable on its facts from the *Scientists' Institute* case—*e.g.,* the agency in *Kleppe* was not engaged in technology development, nor did the commitments being made to the component projects tend so forcefully to moot the broader question of whether to continue the overall program—the Court expressly rejected the appropriateness of the four-part test approach in favor of an approach which substantially defers to the agency's discretion. *See id.* at 405-06.

158. "[T]he [Act] contemplates a consideration of environmental factors by agencies during the evolution of a report or recommendation on a proposal." *Id.* at 406 n.15.

159. *Id.*

160. *See, e.g.,* Hagman, *NEPA's Progeny Inhabit the States—Were the Genes Defective?,* 7 URB. L. ANN. 3 (1974); Sax, *supra* note 146.

161. *E.g.,* Hagman, *supra* note 160, at 47 ("The NEPA . . . theory and approach to land-use control is the antithesis of comprehensive land-use control.").

162. *See* cases cited in notes 144-45 *supra.*

163. For a recent survey of the effects of NEPA in causing agency projects to be delayed and even abandoned, see SIX YEARS' EXPERIENCE, *supra* note 148, app. D.

164. *See* Tuoni, *NEPA and the Freedom of Information Act: A Prospect for Disclosure,* 4 ENVT'L AFF. 179 (1975).

165. For a recent summary of NEPA-related cost, see SIX YEARS' EXPERIENCE, *supra* note 148, at 43-48.

From the perspective of the present analysis, the failure of NEPA's substantive objective may be viewed as essentially inevitable. From the outset, the Act presented something of a dilemma. With respect to those of its provisions which would have been of greatest benefit if successful—those attempting to compel the aspiration of federal agencies—the present analysis would have predicted failure. Correspondingly, those NEPA provisions which might have been expected to succeed—the procedural provisions requiring agencies to explain specific proposals for action—are of dubious utility. In this respect, of course, NEPA is not unlike the auto emission reduction requirements of the Clean Air Act discussed earlier. Both statutory schemes have attempted to compel institutional addressees to aspire to achieve objectives toward which they would not have inclined otherwise, and both appear to have effectuated, at substantial cost, superficial changes in addressee behavior which may prove in the long run to be counterproductive.

D. *The Enforcement Responsibilities of the States Under the 1970 and 1977 Amendments to Title I of the Clean Air Act*

Beginning with the first major federal legislation designed to control air pollution in 1955,[166] Congress recognized that the states would have to play an essential part in implementing federal environmental policies. Openly aspirational, the 1955 Act sought, through grants-in-aid and technical assistance, to encourage the states to develop and enforce environmental regulations. The pressures of competition between the states have tended to preclude them from looking beyond their individual short run economic interests, however.[167] Thus, states hesitated to impose significant environmental clean-up costs on their own industry and commerce out of a fear that other states would thereby gain a competitive edge.[168] Furthermore, since air pollution cannot be contained by state boundaries, the presence of "spillover" effects provides additional inducements to the states to refrain from taking individual initiatives.[169] These spillovers may be substantial enough so that some states cannot solve their pollution problems by themselves. Conversely, other states may find that a substantial portion of the benefits from their expensive pollution control programs inure to neighboring states without cost to them. Thus, the states have had substantial reasons for not accepting the congressional offers to work voluntarily to provide solutions to environmental problems.

In an attempt to avoid reliance upon the voluntary cooperation of the states, the Clean Air Amendments of 1970[170] enlarged the role of the

166. The Air Pollution Control Act, Pub. L. No. 159, 69 Stat. 322 (1955).

167. The phenomenon that prevents individual states from sacrificing short run economic benefits for the greater good of the country as a whole is the "tragedy of the commons," discussed in notes 56-57 and accompanying text *supra*.

168. *See* note 58 and accompanying text *supra*.

169. *See generally* Stewart, *supra* note 58, at 1215-16.

170. Pub. L. No. 91-604, 84 Stat. 1676 (1970) (current version codified at 42 U.S.C.A. §§ 7401-7642 (West 1977)).

federal government and gave greater definition to the responsibilities of the states. Under the 1970 amendments, the EPA Administrator was required to establish national ambient air quality standards.[171] The states were directed to prepare and submit to the Administrator state implementation plans (SIPs) for attainment of these standards, which were to include provisions for enforcement of emission limitations against violators.[172] If a state failed to submit an adequate plan, the Administrator was required to prepare one for that state.[173] The Administrator also was given authority to initiate enforcement proceedings against sources of pollution in the event of default by the state.[174] Thus, the 1970 amendments provided a framework within which the states might be pressured to adopt and enforce environmental controls, but which dispensed with the need to rely exclusively upon the states to do so.

In practice, the 1970 amendments have not functioned in the manner just described. No SIP had been completely approved by the statutory deadline of December 31, 1972.[175] One source of difficulty has been the need to achieve significant reductions in motor vehicle emissions.[176] In addition to the emissions limitations on new vehicles discussed earlier,[177] substantial reductions in emissions from vehicles in use had to be achieved. Rather than call for extreme sacrifices in this regard, some states refused to submit plans containing transportation controls which would accomplish the needed reductions.[178] In such instances, the Administrator prepared outlines of transportation control plans (TCPs) for the states, and directed the states to promulgate regulations to fill in the details of the plans and then to enforce the completed plans.[179]

Several states challenged the authority of the Administrator to require them, under threat of sanction, to exercise their lawmaking and their law enforcement functions. Five federal courts of appeals have rendered decisions on the issues thus raised.[180] Three have held, and the Administrator now

---

171. 42 U.S.C. § 1857c-4 (1976) (current version at 42 U.S.C.A. § 7409 (West 1977)).

172. *Id.* § 1857c-5 (1976) (current version at 42 U.S.C.A. § 7410 (West 1977)).

173. *Id.* § 1857c-5(c)(1) (1976) (current version at 42 U.S.C.A. § 7410(c)(1) (West 1977)).

174. *Id.* § 1857c-8 (West Supp. 1977) (current version at 42 U.S.C.A. § 7413 (West 1977)).

175. *See* Jorling, *The Federal Law of Air Pollution Control, in* FEDERAL ENVIRONMENTAL LAW 1059 (E. Dolgin & T. Guilbert eds. 1974).

176. The recognition of this by the Administrator of the EPA is contained in his general rule relating to transportation controls. *See* 38 Fed. Reg. 30,625, 30,627 (1973).

177. *See* text accompanying notes 64-68 *supra.*

178. *See* Stewart, *supra* note 58, at 1203-04. The magnitude of the sacrifice required for the attainment of the air quality standards in California's South Coast Air Basin is described in Chernow, *Implementing the Clean Air Act in Los Angeles: The Duty to Achieve the Impossible,* 4 ECOLOGY L.Q. 537 (1975). The attainment of the standards would have required an 80% reduction in motor vehicle miles travelled. *Id.* at 550.

179. The Administrator's general rule relating to TCPs, which furnished the basis for transportation control measures in SIPs, is contained in 38 Fed. Reg. 30,626 (1977). The argument that he has authority under the amendments to compel the states to promulgate and enforce transportation control measures is set out at 30,632-33.

180. Second Circuit: Friends of the Earth v. Carey, 552 F.2d 25 (2d Cir. 1977), *application for stay denied sub nom.* Beame v. Friends of the Earth, 434 U.S. 1310 (1977);

concedes, that the 1970 amendments did not confer authority upon him to order states to prepare and to enact into law regulations relating to transportation controls.[181] The Administrator, however, has continued to insist upon his authority to compel the states to enforce the TCPs, and has emphasized the practical necessity of relying upon state enforcement procedures.[182]

It is clear that any attempt to compel the states to enforce federal environmental regulations would require reliance upon aspirational mandates. Certainly, when viewed at the policy level, law enforcement is an aspirational activity.[183] By ordering the states to enforce the TCPs the Administrator did not intend that the states abandon all other law enforcement activities. Thus, while the Administrator would expect the states to make good faith decisions regarding the allocation of scarce law enforcement resources to enforcing the TCPs, the states would inevitably rely upon their own values in exercising the discretion inherent in the law enforcement planning process. For this reason, an attempt to compel the states to enforce the TCPs in ways reflective of national environmental interests, rather than their own individual interests, might have been expected to encounter many of the difficulties already considered in other contexts.

The experience has been consistent with what might have been expected. In proceedings for judicial review of the TCPs, three federal

---

Third Circuit: Pennsylvania v. EPA, 500 F.2d 246 (3d Cir. 1974); Fourth Circuit: Maryland v. EPA, 530 F.2d 215 (4th Cir. 1975), *vacated and remanded sub nom.* EPA v. Brown, 431 U.S. 99 (1977); Ninth Circuit: Arizona v. EPA, 521 F.2d 825 (9th Cir. 1975), *vacated and remanded sub nom.* EPA v. Brown, 431 U.S. 99 (1977); Brown v. EPA, 521 F.2d 827 (9th Cir. 1975), *vacated and remanded*, 431 U.S. U.S. 99 (1977); Alaska v. EPA, 521 F.2d 842 (9th Cir. 1975); D.C. Circuit: District of Columbia v. Train, 521 F.2d 971 (D.C. Cir. 1975), *vacated and remanded sub nom.* EPA v. Brown, 431 U.S. 99 (1977).

181. The Fourth, Ninth, and D.C. Circuits have upheld challenges to the Administrator's authority. *See* cases cited in note 180 *supra*. The authority of the Administrator to order states to prepare and adopt regulations was not at issue in *Friends of the Earth v. Carey*. The case involved enforcement of a plan that had been adopted by state and municipal authorities. In the process of seeking Supreme Court review of the adverse decisions, the Administrator conceded his lack of authority to compel states to enact laws or regulations. *See* Brief for the Federal Parties at 20 n.14, EPA v. Brown, 431 U.S. 99 (1977). In *Brown* the Supreme Court refused to review the orders before it, since it perceived that they would need substantial modification in light of the Administrator's concession. The judgments of the courts below were vacated and the cases remanded.

182. Direct Federal enforcement and massive, duplicative Federal programs aimed at vehicles on an individual basis were not the means contemplated by the Act to solve these problems. It is clearly necessary that implementation of transportation control plans be carried out at the State and local level. The Chairman of the House Committee that reported out the amendments to the Act described their purpose as follows:

> If we left it all to the Federal Government, we would have about everybody on the payroll of the United States. We know this is not practical. Therefore, the Federal Government sets the standards, we tell the States what they must do and what standards they must meet. These standards must be put into effect by the communities and the States, and we expect them to have the means (sic) to do the actual enforcing.

38 Fed. Reg. 30,626, 30,633 (1973) (quoting 116 Cong. Rec. 19,204 (1970) (statement of Rep. Staggers)).

183. Law enforcement involves exceedingly complex decisions relating to planning and the allocation of resources among various enforcement programs. Prohibition furnishes one of the classic examples of the inability of the federal government to compel the states to enforce federal law. *See* note 10 *supra*.

courts of appeals have ruled that the Administrator lacks the power to compel state cooperation.[184] Although based on constitutional grounds, these decisions are remarkably consistent with the foregoing analysis of the inherent limits upon the effectiveness of aspirational commands. A good example is *District of Columbia v. Train*.[185] The National Capital Interstate Air Quality Region, consisting of the District of Columbia and parts of Maryland and Virginia, submitted a SIP to the Administrator, who disapproved some portions and promulgated a plan containing several transportation control measures. The plan called upon the state and local governments comprising the region to adopt and enforce motor vehicle inspection, maintenance and retrofit programs; to purchase additional buses and establish exclusive bus lanes; and to refuse to register any motor vehicle which failed to comply with applicable emission standards. The court of appeals sustained the plan in some respects and rejected it in others, along lines which support this analysis of the limits of aspirational commands.

With respect to the requirement that the states enforce the inspection, maintenance, and retrofit programs, the court rejected the Administrator's position and ruled that the order was unconstitutional:

> In essence, the Administrator is here attempting to commandeer the regulatory powers of the states, along with their personnel and resources, for use in administering and enforcing a federal regulatory program against the owners of motor vehicles. . . . Under the regulations here, the states are to function merely as departments of the EPA, following EPA guidelines and subject to federal penalties if they refuse to comply or if their regulations of vehicles is ineffective. We are aware of no decisions of the Supreme Court which hold that the federal government may validly exercise its commerce power by directing unconsenting states to regulate activities affecting interstate commerce, and we doubt that any exist.[186]

In reaching this conclusion, the court relied upon principles of federalism which often operate to prevent attempts by the federal government to rely upon direct commands to the states to aspire in implementing federal policies.[187]

Applying these same principles of federalism to the other portions of the TCP, the court sustained the Administrator's authority to require the states to purchase buses, to establish exclusive bus lanes, and to refuse to register motor vehicles that fail to satisfy emission standards. Although the requirements relating to the purchase of buses and the establishment of

---

184. *See* note 181 *supra*.
185. 521 F.2d 971 (D.C. Cir. 1975), *vacated and remanded sub nom.* EPA v. Brown, 431 U.S. 99 (1977).
186. *Id.* at 992.
187. *See* note 10 *supra*.

bus lanes called for affirmative action by the states, they specified precisely how many buses were to be purchased, and when. They even designated the streets upon which the exclusive bus lanes were to be located. And the requirement that the states refuse to register nonconforming vehicles was negative and specific. Thus, unlike the requirements struck down as unconstitutional, the requirements of the TCP upheld by the court did not involve federal reliance upon aspirational commands.[188]

The final resolution of the Administrator's authority to compel states to enforce TCPs has been avoided, at least for the time being, by the Clean Air Act Amendments of 1977.[189] Under these amendments, the date for attainment of the primary air quality standards in nonattainment areas (those areas that exceed the air quality standard for any pollutant) has been postponed until 1982, and in some instances until 1987.[190] Although the stautory provisions under which the Administrator has asserted his authority to order the states to enforce the TCPs have not been changed, the 1977 amendments include a number of new provisions designed to indirectly pressure the states to cooperate. For example, an implementation plan for a nonattainment area must be submitted "as a precondition for the construction or modification of any major stationary source [of pollution] in any such area on or after July 1, 1979. . . ." [191] To qualify, plans must conform to a number of requirements, including identification of and commitment to "the financial and manpower resources necessary to carry out the plan provisions. . . ." [192] In addition, the SIPs must include "written evidence that the state [has] adopted by statute . . . or other legally enforceable document, the necessary requirements and schedules and timetables for compliance, and [is] committed to implement and enforce the appropriate elements of the plan. . . ." [193] The 1977 amendments also provide for the withholding of federal grants otherwise authorized by the amendments, and of certain highway grants authorized by title 23 of the United States Code, for nonattainment areas that have not taken certain specified steps toward attainment.[194]

---

188. This discussion should not be taken to suggest that the principles of federalism are coextensive with the limits upon the efficacy of aspirational commands. The reasons for each are different, and federal regulation of state activity by means of nonaspirational commands might well violate the principles of federalism. *See* National League of Cities v. Usery, 426 U.S. 833 (1976). Indeed, the courts in Maryland v. EPA, 530 F.2d 215 (4th Cir. 1975), *vacated and remanded sub nom.* EPA v. Brown, 431 U.S. 99 (1977) and Brown v. EPA, 521 F.2d 827 (9th Cir. 1975), *vacated and remanded*, 431 U.S. 99 (1977), took more expansive views of federalism than the court in *District of Columbia v. Train.* The *Maryland* and *Brown* courts struck down nonaspirational orders similar to those sustained in the *District of Columbia* case. In contrast, in Pennsylvania v. EPA, 500 F.2d 246 (3d Cir. 1974), the court rejected challenges to the authority of the administrator to order the states both to adopt regulations and enforce them.

189. Pub. L. No. 95-95, 91 Stat. 685 (1977), 42 U.S.C.A. §§ 7401-7642 (West 1977).

190. 42 U.S.C.A. § 7502(a) (West 1977).

191. *Id.* § 7502(a)(1) (West 1977).

192. *Id.* § 7502(b)(7) (West 1977).

193. *Id.* § 7502(b)(10) (West 1977).

194. *Id.* § 7506(a) (West 1977).

Looking back over the experience in recent years, it is clear that the 1970 amendments have failed to achieve their objectives.[195] Although the amendments appeared to set nonaspirational performance objectives for the states,[196] it quickly became apparent that the air quality standards could not be achieved without unacceptable levels of sacrifice. Thus, the Administrator felt compelled to seek state cooperation in achieving the best compromise between air quality and other values by ordering them to exercise their lawmaking and enforcement powers. Judicial rejections of these attempts to compel aspiration are largely based upon principles of federalism;[197] but quite apart from those principles, the attempts would have encountered substantial difficulties of the sort described in this article.

The Clean Air Act Amendments of 1977, in contrast to their predecessors, rely upon the withholding of benefits as well as upon the imposition of punishments to bring reluctant states into line. Whether this approach will work any better may seriously be doubted. As studies of similar attempts to control state activities in other contexts make clear,[198] unless a relatively high degree of specificity is achieved, the states will be unable to determine what enforcement procedures will satisfy the Administrator and the Administrator will be unable to determine when to withhold the benefits. As a practical matter, that degree of specificity is unlikely to be achieved. Moreover, the constitutionality of the cutting off of highway funds as a means of attempting to compel the states to enforce the TCPs is not clear.[199] But even assuming that principles of federalism do not preclude this type of congressional

---

195. *See* Downing & Brady, *Implementing the Clean Air Act: A Case Study of Oxident Control in Los Angeles,* 18 NAT. RES. J. 237 (1978).

196. The 1970 amendments to title I contained provisions which on their face helped to convert the performance objectives into aspirational commands. Upon application of the governor at the time of filing of a SIP, the Administrator is authorized to extend the time for the attainment of air quality standards in a state for up to two years if he determines that the necessary technology will not be available to reach the standards within the statutory time period. 42 U.S.C. § 1857c-5(e) (1976) (current version at 42 U.S.C.A. § 7410(e) (West 1977)). The Administrator is also authorized to grant a postponement for up to one year of any requirement of the SIP upon the application of a governor, if he determines that good faith efforts to comply have been made and that the necessary technology is not available. 42 U.S.C. § 1851c-5(f) (1976) (current version at 42 U.S.C.A. § 7410(e) (West 1977)). Recognizing that control technology might not be available for states for which transportation control measures would be required, the Administrator granted two-year extensions for states requiring TCPs, and indicated that he would seek legislation delaying the air quality standards attainment date. 38 Fed. Reg. 30,626, 30,626-27. It was a similar pattern of extensions based upon an absence of control technology that converted the seeming specificity of title II into an aspirational mandate. *See* text accompanying notes 64-82 *supra.*

197. The literature involving the interpretation of title I and the related problems of federalism is extensive. *See, e.g.,* Gordon, *When Push Comes to Infringement of State Sovereignty: Implementation of EPA's Transportation Control Plans,* 1976 WIS. L. REV. 1111; Luneburg, *Federal-State Interaction Under the Clean Air Amendments of 1970,* 14 B.C. IND. & COM. L. REV. 637 (1973); Salmon, *The Federalist Principle: The Interaction of the Commerce Clause and the Tenth Amendment in the Clean Air Act,* 2 COLUM. J. ENVT'L L. 290 (1976); Stewart, *supra* note 58; Note, *The Clean Air Act: "Taking a Stick to the States,"* 25 CLEV. ST. L. REV. 371 (1976); Note, *The Clean Air Act Amendments of 1970: A Threat to Federalism?,* 76 COLUM. L. REV. 990 (1976); Comment, *The Clean Air Amendments of 1970: Can Congress Compel State Cooperation in Achieving National Environmental Standards?,* 11 HARV. C.R.-C.L. L. REV. 701 (1976).

198. *See* notes 41-45 and accompanying text *supra.*

199. *See* Stewart, *supra* note 58, at 1250-62.

regulation of state governments,[200] the limited effectiveness of aspirational commands will remain as a substantial barrier to the successful use of grants-in-aid to compel states to implement federal environmental policies.[201]

CONCLUSION

Traditional approaches to the allocation of environmental resources have been primarily through the marketplace, controlled to some extent by rules of law establishing priorities of their use among owners of land. It has become apparent that these approaches are inadequate to protect the larger public interests in health and welfare, and that the states cannot be expected to take initiatives in creating new environmental regulatory programs. Thus, the federal government has had to assume the dominant role in formulating and implementing environmental policies and programs. Increasingly in recent years, federal regulatory efforts have included aspirational commands directed at both governmental agencies and private firms to attempt to secure their cooperation in implementing federal policies. In spite of the fact that these commands have often been accompanied by threats of substantial sanctions, they usually have not produced the desired responses. This article attributes much of the difficulties to substantial and unavoidable limits on an addressor's ability to compel others to aspire to achieve objectives which are incompatible with the addressees' value structures. The practical considerations supporting reliance upon aspirational commands in the field of environmental protection are understandable. The business firms and governmental agencies to whom these commands are addressed possess technical and logistical capabilities markedly superior to federal lawmakers.[202] Furthermore, aspirational commands may serve to change attitudes toward environmental protection, and thus bring about a greater coincidence in values between the federal lawmakers and those to whom the environmental protection laws are addressed.[203] But whether or not this reliance may appear to be sensible from a practical standpoint, an understanding of the limits upon the effectiveness of aspirational commands reveals it to be misplaced.

In attempting thus to explain the difficulties associated with federal environmental regulatory efforts in recent years, care must be taken to avoid claiming too much for one's thesis. Obviously, other factors have contributed to frustrating attempts to implement federal environmental policies. Federal regulatory schemes are typically addressed to very large and politically

---

200. *See* Choper, *The Scope of National Power Vis-à-Vis the States: The Dispensability of Judicial Review*, 86 YALE L.J. 1552 (1977).

201. For different reasons, Professor Stewart shares this pessimism about the use of grants-in-aid. *See* Stewart, *supra* note 58, at 1251. Downing and Brady also hold out little hope that the 1977 amendments will succeed. *See* Downing & Brady, *supra* note 195, at 282.

202. The term "federal lawmaker" includes, where appropriate, Congress, administrative agencies, and federal judges.

203. *See* note 2 and accompanying text *supra*.

powerful institutions, by lawmakers admittedly acting without adequate knowledge of the costs involved. Enforcement of even specific environmental regulations can be expected to be difficult in periods of economic recession, with their understandable, if not applaudable, anti-environmental swings in public opinion. Rather than attempting to explain all that has occurred by means of a single principle, this Article suggests that among the factors responsible for the frustration of attempts to implement federal environmental policies is one factor apt to be overlooked in favor of the others—inherent limitations upon the efficacy of aspirational commands.

That reliance upon aspirational commands may have been fruitful in some important areas of public concern, such as in the field of civil rights, does not detract from the foregoing analysis of federal environmental regulatory efforts. Consistent with the analysis in this Article, aspirational commands may have greater potential in situations which do not present, in so stark a fashion, the earlier described phenomenon of the tragedy of the commons.[204] But where the phenomenon exists as it does in the field of environmental regulation—where it is clearly against the competitive interests of addressees to cooperate voluntarily in response to aspirational commands—reliance upon appeals to conscience, even when accompanied by threats of sanctions, can be expected to lead to frustration and in some instances to produce results which are contrary to those intended.

What all of this comes down to is not a doomsday appraisal of despair, but rather an obvious truth: there are no easy solutions available to federal lawmakers seeking to regulate decisions and activities significantly affecting the environment. Like the monarch who wanted to capture the skills but not the values of the poet, federal lawmakers are confronted in this context with an institutionalized, potentially threatening separation of skills and values. Business firms and state governments possess both the technical skills to develop solutions and the logistical capabilities to carry them out. Often, however, they are trapped in destructive patterns of short run competition which preclude them from giving adequate consideration to environmental values. In contrast, federal lawmakers are in a position to establish the proper values, but frequently lack the technical skills and logistical capabilities to implement them without substantial cooperation from the firms and the states. The foregoing analysis suggests that this separation may not successfully be bridged by aspirational commands aimed at commandeering the institutional addressees' skills and bending them to the federal lawmakers' values. It follows that if the harmful consequences of this separation of skills and values are to be reduced, the separation itself must somehow be reduced: either the federal lawmakers must acquire sufficient expertise to be able, either directly or indirectly, to tell the institu-

204. *See* notes 56-57 and accompanying text *supra*.

tional addressees more specifically what to do, or the institutional addressees must be restructured to reflect the lawmakers' values more closely.[205]

With this last observation, the present analysis comes full circle, for it will be recalled that these were the difficult-to-implement alternatives that rendered attractive the possibility of relying upon aspirational commands.[206] But it should now be apparent that the problems associated with attempting to compel aspiration are just as formidable. Therefore, what appears to be required is a commitment of sufficient resources to render workable an appropriate combination of these alternatives. To some extent, the heavy reliance by Congress upon aspirational commands in recent years may reflect what some environmentalist writers have long and openly suspected—that in the final analysis, federal lawmakers lack the resolve to commit the resources necessary to implement their environmental policies effectively.[207] This is not to say that these lawmakers have acted deliberately to subvert their own publicly proclaimed goals. It is more likely that given the competing demands of a wide variety of social welfare programs, they have taken a relatively high sounding, seemingly low cost road, and have hoped for the best. From this perspective, the chief utility of this analysis may be to expose the unavoidable difficulties involved in these attempts, thereby bringing nearer the day when the hard, but necessary, choices will be made.

---

205. *See* Tribe, *supra* note 1, at 52-53.

206. *See* notes 59-63 and accompanying text *supra*.

207. Hypocrisy on the part of government officials, including those in Congress, is not unknown, and cynicism about Congress's commitment to its stated goals is occasionally expressed. *See, e.g.*, Sax, *supra* note 146, at 248. Notwithstanding such occasional expressions of frustration, there is too much evidence of sincere congressional concern over environmental quality to accept a cynical explanation of the failure of the federal attempts of environmental regulation analyzed in this Article. For example, the imposition of criminal penalties for manufacturers' violations of title II of the Clean Air Amendments of 1970, *see* 42 U.S.C.A. § 7524 (West 1977), represents a clear attempt to put teeth in the legislation, and there can be no doubt that Congress was concerned with the possibility that the suspension provisions of title II would undermine the legislation's technology-forcing potential. *See* note 93 and accompanying text *supra*. In connection with NEPA, the procedural requirements of § 102 were added as a means of forcing federal agencies to comply with the Act's substantive provisions. *See* note 142 and accompanying text *supra*. The purpose behind the provisions of the 1970 amendments to title I of the Clean Air Act requiring states to prepare and file SIPs was clearly to force the states to assume an active role in the implementation of national environmental policies. *See* text accompanying notes 166-74 *supra*. A fair reading of reports of recent congressional hearings supports the conclusion that congressional commitment to a better environment remains strong. *See, e.g., Implementation of the Clean Air Act: Hearings Before the Subcomm. on Environmental Pollution of the Senate Comm. on Public Works*, 94th Cong., 1st Sess. 131-39 (1975) (opening statements); *Proposed Amendments to the Clean Air Act: Hearings on S. 251, S. 252, and S. 253 Before the Subcomm. on Environmental Pollution of the Senate Comm. on Environment and Public Works*, 95th Con., 1st Sess. 13-19 (Part 1 1977) (opening statements).