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SOCIAL IMPACTS, POLITICS, AND THE ENVIRONMENTAL IMPACT STATEMENT PROCESS†

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The National Environmental Policy Act of 1969 (NEPA)¹ is generally regarded as the single most important piece of federal legislation on the environment. An important feature of NEPA is the requirement that administrative agencies prepare environmental impact statements (EIS's) for major actions significantly affecting the quality of the human environment.² The effectiveness of the EIS requirement is open to a great deal of debate. While the EIS is mandated to be a multidisciplinary, scientific evaluation of agency proposals,³ a host of plaintiffs have alleged that particular EIS's were inadequate, and certain scholars have characterized the EIS process as less science than "proliferating paperwork."⁴ At least one environmental lawyer has charged environmental statements with "squandering massive amounts of time, talent, public and private moneys," and argued that EIS's "have little relationship to actual decision making on location, design, construction, and operation of the endeavor being studied. Often they are done after basic development decisions have been made."⁵

Perceptions of the ineffectiveness of the EIS process appear to result in large part from associating unattainable norms with the EIS process. NEPA, the Guidelines of the Council on Environmental Quality (CEQ), and the normative expectations of agencies' critics anticipate EIS's which (a) are scientific and multidisciplinary, (b) take into account all relevant factors, (c) evaluate the unquantifiable, (d) produce policy which mitigates all damage, and (e) are coordinated with the policy of all other relevant governmental entities. For students of public administration these prescriptions have a familiar ring. The study of public administration in the first half of the twen-

† This article is a revision of a paper originally presented at the Meeting of the Society for the Study of Social Problems, Montreal, August 1974.

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1. 42 U.S.C. § 4321, et seq.

2. NEPA § 102(2)(C), 42 U.S.C. § 4332(C) (1970).

3. NEPA § 102(2)(A), 42 U.S.C. § 4332(A) (1970).

4. R. Christofferson, NEPA: Proliferating Paperwork or Plotting a New Direction?, American Association for the Advancement of Science meeting paper, Philadelphia, December 1972.

5. R. Hansen, speech to the Colorado Open Spaces Council, Aspen, July 1974.

tieth century was dominated by the theory that the bureaucracy could be managed in a scientific manner. This scientific management theory is perhaps best expressed by Gulick's statement that the job of the administrator consists solely of planning, organizing, staffing, directing, coordinating, reporting, and budgeting (POSDCORB).⁶ During the 1960's scientific management took the form of planning-programming-budgeting systems (PPB), an attempt to determine program expenditures on the basis of cost-benefit evaluation of programs and program alternatives.⁷ The expectation that NEPA will cause federal agencies to produce scientific, wholistic, optimizing, evaluating, mitigating, and coordinating policy seems to be the latest manifestation of the rational decisionmaking perspective on bureaucratic behavior. In fact, some scholars would even have NEPA carry the burden of technology assessment, the evaluation of whole classes of applications of science and engineering.⁸

Modern students of public administration have rejected the scientific management perspective on the bureaucracy because bureaucratic decisionmaking is not wholistic, but incremental;⁹ decision-makers do not optimize, but make the minimum satisfactory decision;¹⁰ budgeting is not so much a process of rational analysis, as PPB advocates argue, as the crux of the political process;¹¹ and administrative agencies' interactions with each other are not so much cooperative as competitive.¹² In short, public administrative behavior is not scientific management; it is politics.

It is the contention of this paper that if one evaluates EIS's in terms of the quality or even potential quality of the science which is brought to bear on environmental policy issues, the evaluation is discouraging. However, if one takes a more political perspective, NEPA seems to have created a new, complex political process which can be and has been used very effectively to improve the social and environmental sensitivity of government decisionmakers.

This article will evaluate the quality of the science found in EIS's by focusing on the social impact analysis in environmental statements. NEPA pays at least lip service to the social causes of environ-

6. Gulick, *Notes on the Theory of Organization*, in *Papers on the Science of Administration* (L. Gulick & L. Urwick eds. 1937).

7. On PPB, see *Planning Programming Budgeting: A Systems Approach to Management* (F. Lyden & E. Miller eds. 1972).

8. See Christofferson, *supra* note 4, and D. Medford, *Environmental Harassment or Technology Assessment?* (1973).

9. C. Lindblom, *The Science of "Muddling Through,"* 19 *Public Ad. Rev.* 79-88 (1959).

10. See generally, J. March & H. Simon, *Organizations*, ch. 6 (1958).

11. A. Wildavsky, *The Politics of the Budgetary Process* (1964).

12. Holden, *"Imperialism" in Bureaucracy*, 60 *American Pol. Sci. Rev.* 943-51 (1966).

mental problems,¹³ the social impacts of environmental policy,¹⁴ and the importance of using social science in environmental planning and policymaking.¹⁵ Now, five years after NEPA's passage, social impacts are becoming increasingly salient aspects of EIS issues. In several recent major EIS's, sociocultural issues involving native peoples have been the dominant public policy issues,¹⁶ and social impacts have come to dominate almost every current energy development EIS. Additionally, environmental assessment has received greatly increased interest from social scientists. The Environmental Sociology Section of the American Sociological Association, for example, reported a 58 percent growth in membership in the first quarter of 1975.¹⁷ Of course, a basic reason for examining the social science in EIS's is that the authors have focused on social impacts in their environmental statement work and evaluation of this aspect of EIS analysis is within their disciplinary competences.

ENVIRONMENTAL STATEMENTS AS A DATA BASE

The authors have, over the past three years, examined EIS's as a reflection of the group and administrative processes of natural resources policymaking. Environmental statements have at least three methodological advantages as data sources. First, they are written, public records of administrative decisionmaking which describe proposals and administrators' justifications for proposals and, on occasion, even provide histories of decisionmaking prior to the EIS.¹⁸

Second, EIS's are published in draft form, circulated to other agencies, interest groups, and individual citizens and specialists for comments, and almost always contain those comments in their final form. Because of this circulation procedure, EIS's contain a record of interagency and interest group conflict and cooperation with respect to particular proposals. In addition, commentators often bring out clandestine justifications for, or deficiencies of, projects, which elicit responses (sometimes superficial) from proposing agencies. Thus,

13. NEPA § 101(a), 42 U.S.C. § 4331(A).

14. NEPA §§ 101(b)(2), 101(b)(4), and 101(b)(5), 42 U.S.C. § 4331(B)(2), 42 U.S.C. § 4331(B)(4), 42 U.S.C. § 4331(B)(5) (1970).

15. NEPA § 102(2)(A), 42 U.S.C. § 4332(A) (1970).

16. See, e.g., the 28 Final Environmental Statements in regard to the Alaska Native Claims Settlement Act (ANCSA) of 1971, U.S. Department of the Interior, Alaska Planning Group (Washington 1974), and U.S. Department of the Interior, Bureau of Indian Affairs, Crow Ceded Area Coal Lease, Westmoreland Resources Mining Final Environmental Statement (Billings, January 29, 1974).

17. 6 Environmental Sociology 1 (April 1975).

18. On the problem of administrative decisionmaking in relative secrecy, see F. Rourke, *Secrecy and Publicity: Dilemma of Democracy* (1961).

EIS's are an important public adversarial record of administrative agency decisionmaking, analogous in many respects to court records in litigation and published testimony and debate in legislative deliberations.

A third advantage of the EIS process is that the authors have been able to examine it as participant observers. Perhaps because of the "special expertise" clause of NEPA,¹⁹ which applies to potential agency commentators, university academics have been given high legitimacy as commentators, even when they neither have legal standing nor are part of the responsible official's preexisting clientele. Social scientists are thus afforded access to a researchable process as participants. In this regard EIS's have an important advantage over other forms of participant observation: participating in EIS processes allows for observation of many units of analysis. The authors, for example, in addition to reading several hundred EIS's, have actively participated in about 100 EIS processes. These EIS's included examples of almost all general types of agency action, involved 20 different lead agencies, and included proposed actions located in 30 states and nationwide. A further advantage of the participant observation approach is that it permits testing the margins of the system of activity under examination by pressing certain issue areas or subjects to determine agency response.²⁰

EVALUATION OF SOCIAL IMPACT ANALYSIS IN ENVIRONMENTAL IMPACT STATEMENTS

CEQ guidelines and regulations of various agencies for preparing environmental impact statements have remained relatively general during the five years following NEPA. The process has not yet become routinized to the point of being an exercise at filling in the blanks in some assessment matrix.²¹ As a result, there are substantial variations among agencies—and even among different units within agencies—in the factors which are routinely considered in EIS documents. There are exceptions to almost every generalization about the social science found in EIS's which will be presented below. But it seems clear that in view of the wide range of major federal actions for which EIS's are prepared, the social consequences actually considered and discussed in EIS's are limited.

19. NEPA § 102(2)(C), 42 U.S.C. § 4332(C)(v) (1970).

20. This is somewhat similar to Dexter's recommendation to engage, while interviewing, elites. See L. Dexter, *Elite and Specialized Interviewing*, ch. 6 (1970).

21. Unfortunately, however, agencies seem to be attempting to develop and implement standardized matrices.

Substantive Treatment of Social Impacts

The primary deficiency of social impact assessment in EIS's is that the statements usually consider only one social consequence—the economic impact of the project. The socioeconomic impact section of the typical EIS is generally an assertion that economic benefits will be derived from the project, typically expressed as a claim that employment or gross regional income will increase as a result of a project or that the project is designed to meet some economic demand. The modal EIS treats economic benefits as the primary justification for a project. The typical EIS, in addition, makes an unelaborated assertion that economic impacts will be beneficial. In many cases these assertions are open to severe methodological criticisms. Because of methodological difficulties, one must often treat these assertions as articles of faith, rather than the result of rational evaluation.

Impacts of agency programs on status, cultural or ethnic subgroups, or on the human community as a system are rarely considered in EIS's. While economic discussions in EIS's may assert that some economic variable, such as employment, will increase as a result of the project, discussion of other social impacts is rarely as specific. It is common for EIS's to note that some social variable will be affected, but not to assert the directionality of the effect, much less the magnitude. Possible social impacts, if noted at all, are merely listed. Nor are the implications of change in some social variable likely to be discussed. For example, an EIS on a major energy development may note that the project could double or treble the population in the impacted county over a short period of time. Apart from the demographic calculation, the EIS is not likely to discuss the implications for governmental services, crime rates, residential displacement, and changes in ways of life caused by industrialization. In fact, it is not uncommon for EIS's to attempt to bury significant social issues. For example, a recent EIS discussed the impacts of the proposal on sacred—and secret—Indian tribal religious lands under the heading “wilderness,” rather than as a cultural or religious issue.²²

There are two minor exceptions to the pattern of nontreatment of social impact other than economics. Environmental statements by law must discuss two types of impacts which fall within a broad definition of social science. They must identify whether or not the

22. U.S. Department of Agriculture, Forest Service, Southwestern Region, Carson National Forest, Taos Ski Valley, Draft Environmental Statement, at 66 (April 1974). The proposed ski area would increase access to the Wheeler Peak Wilderness Area and the adjacent Taos Pueblo sacred Blue Lake area.

project or proposal will affect either designated historic sites or identified archeological sites.^{2 3}

EIS's give inadequate treatment to problems of social impact in a number of other ways. Environmental statements usually propose ameliorative strategies to reduce negative impacts of the project. Hydroelectric power projects, for example, typically must provide new wildlife habitats or parkland to replace the habitat or parkland inundated by the dam's storage reservoir, Forest Service timber sale EIS's typically state that landscape architects will be consulted to minimize the aesthetic impacts of logging cuts, and projects with effects on air and water quality often propose ameliorative programs. However, the authors are aware of no EIS which proposes a mitigation strategy for a social impact and of only one EIS which even hinted at an ameliorative program for a social impact. (In a recent ski area EIS the Forest Service proposed that the developer provide group plans for lower-income recreationists.^{2 4}) Some energy development EIS's still in process may become exceptions to this generalization.

Methodological Deficiencies of Social Impact Analyses

The major methodological problem of EIS's is that the methodologies used to arrive at assertions in EIS's are often crude or blatantly inappropriate. For example, an EIS prepared on a proposed scenic highway in northern New Mexico alleged economic benefits just marginally exceeding the cost of the road.^{2 5} The Economic Development Administration (EDA), the lead agency, calculated the anticipated economic benefits from two sources. First, EDA surveyed local merchants to estimate the increase in business they might receive, generalizing from a five per cent response to a mail questionnaire. Second, EDA multiplied the standard daily tourist expenditure by the design capacity of the road. The road's ostensible purpose was

23. The National Historic Preservation Act of 1966, 16 U.S.C. §§ 470-470(m) (1970), as amended, 16 U.S.C. §§ 470(h), 470(i), 470(l)-470(n) (Supp. III, 1973) and § 470(h) (Supp. IX, 1974); Executive Order 11593, 3 C.F.R. at 154 (1971); and the Moss-Bennett Act, 16 U.S.C. §§ 469-469(c) (Supp. IV, 1974).

24. U.S. Department of Agriculture, Forest Service, California Region, Sequoia National Forest, Mineral King Recreation Development, Draft Environmental Statement, at 188 (December 1974). Because of the high cost of travel, lodging, equipment purchase or rental, and lift tickets, downhill skiing tends to be an upper-middle-class form of recreation. Thus government provision of land for ski areas could be considered to differentially benefit upper-income groups.

25. U.S. Department of Commerce, Economic Development Administration, Proposed Construction of Road, San Miguel County, New Mexico, Final Environmental Statement (Washington, D.C., July 17, 1973). The popular name of the issue is the "Elk Mountain Road."

to stimulate regional economic development. Apart from other problems, it was clear that few tourists would come to the region solely to drive the short but scenic road. Thus increased tourist travel would represent only shifts to the proposed road from other scenic roads in the region. In another case the Forest Service, calculating demand for a proposed development, made an arithmetic error which had the effect of overstating demand by 600 per cent.²⁶ The correct demand was far below the proposed level of development.

While the EDA's methods and the Forest Service's arithmetic in the above examples were cruder than usual, in one respect the discussion of economic impact was more complete than is customary. In these cases the basic methodology used in arriving at assertions of economic benefit was at least discernible; usually the basis for calculations about economic or other impacts is omitted, which makes the figures presented difficult or impossible to evaluate. Corps of Engineers calculations of recreational demand for impounded water—often a critical component of cost-benefit calculations—are representative of this problem. The Corps has relatively sophisticated methods for deriving an estimate of recreational demand based on a "most similar other project" design. This design makes assumptions which may be inappropriate for a given project, but characteristically the EIS will present the calculated demand without reference to how it was calculated, and internal calculations or consultants' reports will be unavailable. Because of repeated experience with gross methodological errors, the authors view calculations of social impacts presented without reference to assumptions and methods to be of little scientific value.

In addition to basic methodological errors, analyses of social impacts in EIS's have several epistemological difficulties. Social impact assessment in EIS's is almost always devoid of any recognizable social theory and appears instead to be the result of agency hunches. Rarely do EIS's refer to relevant social science literature. The lack of references to social science literature is notable in contrast to references to technical literature of the natural sciences. For example, extensive bibliographies and even bibliographic reviews on the use of some pesticide can be found in EIS's. Furthermore, almost no pri-

26. Mineral King Recreation Development, *supra* note 24, at 106-10. The error was that, in accounting for market area demand met outside of the market area (for example, 33% who ski out of state), the EIS did not subtract one third of estimated market demand, but one third of *market demand, less existing supply*. This resulted in overestimating net demand by 600 percent for the higher of two total market demand estimates, and by 13,120 percent for the lower estimate. See, letter from Paul J. Culhane to Douglas R. Leisz, Regional Forester, March 17, 1975, at 1-2, and letter from Michael McCloskey, Sierra Club, to Douglas R. Leisz, Regional Forester, March 31, 1975, at 12-14.

mary social research is conducted in preparing EIS's for programs likely to have major social impacts. In contrast, it is common to find natural science studies reported in EIS's which were conducted specifically for a project or which are very closely related to the project.

EXPLANATIONS FOR INADEQUATE TREATMENT OF SOCIAL IMPACT ASSESSMENT

There are a number of good reasons for the inadequate treatment of social impacts in EIS's. In the first place, the EIS process, by common understanding, gives greater weight to impacts on air, water, land, and ecological systems than to impacts on social systems. While some sections of NEPA do recognize the importance of social impact,²⁷ this assessment has not been reinforced by emphasis in CEQ or agency guidelines, nor by court decisions.²⁸

Second, the backgrounds and inclinations of agency decision-makers, staffs, EIS writers, and consultants are typically not in the social sciences, but in the natural sciences. Therefore, the key participants in the drafting of EIS's are frequently unaware and unappreciative of systematic social science. An interesting example of this bias against the social sciences among administrators is the following remark by an agency official about the social assessment conducted for the Northern Great Plains Resources Program study:

A third work group is studying the social economic and cultural aspects [of coal strip mining]. This group is endeavoring to find out what coal development will do to populations, incomes, local governments, and cultural changes. They are looking into an assortment of changes that could take place socially. They are worried about people working in Decker and living in Sheridan that have to buy two license plates. They are also worried about whether newcomers commit different types of crimes than local people. I keep thinking really that they can answer most of their questions if they could just determine whether a cowboy can shovel coal.²⁹

27. See notes 13, 14, and 15, *supra*.

28. Natural science impacts are given greater weight by default. The Environmental Law Reporter, volumes I-present, does not present any cases in which social impacts were a major consideration in the decision of the court. Social impacts are not discussed in either of the two best sources on NEPA law: F. Anderson, *NEPA in the Courts* (1973), or Federal Environmental Law (E. Dolgin & T. Guilbert eds. 1974). The only partial exception is the article by John M. Fowler, *Protection of the Cultural Environment*, *id.* at 1466-1517, which focuses on the protection of historic sites.

29. Gibbs, Bureau of Reclamation, *Remarks on the Northern Great Plains Resources Program*, in Bureau of Land Management, Montana State Advisory Board, Minutes 32 (February 13-14, 1974).

Third, serious epistemological and methodological complexities often make it difficult or impossible for social scientists to give useful or precise predictions of the likely social consequences of major projects. Rarely can all variables in a system but one be held constant in a real-life situation. If the researcher must assume that all factors but one remain constant to proceed with meaningful analysis, the result is often so transparently wrong as to make the impact evaluation obviously inaccurate. Moreover, making such an assumption, and therefore omitting calculations of second-order impacts or the interactive impacts of a combination of developments, may lead to underestimating social consequences. Such underestimates may support the predilections of decisionmakers.

While these formal problems (lack of legal reinforcement, lack of appreciation for social science, and epistemological difficulties) contribute to inadequate social impact assessment in EIS's, the most fundamental problem is the approach of agencies to the EIS process. The EIS is written in the later stages of project planning and decisionmaking. By the time an EIS is written agencies have devoted considerable resources to project planning. The pre-EIS planning represents a form of "sunk cost" to the agency, and for agencies like the Corps, with a ten-year planning to construction cycle, or the Nuclear Regulatory Commission (formerly the Atomic Energy Commission), with a six-year cycle, this sunk cost can be considerable. Further, by proposing a project the agency commits its prestige to it. These sunk costs, long recognized by environmentalist observers of agencies, invariably lead the agencies to adopt an advocacy position in the EIS document. Thus, social impacts that are discussed, *i.e.*, economic benefits, are marshalled as project justification. If negative social impacts are so obvious that they have to be acknowledged, they will be understated or misstated so neither decisionmakers nor other readers can use the EIS properly to assess the project's impacts. There are few exceptions to this pattern.

This adversarial, project justification approach to EIS writing is a general property of EIS's, not limited to considerations of social impacts. Agencies often attempt to find project benefits which are not apparent to other observers. For example, a Corps EIS several years ago noted that a dam which would inundate a pine grove would have the air quality benefit of eliminating "noxious emissions into the atmosphere" from conifers.³⁰

In addition, many of the most important social impacts of major federal actions are taboo subjects for written public documents such

30. U.S. Army Corps of Engineers, St. Paul District, La Farge Lake, Kickapoo River, Vernon County, Wisconsin, Draft Environmental Statement, at 11 (September 1971).

as EIS's, even though they may be important considerations in agency decisionmaking. Discussion of a measure's political ramifications and differential social impacts upon status, class, or cultural groups would violate the agencies' fundamental myth that their programs serve an undifferentiated public interest. It would be politically difficult for agencies publicly to debate the merits of providing positive values to one segment of society at the expense of another. An EIS on a major energy development in Utah might mention generally that the population would double or triple, but could not be expected to say that this population growth would be likely to decrease the hegemony of the Mormon Church over almost all other social institutions in the area, or affect the pattern of rural Republicanism (unshaken since statehood). An EIS for a road that would open a previously undeveloped area in northern New Mexico,³¹ would almost certainly not discuss in any detail the possibility that ancillary developments would attract enough newcomers to create an Anglo majority in a previously Hispanic community, obviously an important social impact. Even if NEPA were meant to be an environmental full disclosure law, as Judge Eisele stated in his opinion on the Gilham Dam case,³² there are limits to the social impacts which are likely to be exposed in the environmental impact statement.

AN ALTERNATIVE PERSPECTIVE: NEPA AS A VITAL, EFFICACIOUS, POLITICAL, ADVERSARIAL PROCESS

The scientific management analysis of EIS's leads to a very discouraging evaluation of NEPA. However, such an evaluation significantly understates the usefulness of NEPA and the EIS process. Perhaps the first and most important step in gaining a perspective on NEPA is to view the critical goal as improvement of the quality of *decisions* agencies make rather than improvement of the quality of environmental statements agencies write. While a good EIS may be associated with a subsequent decision which is socially and environmentally sensitive, and EIS's on "environmental disasters" are almost always characterized by critics as inadequate, the final EIS and the final decision are quite different things. One need look no further than the first of the post-NEPA landmark cases for demonstration of this difference: the *Calvert Cliffs* decision required that an adequate EIS be prepared,³³ but the nuclear power plant is now in operation.

31. Proposed Construction of Road, San Miguel County, New Mexico, *supra* note 25.

32. Environmental Defense Fund v. Corps of Eng'rs. 325 F. Supp. 749, 759 (E.D. Ark. 1971).

33. Calvert Cliffs Coordinating Committee, Inc. v. AEC, 449 F.2d 1109 (D.C. Cir. 1971).

Similarly, opponents of a proposal consider it a victory when no final EIS is prepared because this indicates the proposal has been killed for the time being. However, even when a final EIS proposes essentially the same federal action proposed in the draft EIS, the process is by no means over. An EIS is a decision document, a report which accompanies a proposal through subsequent decision stages. It is *not* a decision, but does provide an entry into the decisionmaking process and does create a number of new tools for advocates who wish to increase the environmental sensitivity of the decisionmakers.

The EIS review process gives increased access to environmental, ad hoc community and public interest groups, particularly those groups which might not otherwise have close, informal access to decisionmakers. To illustrate the increased access of environmentalists under NEPA, Table 1 presents a comparison of comments received on almost all 1973 Forest Service EIS's with the distribution of contacts of a sample of 28 Forest Service district rangers during the same year. The table demonstrates a remarkable difference between the sources of EIS comments and of routine contacts with rangers. While consumptive users and other developmental interests account for two-thirds of ranger contacts (and almost four-fifths of all personal business contacts with the public), they provide only 17 percent of the comments on EIS's. On the other hand, environmentalists, conservationists, and preservationists—generally the agency's critics—provide a quarter of EIS comments, though they account for only seven percent of the rangers' public contacts.

The pro-environmental bias of access in the EIS process has, on occasion, allowed agencies to use the EIS to serve agency purposes. Agencies usually approach the EIS review from a project justification perspective and often view the preparation of EIS's, solicitation of comments, and revision and reissuance of the final statement as expensive, time consuming, and unnecessary formal requirements. However, EIS's have also been used to manipulate client groups, build coalitions, and otherwise generate support for programs or alternatives an agency wishes to pursue. The need to prepare an impact statement can often justify delaying a response to a demand from a powerful client, or even the agency's political superiors, when the demand or directive undermines agency values. While there are examples of several agencies which have used the EIS process in this way, the Forest Service has made particular use of this tool, successfully stimulating comments supporting some alternative to or modification of a project proposed by a developer. This "compelled" the Forest Service to impose more stringent controls on the development

TABLE 1.
Comparison of Interest Group Comments on Forest Service Environmental Impact
Statements Versus Routine District Ranger Contacts, 1973

	Type of Group/Individual							Total
	Environmental, Conservation & Preservation (inclu. Sportsmen)	Outdoor Recreationists (inclu. Ski Area Managers, Outfitters, ORV Clubs)	Consumptive Users, Boosters, Developers & Other Business Firms	Other (Ethnic, Service, Social, Political, Media, Schools)	Profess'l, Scientific, & Historical Ass'ns & Individuals	Concerned Citizens		
Comments on Forest Service EIS ^a :								
Number of Comments	153	18	101	14	103	196	585	
%	26.1%	3.1%	17.3%	2.4%	17.6%	33.5%	100	
Public Contacts of District Rangers ^b :								
Number of Persons	46	30	237	32	3	2	350	
%	13.1%	8.6%	67.7%	9.1%	0.9%	0.6%	100	
Number of Interactions	413	285	4210	377	43	7	5335	
%	7.7%	5.3%	78.9%	7.1%	0.8%	0.1%	99.9 ^c	

a) Source: H. Paul Friesema, Environmental Group Fragmentation and Administrative Decision Making, American Society for Public Administration meeting paper, Chicago, April 1975, p. 12. Data presented are the results of coding the effective universe of 1973 Forest Service EIS's. Categories above are combinations of Friesema's coding categories, as described *id.* at 7-9.

b) Source: P. Culhane, Land Management and Politics (forthcoming Ph.D. dissertation, Northwestern University, Evanston). Results are drawn from a sample of 28 ranger districts on five National Forests in South Dakota, Utah, and New Mexico; data are rangers' contacts with key people as reported in interviews conducted during the spring and summer 1973. "Number of persons" is the number of individuals or organizations on a ranger's key person list; if persons appeared on more than one ranger's list—as was often the case—they were coded each time. "Number of interactions" is the sum of the reported yearly contacts with the various key people.

c) Does not total 100 per cent due to roundoff error.

than would have been possible in the absence of environmental "pressure." The Forest Service has done this by highlighting alternatives or deficiencies in the draft EIS, prompting prospective commentators, and employing a variety of other subtle and not so subtle techniques. In this manner the Forest Service has justified imposition of severe restrictions on access to mining sites in wilderness areas, land use controls on private land around developments, and limitation of directed increases in timber harvesting.

While the EIS process has increased access to decisionmakers, it does not guarantee effectiveness. To be effective in influencing agency decisions, an EIS comment can simply suggest an argument for or against an alternative. It is vital that the comment present a technically sound, detailed, and clear critique of the draft EIS. In this area professional and scientific commentators can play an important role, emphasizing the importance of the high proportion of such commentators presented in Table 1. Agencies can, and frequently do, dismiss or give little weight to simple assertions of preferences, because they are seen as inappropriate comments on the merits of the decision rather than the EIS,³⁴ and because they violate the agencies' myths of rational decisionmaking and taboos against vote counting.

There are a number of reasons why detailed, clear, and forcefully presented comments on an EIS can influence agency treatment of environmental and social concerns. First, the lead agency is typically cast in the role of a program advocate in an EIS. Thus the commentator's effort is frequently to stop, delay, or modify a program to which the agency has made a commitment. It is easier to stop programs than it is to initiate positive programs.

Delays are frequent in EIS preparation. Detailed critiques of draft EIS's which force reconsideration of major points often delay initiation of projects and occasionally lead to their cancellation. Several issues in which the authors have been active were resolved in this way. In one case, comments on the draft EIS for a weather modification proposal required such detailed reevaluation that the season for the proposed weather modification was over before the final EIS

34. See, e.g., U.S. Department of the Interior, Geological Survey, 2 Proposed Plan of Mining and Reclamation, Big Sky Mine, Peabody Coal Company, Coal Lease M-15965, Colstrip, Montana, Final Environmental Statement, at 12-107 to 12-112 (Reston, Va., March 7, 1974), in which the agency explicitly chose to ignore the *primary comments*, replete with citations of law and regulations, of the Natural Resources Defense Council on the proposal (the "decision") as "not related to the environmental effects . . . or alternatives to the proposed action."

could be prepared.³⁵ In another case, during the time required to prepare several EIS's and defend litigation on a scenic highway proposal inflation increased the cost of the project so greatly that it was cancelled.³⁶ The ability of sophisticated commentators to force delays can lead agency decisionmakers to respond positively to commentators rather than face the delay of constructing a detailed response to the comments. Delay is a particularly potent threat, of course, during a time of rapid inflation.

While agencies may be constrained in the issues they voluntarily consider in EIS's (as noted in the previous section), commentators are under no such constraint. Commentators are not bound by agency taboos nor by the need for consistency from one EIS comment to another. Commentators can ask any question, present any data or argument, offer any explanation, or suggest any alternative they wish, no matter how threatening to the agency. And the agency is mandated to consider such comments, at least formally.³⁷ Because of the procedural complexities of NEPA agency resistance to good faith compliance with the Act and CEQ guidelines, it is still common to invoke legal sanctions for inadequate EIS's. This threat, which seems very real to agency decisionmakers, often compels them to treat detailed and intelligent comments with respect.

A fundamental problem with the EIS process is that the agency which is responsible for a project (and thus often has a vested interest in the project) is also responsible for preparing the impact statement and responding to comments on the draft EIS. As Professor Reich noted more than a decade ago, environmental administration does not separate the functions of advocate and judge.³⁸ It is not uncommon for agencies to ignore or misinterpret the detailed and apparently compelling comments they receive, leaving the substance of the final EIS essentially unchanged from the draft. However, the lead agency is often dependent on other units of government to carry out the project. Other units whose assent or financial participation

35. U.S. Department of the Interior, Bonneville Power Administration, Hungry House Cloud Seeding Program, Final Environmental Statement (Portland, December 17, 1973).

36. *Upper Pecos Association v. Stans*, 328 F. Supp. 332 (D.N.M. 1971); U.S. Department of Agriculture, Forest Service, Region 3, Proposal to Construct the Elk Mountain Road by San Miguel County, Final Environmental Statement (Albuquerque, June 17, 1971); *Upper Pecos Association v. Stans*, 452 F.2d 1233 (10th Cir. 1971); *Proposed Construction of Road, San Miguel County, New Mexico*, *supra* note 25; *Upper Pecos Association v. Peterson*, 380 F. Supp. 191 (D.N.M. 1973); and *Upper Pecos Association v. Stans*, 500 F.2d 17 (10th Cir. 1974).

37. Council on Environmental Quality, *Guidelines for Preparation of Environmental Impact Statements*, 40 C.F.R. § 1500.10 (1975).

38. Reich, *Bureaucracy and the Forests*, Center for the Study of Democratic Institutions Occasional Paper, 1962; reprinted 8 *Center Magazine* 51, 56 (No. 1 1975).

and approval may be necessary include the Office of Management and Budget, CEQ, appropriations committees of Congress, other federal agencies with overlapping jurisdictions, and state and local governments. The comments in an EIS can become the public record upon which these other units of government base their decisions, as well as a legitimate basis upon which the commentator can make an appeal to another unit of government.

The authors' experience provides several examples of the importance of post-EIS appeals to other units of government. In one case, the Soil Conservation Service was not impressed by comments that a small watershed project would cause inadequate water flow in a trout stream. However, it was necessary for the project sponsors to obtain a right-of-way permit from the Bureau of Land Management. The BLM was more appreciative of comments about stream flow and made issuance of the permit conditional upon maintenance of the trout fishery, causing the project to be cancelled.³⁹ The Elk Mountain Road project in New Mexico⁴⁰ was ultimately cancelled when the state governor and Board of Finance, in response to environmental criticism which the lead agency, EDA, had ignored, refused to commit additional state matching funds to cover the inflationary rise in the cost of the project.⁴¹ The Oakley Dam-Allerton Park issue is older than many of the current participants in the struggle. After the Corps issued an EIS on the project, many of the comments were directed not at changing the minds of Corps decisionmakers, but at pressuring the State of Illinois into withdrawing local support, thus forcing cancellation of the project. Recently, Senator Charles Percy (R-Ill.), in response to a critical General Accounting Office report which he had requested, began congressional action to revoke authorization for the project. The University of Illinois Board of Trustees, which holds the threatened Allerton Park in trust, and the Illinois Governor withdrew local support, causing the Corps to abandon the project.⁴² Because of delays in preparing the final EIS on the

39. U.S. Department of Agriculture, Soil Conservation Service, Georgetown Creek Watershed Project, Bear Lake County, Idaho, Final Environmental Statement (Boise, February 1973).

40. See text accompanying note 25 *supra*.

41. Letter from Governor Jerry Apodaca to H. Paul Friesema, February 11, 1975; see also, notes 24 and 35 *supra*.

42. Shaw & Ingersoll, *U. of I. Trustees Withdraw Support for Oakley Reservoir*, Chicago Sun-Times, Jan. 16, 1975, at 22; *Changed Stand on Oakley: Percy*, Chicago Tribune, April 23, 1975, § 3, at 12, col. 1; and McManus, *U.S. Kills Oakley Dam Project*, Chicago Tribune, May 28, 1975, § 1, at 2, col. 2; cf. U.S. Army Corps of Engineers, Chicago District, William L. Springer Lake, Sangamon River, Illinois, Draft Environmental Statement (Chicago 1973); Comptroller General of the U.S., *Economic and Environmental Aspects of the Proposed William L. Springer Project, Illinois*, RED-75-363 (1975).

weather modification project,⁴³ the lead agency, the Bonneville Power Authority, would have needed to obtain a waiver of the normal 30-day, post-final EIS comment period to carry out the project. Because the comments submitted pointed out adverse environmental and social impacts, CEQ did not grant the waiver, and the project was cancelled. Thus, the final EIS is not the same as a final decision, but the EIS can serve as an entry into the full decision-making process, and comments on EIS's can serve commentators' purposes throughout the process.

Skill in articulating social and environmental concerns and in following those concerns through the full decisionmaking process can be quite effective. The authors estimate that agency decisions have been altered to some degree in approximately half the decisions in which they have participated. The quality of the impact statement documents themselves has rarely been altered. In fact, to the extent that the documents have been "improved," the decisions themselves are less likely to be altered. Professor Sax, in a recent evaluation of the Michigan Environmental Protection Act, found that environmentalists have won about 50 per cent of the litigation they initiated, at an average cost of a little more than \$2,000.⁴⁴ Therefore, the preparation of skilled, detailed comments on EIS's and follow-through on those comments is a relatively inexpensive, efficacious way to influence public policy. Environmental and conservation oriented individuals and groups and activist scientists and specialists can operate effectively under these ground rules with few resources other than skill and perseverance.

CONCLUSIONS

The continuing threat to agency programs and activities posed by environmental and citizen groups using the NEPA process and the courts has caused agencies to move, in varying degrees, toward organizational changes which go beyond discrete decisions. These changes, which increase the probability that environmental and public interest values will be important considerations in the decisionmaking process, include: (1) increasing emphasis on public participation programs, particularly on developing more predictable and beneficial informal ties with critics⁴⁵; (2) internally differentiating agency staff by hiring individuals with broader disciplinary

43. Hungry Horse Cloud Seeding Program, *supra* note 35.

44. Sax & DiMento, *Environmental Citizen Suits: Three Years Experience under the Michigan Environmental Protection Act*, 4 Ecology L. Q. 1, 8, 51 (1974).

45. *Federal Agency Organizational Change in Response to Environmentalism*, 2 Humboldt J. of Soc. Relations 33, 33-35 (1974).

and professional backgrounds who share at least some of the values of the agencies' environmental critics, thus internalizing divergent points of view and altering agency values⁴⁶; and (3) anticipating possible adverse environmental and citizen objections and introducing ameliorative measures in agency proposals and projects, even rejecting certain proposals before they have a chance to surface publicly.⁴⁷

These organizational changes in agency behavior reflect the importance of the EIS process as a means of opening up agency decision-making processes and counteracting the closed agency pattern described by Professor Reich by giving citizens, environmentalists, and professional evaluators access to the policy process.⁴⁸ To be effective, however, commentators must recognize that preparation of the EIS is not primarily a scientific, rational decisionmaking process. Even while criticizing the logical and technical inadequacies of particular environmental statements, commentators must recognize that the EIS process is adversarial and does not end with publication of a final EIS. A comment on an EIS may provide access to a decision-making process and be a valuable tool for affecting that process, but it is only a tool.⁴⁹

This article has argued that NEPA and the EIS process have been effective in bringing environmental pressures to bear on agency decisionmaking. In one sense, however, this evaluation of the EIS process is not completely positive. The beneficial effects of NEPA appear in many ways to be unintended consequences. Basically the EIS is not an integral part of the decisionmaking process leading to fundamental agency decisions, but a formal requirement prepared to support a predetermined decision. It seems indefensible to devote considerable agency resources to building multivolume records for such a purpose.⁵⁰ Agencies can and should integrate environmental

46. *Id.* at 35-36.

47. This agency response is a classic example of Freidrick's "law of anticipated reactions." See C. Freidrick, *Constitutional Government and Politics: Nature and Development*, ch. 1 (1937).

48. Culhane, *supra* note 45, at 33.

49. Berry, *Citizens Approach Government: The Strategies of Influence of Public Interest Groups*, Midwest Political Science Association meeting paper, 8-29 (Chicago, April 1974). Berry reports that hearing testimony (which is analogous to comments on EIS's) is viewed as necessary by public interest lobbyists, but that other tools (informal lobbying, litigation, constituency pressure, etc.) are usually viewed as more effective.

50. However, in *Bureaucracy and the Forests*, *supra* note 38, at 56, Professor Reich argues that one of the deficiencies of administrative decisionmaking under broad congressional delegations of authority is that administrators are never forced to justify their decisions. The EIS requirement at least forces agency administrators to put the reasons for their proposals in writing.

analysis into their basic project planning. There are sufficient illustrations of how EIS's can be integrated into project planning, as CEQ has noted with regard to the Forest Service land use planning process.⁵¹

The difficulty with earlier integration of the EIS into the decision process is that agencies are loath to make proposals public before all anticipated problems have been solved. They are, in short, unwilling to appear foolish in public. However, the time and effort necessary to mitigate problems represents an investment of personnel resources and agency prestige. This investment often makes it difficult for the agency seriously to evaluate an EIS comment or other pressures for cancellation or serious alteration of a proposed agency action. There is an inherent organizational contradiction in requiring agencies to prepare EIS's, which are thorough evaluations of a project, while also demanding that EIS's be publicly reviewed before agencies have become committed to the project.

It is difficult to disagree with the statement that EIS's ought to be integrated into the decisionmaking process and basic project planning. However, this article has been concerned with a different issue. EIS's may have a less than optimal impact on internal agency decisionmaking, but they do provide a basis for exerting effective external pressure on the agencies. The difference between the evaluative conclusions based on a rational decisionmaking perspective and those based on an adversarial perspective seems to account for the apparently inconsistent pattern which leads environmentalists to deplore the ineffectiveness of NEPA, but to react vigorously against any attempt to weaken or restrict its applicability. NEPA may not force agencies to become optimizing decisionmakers with fully internalized environmental values, but it does provide the means to enforce environmental accountability on the agencies.

51. Council on Environmental Quality, *Environmental Quality*—1974, at 378-81 (1974).