THE NATIONAL ENVIRONMENTAL POLICY ACT OF 1969: TOWARD A SUBSTANTIVE STANDARD OF REVIEW

I. INTRODUCTION

Although the National Environmental Policy Act (NEPA)[1] has been in force for five years and the brief provisions of the Act have been litigated in several hundred cases,[2] the substantive content of NEPA remains undefined. The early leading case[3] under the Act required procedural compliance with section 102[4] but only suggested the substantive policy which the procedural duties were designed to implement.[5] Subsequently, almost all of the NEPA cases have raised questions of compliance with the procedural prerequisites[6] and the integrity of the procedural process has become paramount in judicial review.[7] Correspondingly, the courts have been reluctant or unwill-

1. 42 U.S.C. § 4321 et seq. (1970). NEPA was signed into law on January 1, 1970.

2. F. Anderson, NEPA in the Courts, 298 (1973), lists over 150 cases that had been decided by March 1973. For more recent cases, see BNA Environmental Reporter—Decisions.

3. Calvert Cliffs' Coordinating Comm., Inc. v. AEC, 449 F.2d 1109 (D.C. Cir. 1971). The Supreme Court has never definitively ruled on a NEPA case. But see SCRAP v. United States, 412 U.S. 669 (1973). In light of this lack of controlling precedent, *Calvert Cliffs'* has served as the guiding light. One very thorough analysis of NEPA cases has concluded:

> In *Calvert Cliffs'* NEPA received its first comprehensive judicial analysis by a circuit court. Despite certain important modifications and extensions, the *Calvert Cliffs'* interpretation has been accepted as the definitive judicial gloss on NEPA. It has been more frequently cited, analyzed, and relied upon than any other NEPA decision . . . .

Anderson, supra note 2, at 247 (footnote omitted).

4. 42 U.S.C. § 4332 (1970) [hereinafter § 102 in accordance with the form of citation most frequently used in judicial opinions and critical commentary].

5. *Calvert Cliffs'* suggested that NEPA required a balancing of economic, technical and environmental factors to achieve the optimally beneficial action. Calvert Cliffs' Coordinating Comm., Inc. v. AEC, 449 F.2d 1109, 1123 (D.C. Cir. 1971). See notes 34-35, 64 infra and accompanying text.

6. As one commentator has stated:

> Despite a clear enforcement mandate, courts have consistently limited their scrutiny of administrative action to compliance with the procedural duties in section 102 of the Act.

Note, Substantive Review under the National Environmental Policy Act: EDF v. Corps of Engineers, 3 Ecology L.Q. 173 (1973) [hereinafter Note, Substantive Review]. For a discussion of the various issues involved in procedural compliance with NEPA, see notes 24-29 infra and accompanying text.

7. Writing for a three-judge district court panel in City of New York v. United States, 337 F. Supp. 150 (E.D.N.Y. 1972), Judge Friendly stated:

> To permit an agency to ignore its duties under NEPA with impunity because we have serious doubts that its ultimate decision will be affected by compliance would subvert the very purpose of the Act and encourage further administrative laxity in this area. . . . In any event, preservation of the integrity of NEPA necessitates that the Commission be required to follow the steps set forth in § 102, even if it now seems likely that those steps will lead it to adhere to the present result.

Id. at 160.

ing to engage in a review of substantive compliance with the Act.[8] This reluctance extends beyond the traditional judicial caution against substituting the court's judgment for that of the agency. One circuit has squarely held that judicial review of substantive compliance is precluded.[9] Consequently, there has been scant judicial articulation of the Act's substantive mandate.

The judicial emphasis on procedural compliance has resulted in a stringent standard of review which in turn has elicited criticism over the difficulty of achieving full compliance with NEPA.[10] Efforts have been made to exempt some categories of agency action from NEPA's requirements[11] and Congress has responded by immunizing construction of the Alaskan pipeline from judicial review under NEPA.[12] On the other hand, one noted environmental law scholar has stated that the procedural reform wrought by judicial application of NEPA is ineffective, except to increase the paperwork necessary to obtain approval for agency actions.[13]

Certain legislative history of NEPA suggests that one of NEPA's sponsors felt that agencies charged with environmental protection responsibilities would influence the decisions of agencies that had traditionally ignored the effects of environmental harm.[14] However, the interagency review required under NEPA[15] appears to have had little effect on agency decisions.[16] The agencies themselves have resisted the procedural obligations imposed by NEPA[17] and, with the exception of the Atomic Energy

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8. City of New York v. United States, 344 F. Supp. 929 (E.D.N.Y. 1972), is an illustrative case. In an earlier review Judge Friendly had required strict procedural compliance. 337 F. Supp. at 160. After the procedural compliance had been undertaken he declared:

> Once it is determined in any particular instance that there has been good faith compliance with those procedures, we seriously question whether much remains for a reviewing court.

344 F. Supp. at 940. For a criticism of this view, see Leventhal, Environmental Decisionmaking and the Role of the Courts, 122 U. Pa. L. Rev. 509, 527-28 (1974). See also Note, Evolving Judicial Standards under the National Environmental Policy Act and the Challenge of the Alaskan Pipeline, 81 Yale L.J. 1592, 1595-98 (1972) [hereinafter Note, Evolving Judicial Standards].

9. National Helium Corp. v. Morton, 455 F.2d 650 (10th Cir. 1971), 486 F.2d 995 (10th Cir. 1973), cert. denied, 416 U.S. 993 (1974). See notes 102-28 infra and accompanying text. See also Environmental Defense Fund, Inc. v. Armstrong, 487 F.2d 814 (9th Cir. 1973).

10. Cramton & Berg, On Leading a Horse to Water: NEPA and the Federal Bureaucracy, 71 Mich. L. Rev. 511 (1973); Jaffe, Ecological Goals and the Ways and Means of Achieving Them, 75 W. Va. L. Rev. 1 (1972); Murphy, The National Environmental Policy Act and the Licensing Process: Environmentalist Magna Carta or Agency Coup De Grace? 72 Colum. L. Rev. 963 (1972).

11. E.g., Article, Conferees Report Emergency Legislation Relaxing Environmental Requirements, 4 BNA Env. Rep. Cur. Dev. 1371 (1973); Article, Administration Split by Proposal to Waive NEPA on Energy Projects, 4 BNA Env. Rep. Cur. Dev. 1839 (1974).

12. 43 U.S.C. § 1652(d) (Supp. 1973).

13. Sax, The (Unhappy) Truth About NEPA, 26 Okla. L. Rev. 239 (1973).

14. 115 Cong. Rec. 40425 (1969) (remarks of Senator Muskie: NEPA will "bring pressure" on federal agencies; "the nature and extent of environmental impact will be determined by the environmental control agencies").

15. § 102(2)(C) of NEPA requires that the lead agency "consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved." In practice the lead agency writes a "draft" environmental impact statement which is circulated to the agencies specified in section 102(2)(C) of NEPA. These agencies formally comment upon the draft statement and the project in general. These interagency comments are included in the "final" environmental impact statement.

16. "There are no institutional means for forcing lead agencies to adopt suggestions made by reviewers." Article, APCA Told Interagency Review of EIS Affects Project Modification Little, 5 BNA Env. Rep. Cur. Dev. 188 (1974).

17. E.g., Harlem Valley Transp. Ass'n v. Stafford, 500 F.2d 328 (2d Cir. 1974) (describing at length the efforts of the Interstate Commerce Commission to resist full compliance with NEPA and requiring, four and a half years after passage of the Act, that the ICC implement its procedural

Commission,[18] have not developed any criteria for evaluating the significance of environmental harm.[19] The Council on Environmental Quality, charged with overseeing the implementation of NEPA, likewise has not developed or suggested any standard for determining the weight to be accorded environmental harm in the process of making agency decisions.[20]

Despite the dearth of articulation of NEPA's substantive commands, two Circuit Courts of Appeals have held that they have the power to review substantive compliance with the Act.[21] Both courts have stated that the compliance is reviewable under traditional standards of the Administrative Procedure Act,[22] but neither has explained how APA review standards are to be applied in the face of NEPA's unarticulated substantive policy.

This Note proceeds from the premise that formulation of substantive standards for NEPA is both desirable and required. Part II examines the difficulty agencies encounter in attempting to meet the Act's procedural requirements, and the problem posed by judicial review of procedural compliance, when neither the agencies nor the judiciary defines the substantive standard. Part III explores the current efforts to implement NEPA's substantive policy in its nascent condition and the difficulties faced when NEPA is construed as creating a substantive standard. A fuller explanation of the workings of the substantive standard derived from an economic analysis is presented in Part IV. Part IV concludes with a discussion of the roles of the agencies and the courts in fostering the articulation and implementation of NEPA's substantive standard.[23]

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duties). See also Strohbehn, NEPA's Impact on Federal Decisionmaking: Examples of Noncompliance and Suggestions for Change, 4 Ecology L.Q. 93 (1974).

18. See notes 83-99 infra and accompanying text.

19. See, e.g., 18 C.F.R. §§ 2.80-.82 (1973) (FPC); 49 C.F.R. § 1100.250 (1973) (ICC). Both these agencies have generalized rules about the responsibility for the development of an environmental assessment but do not say how environmental factors are to be weighed in the agency decision. See also 40 C.F.R. §§ 6.10-.95 (1973) (EPA).

20. The guidelines issued by the Council on Environmental Quality (CEQ) cover most of the potential procedural problems in complying with NEPA but are silent on how environmental factors are to be weighed in agency decision-making. CEQ Preparation of Environmental Impact Statements: Guidelines, 38 Fed. Reg. 20, 550-62 (1973). The CEQ was created by section 202 of NEPA, 42 U.S.C. § 4342 (1970); under section 102 and section 204, 42 U.S.C. § 4344 (1970), the CEQ is to work with federal agencies in implementing NEPA and to develop methods for achieving NEPA's goals.

21. Environmental Defense Fund, Inc. v. Corps of Eng'rs, 470 F.2d 289 (8th Cir.), cert. denied, 409 U.S. 1072 (1972); Conservation Council of N.C. v. Froehlke, 473 F.2d 664 (4th Cir. 1973). See also Environmental Defense Fund, Inc. v. Froehlke, 473 F.2d 346 (8th Cir. 1972); Environmental Defense Fund, Inc. v. Corps of Eng'rs, 492 F.2d 1123 (5th Cir. 1974). See notes 107-28 infra and accompanying text.

22. Section 706 of the Administrative Procedure Act (APA), 5 U.S.C. § 706 (1970), provides standards for judicial review of administrative action. Section 706(2)(A) sets out the "arbitrary or capricious" standard generally relied upon by both the Eighth and Fourth Circuits. See note 21 supra. The Eighth Circuit stated that the "scope of authority" test was applicable but then determined only that the decision was not arbitrary or capricious. Environmental Defense Fund, Inc. v. Corps of Eng'rs, 470 F.2d 289, 300-01 (8th Cir.), cert. denied, 409 U.S. 1072 (1972).

The standard of review applicable to NEPA decisions is unsettled. Four different but overlapping standards have been applied. See, e.g., Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), cert. denied, 412 U.S. 908 (1973) (arbitrary or capricious standard); City of New York v. United States, 344 F. Supp. 929 (E.D.N.Y. 1972) (substantial evidence rule); National Helium Corp. v. Morton, 486 F.2d 995 (10th Cir. 1973) (rule of reason standard); Environmental Defense Fund, Inc. v. Corps of Eng'rs, 470 F.2d 289 (8th Cir.), cert. denied, 409 U.S. 1072 (1972) (scope of authority test).

23. Two issues are beyond the scope of this Note: the definition of "environmental" factors and standards of review in NEPA cases. For the problems involved in defining what constitutes an "environmental" factor, see SCRAP v. United States, 412 U.S. 669 (1973); Nucleus of Chicago Homeowners Ass'n v. Lynn, 372 F. Supp. 147 (N.D. Ill. 1973). For a discussion of judicial review

II. PROCEDURAL COMPLIANCE

A. The Legal Framework

NEPA established a federal policy of environmental protection and implemented this policy by making environmental effects a relevant factor in governmental decisions. Section 102 imposes upon all federal agencies a set of procedures, the crux of which is the preparation of an environmental impact statement (EIS). The EIS must be prepared for all "major federal actions significantly affecting the quality of the human environment" and must be a "detailed statement" disclosing the environmental impact, unavoidable adverse environmental effects and the alternatives to the project.[24]

Courts have given a broad interpretation to the procedures required in section 102.[25] Where an agency determines that no EIS is required, the agency still must provide a reviewable record on the basis of which it reached the conclusion that the action was environmentally insignificant.[26] Further, the agency must independently investigate the environmental consequences rather than rely on project applicants or intervenors for development of the issues.[27] In disclosing environmental effects the agency must discuss all responsible scientific opinions rather than merely state conclusory facts.[28] The alternatives presented must include those which only meet some

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standards in environmental cases, see Leventhal, supra note 8; Sive, Some Thoughts of an Environmental Lawyer in the Wilderness of Administrative Law, 70 Colum. L. Rev. 612 (1970).

24. Section 102(2)(C) provides:

> (2) all agencies of the Federal Government shall—
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> . . . .
>
> (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 by the responsible official on—
>
> (i) the environmental impact of the proposed action,
>
> (ii) any adverse environmental effects which cannot be avoided should the proposal be implemented,
>
> (iii) alternatives to the proposed action,
>
> (iv) the relationship between local short-term uses of man's environment and the maintenance and enhancement of long-term productivity, and,
>
> (v) any irreversible and irretrievable commitments of resources which would be involved in the proposed action should it be implemented.
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> Prior to making any detailed statement, the responsible Federal official shall consult with and obtain the comments of any Federal agency which has jurisdiction by law or special expertise with respect to any environmental impact involved. Copies of such statement and the comments and views of the appropriate Federal, State, and local agencies, which are authorized to develop and enforce environmental standards, shall be made available to the President, the Council on Environmental Quality and to the public as provided by section 552 of Title 5, and shall accompany the proposal through the existing agency review process; . . . .

42 U.S.C. § 4332 (2)(C) (1970).

25. Literature analyzing the procedural requirements of NEPA is voluminous. See Anderson, supra note 2, at 15-245; Note, Environmental Law: Substantial Compliance with NEPA's "Impact Statement" Requirement—A Look at Judicial Interpretations, 26 Okla. L. Rev. 281 (1973); Seeley, The National Environmental Policy Act: A Guideline for Compliance, 26 Vand. L. Rev. 295 (1973). Many articles deal with particular procedural issues. See, e.g., Note, Retroactive Application of the National Environmental Policy Act of 1969, 69 Mich. L. Rev. 732 (1971); Kalodner, Selected Procedural Issues in Environmental Litigation, 47 N.Y.U.L. Rev. 1093 (1972); Note, NEPA, Environmental Impact Statements and the *Hanly* Litigation: To File or Not to File, 48 N.Y.U.L. Rev. 522 (1973).

26. E.g., Hanly v. Mitchell, 460 F.2d 640 (2d Cir.), cert. denied, 409 U.S. 990 (1972).

27. E.g., Green County Planning Bd. v. FPC, 455 F.2d 412, 420 (2d Cir.), cert. denied, 409 U.S. 849 (1972).

28. E.g., City of New York v. United States, 337 F. Supp. 150 (E.D.N.Y. 1972); Environmental Defense Fund, Inc. v. Corps of Eng'rs, 348 F. Supp. 916 (N.D. Miss. 1972).

of the project's goals, those which the agency is powerless to implement, and the possibility of foregoing the project.[29]

The substantive policy of NEPA is developed in section 101(b),[30] which sets forth various environmental goals including, *inter alia*, the right to safe and aesthetic surroundings, attainment of the widest range of beneficial uses of the environment and preservation of environmental diversity.[31] The Act then requires federal agencies to develop methods which will "insure" that environmental values "be given appropriate consideration in decision-making along with economic and technical considerations."[32] The Act also requires a "systematic" approach to decision-making involving an EIS.[33]

In commenting on these provisions, the court in *Calvert Cliffs'* said that NEPA "mandates a rather finely tuned and 'systematic' balancing analysis" which includes "environmental costs and benefits."[34] Moreover, the weight given to environmental factors is not discretionary since "[t]he Act requires consideration 'appropriate' to the problem of protecting our threatened environment, not consideration 'appropriate' to the whims, habits or other particular concerns of federal agencies."[35]

Because the courts are reluctant to pass upon substantive compliance with NEPA, it is important to attempt, insofar as possible, a precise delineation of the distinction between substance and procedure. Agency consideration of environmental harm involves two separate but related steps: the investigatory step and the balancing step. The investigatory step requires the agency to project, on the basis of available technological and scientific studies, the variety and magnitude of environmental effects which may result from a proposed action. In addition, the agency must calculate the impact of the alternatives relative to the proposed action. In most instances, the investigative step is

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29. E.g., Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827 (D.C. Cir. 1972). See also Anderson, supra note 2, at 217-23.

30. 42 U.S.C. § 4311(b) (1970) [hereinafter § 101(b) in accordance with the form of citation most frequently used in judicial opinions and critical commentary]. The standards in § 101(b) will be referred to in the text both as the goals of NEPA and as variables which are to be applied in determining the value of environmental amenities. The section's standards are clearly goals set forth by Congress. Since not every goal can be achieved by preserving each environmental amenity, the application of the § 101(b) standards will produce varying environmental values. It is in this sense that the § 101(b) standards will be referred to as variables.

31. Section 101(b) provides:

> (b) In order to carry out the policy set forth in this Act, 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—
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> (1) fulfill the responsibilities of each generation as trustee of the environment for succeeding generations;
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> (2) assure for all Americans safe, healthful, productive, and esthetically and culturally pleasing surroundings;
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> (3) attain the widest range of beneficial uses of the environment without degradation, risk to health or safety, or other undesirable and unintended consequences;
>
> (4) preserve important historical, cultural and natural aspects of our national heritage, and maintain, wherever possible, an environment which supports diversity and variety of individual choice;
>
> (5) achieve a balance between population and resource use which will permit high standards of living and a wide sharing of life's amenities; and
>
> (6) enhance the quality of renewable resources and approach the maximum attainable recycling of depletable resources.

42 U.S.C. § 4331(b) (1970).

32. Section 102(2)B).

33. Section 102(2)(A).

34. Calvert Cliffs' Coordinating Comm., Inc. v. AEC, 449 F.2d 1109, 1112-13 (D.C. Cir. 1971).

35. Id. at 1109 n.8.

neither simple nor precise. It is frequently based upon insufficient or conflicting scientific evidence.[36] Nonetheless, this step should yield man's best efforts to predict the nature and consequences of the impact. The agency should then utilize this information to assist it in balancing environmental costs against economic benefits and in reaching a judgment about whether to proceed with the action.

What the courts view as the procedural aspects of environmental cases are in fact the metes and bounds of the agency's duty to investigate.[37] The examination of various forms of environmental effects and the description of alternatives are the primary procedural duties. The balancing step, which involves a determination of the "appropriate" weight that should attach to the findings of the investigatory step, is the substantive aspect. This aspect requires judgments about the value of environmental amenities and the significance of these factors in relation to economic benefits.[38]

B. Problems with Procedural Compliance

Judicial construction of NEPA has required strict compliance with the procedural duties.[39] Noncompliance usually results in an injunction until the procedural prerequisites are met;[40] moreover, regardless of whether full compliance would have any effect on the agency's final decision, noncompliance is a violation of the statute.[41] In other words, "nonprejudicial error" is not recognized in NEPA cases.

As a result of the uncertain but expansive scope of NEPA's procedural requirements and the disruptive effect of noncompliance, some legal commentators have criticized the Act.[42] The criticism has focused upon the need to consider alternatives and the investigation of environmental effects. The number and variety of alternatives that the agency must consider are said to impose "a great and perhaps intolerable strain on the decision-making process."[43] But this criticism is not persuasive because compliance is usually a routine matter, and when it is not the results are nonetheless beneficial.

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36. For example, where the risk of oil pollution is present it is difficult to estimate how much oil spillage will occur; moreover, there are differing scientific opinions on the effects of oil on the marine system. Accordingly, it has been held that the EIS must present responsible opposing scientific views of the expected impact. Committee for Nuclear Responsibility v. Seaborg, 463 F.2d 783, 787 (D.C. Cir. 1971).

37. The courts frequently review an agency's discharge of its NEPA procedural duties by applying a two-fold test to determine, first, whether the agency took all the steps required by section 102(2)(C) of NEPA and second, whether the agency "adequately" discussed the environmental impact. See generally Leventhal, supra note 8, at 521-27. The two-fold test is not helpful, however, because the second prong of the test—the adequacy of the content of the impact statement—is essentially a substantive question. See note 59 infra. To the extent that the "adequacy" question does not involve issues of value judgments, it would seem to be a matter of whether opposing scientific views are included in the EIS. See note 36 supra. Such scientific questions fall easily into the first prong of the test, however.

38. For a similar analysis, see Note, Substantive Review, supra note 6, at 181-82.

39. Calvert Cliffs' Coordinating Comm., Inc. v. AEC, 449 F.2d 1109, 1128 (D.C. Cir. 1971) (establishing a "strict standard of compliance"). See Anderson, supra note 2, at 49-55.

40. For a listing of early cases wherein injunctions were granted, see Note, Evolving Judicial Standards, supra note 8, at 1596 n.23. Injunctions issued for inadequate procedural compliance usually halt specific projects temporarily but those issued to enjoin the use of an inadequate rule may halt whole categories of projects. E.g., Calvert Cliffs' Coordinating Comm., Inc. v. AEC, 449 F.2d 1109 (D.C. Cir. 1972) (halting the licensing of nuclear facilities); Harlem Valley Transp. Ass'n v. Stafford, 500 F.2d 328 (2d Cir. 1974) (halting railroad abandonment proceedings).

41. E.g., City of New York v. United States, 337 F. Supp. 150 (E.D.N.Y. 1972).

42. See note 10 supra.

43. Cramton & Berg, supra note 10, at 528. See Murphy, supra note 10, at 980-81 (NEPA as interpreted by the courts requires something that "may be impossible to perform"); Jaffe, supra note 10, at 27-29 (alternatives to a proposed action may be infinite depending on how one states the end in view).

First, "conventional" actions within a particular agency tend to be repetitive and therefore so do the alternatives. Although several agency decisions have been reversed for a failure to consider a particular alternative,[44] no agency has yet been reversed again for its failure to consider a different alternative. Thus the process has heretofore required consideration of an established set of alternatives, not an infinite variety.[45] Second, when "unconventional" agency actions, or those taken for the first time, are under consideration, the difficulty in defining alternatives is most pronounced, but the results are clearly worthwhile. Consideration of alternatives, especially those the agency is powerless to implement, is helpful because it draws attention to more desirable alternatives and may stimulate a fundamental rethinking within the agency, in the executive branch or in Congress.[46]

The more troublesome aspect of complying with the procedural provisions of NEPA appears to be the investigation of environmental effects.[47] Judge Wright has stated that "all possible environmental factors [must be included] in the decisional equation."[48] This requirement is said to allow any party "with a spark of imagination" to object in court to an agency decision.[49] Since an EIS may be inadequate because it contains insufficient detail, is conclusory or insufficiently treats some forms of environmental effects, the possible objections are many.

The pitfalls involved in the investigating environmental harm are illustrated by the *Hanly* case, which was twice reviewed by the Second Circuit.[50] In this litigation the plaintiff alleged that the General Services Administration had violated NEPA in the construction of a joint courthouse annex and jail in New York City. The case turned on the threshold issue of whether the action "significantly" affected the environment and thus required an EIS.[51]

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44. E.g., Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827 (D.C. Cir. 1972); Environmental Defense Fund, Inc. v. Corps of Eng'rs, 325 F. Supp. 749 (E.D. Ark. 1971), aff'd, 470 F.2d 289 (8th Cir.), cert. denied, 409 U.S. 1072 (1972).

45. In Natural Resources Defense Council, Inc. v. Morton, 458 F.2d 827 (D.C. Cir. 1972), the leasing of off-shore oil tracts by the Department of Interior was enjoined until the Secretary considered the alternative of ending oil import quotas. Since the Interior Department had no authority to change the import system, the case appeared to require the inclusion of an almost infinite set of alternatives. In fact the decision required little more than the inclusion for consideration of well-known alternatives outside the agency's authority. Id. at 838.

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> Congress contemplated that the Impact Statement would constitute the environmental source material for the information of the Congress as well as the Executive, in connection with the making of relevant decisions . . . .

Id. at 833.

47. The critics do not attempt to draw a clear line between their critique of the investigation of alternatives and the investigation of environmental factors within the proposal. Since the critics assume, as a matter of practicality, that the agencies should be required to consider only substantially less harmful alternatives and significant environmental factors, the conceptual problem is the same: how to narrow the boundaries of what the agency must consider. See note 49 infra.

48. Calvert Cliffs' Coordinating Comm., Inc. v. AEC, 449 F.2d 1109, 1113 (D.C. Cir. . 1971).

49. Cramton & Berg, supra note 10, at 526. The failure of the courts to distinguish different degrees of environmental harm is what seems to trouble the critics most. They argue that if all environmental factors must be included, the process is too expansive for the agency to deal with effectively. They suggest that the courts use a "rule of reason" standard in examining agency impact statements. Id. at 527; Jaffe, supra note 10, at 22-25. Alternatively, they suggest the need "to establish criteria to guide" the agencies. Murphy, supra note 10, at 985-90.

50. Hanly v. Mitchell, 460 F.2d 640 (2d Cir.), cert. denied, 409 U.S. 990 (1972); Hanly v. Kleindienst, 471 F.2d 823 (2d Cir. 1972), cert. denied, 412 U.S. 908 (1973).

51. Section 102(2)(C) of NEPA requires a detailed impact statement only when there is federal action "significantly affecting the quality of the human environment." See note 24 supra and accompanying text. In the *Hanly* cases the agency had proceeded with construction without issuing an

In *Hanly I*[52] the court determined that the failure to consider several factors, including disturbances within the jail and the influence of people associated with a possible drug treatment center, were sufficient to enjoin the construction of the courthouse annex.[53] On its second review, the court declared:

> For the most part [the plaintiff's] opposition is based upon a psychological distaste for having a jail located so close to residential apartments which is understandable enough. It is doubtful whether psychological and sociological effects upon neighborhoods constitute the type of factors that may be considered in making such a determination [that the action is significant] since they do not lend themselves to measurement.[54]

Consequently, the court agreed with the agency that no EIS was necessary. As Judge Friendly noted in his dissent, however, NEPA requires the input of factors which are not easily measured or quantified.[55] He also contended that the residents' emotional distaste was exactly the type of factor that NEPA was meant to encompass in an urban society.[56] Since these factors had to be taken into account, Judge Friendly concluded that the action was "significant" and therefore the agency was required to file an EIS.[57]

The opinions in *Hanly I* and *Hanly II* read together reveal the wavering judicial principles which have been established to mark the boundaries of an agency's duty to investigate.[58] More importantly, the opinions also reveal that the uncertainty over procedural duties is firmly rooted in an inability to agree upon the value of environmental amenities. *Hanly I* implied that the excluded factors should be afforded significant weight. In *Hanly II* the majority appeared to hold that even if the sociological factors were included, their weight was negligible. On the other hand, the dissent found the effects to be significant, a result more nearly in accord with *Hanly I*.[59]

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impact statement. The plaintiffs claimed that if all environmental factors had been considered the proposed action would have required the agency to issue an impact statement.

52. Hanly v. Mitchell, 460 F.2d 640 (2d Cir.), cert. denied, 409 U.S. 990 (1972).

53. The court specifically recognized that these were environmental factors which must be included in determining whether the action was or was not significant. Id. at 647.

54. Hanly v. Kleindienst, 471 F.2d 823, 833 (2d Cir. 1972), cert. denied, 412 U.S. 908 (1973). This statement can be read as a denial that such factors were "environmental" concerns within the meaning of NEPA. But since the court also requires the agency to hold a hearing on these factors before the agency would be allowed finally to determine that no EIS was necessary, such a reading is implausible. Id. at 836.

55. Id. at 839.

56. Id. Judge Friendly stated that he could not "believe my brothers would entertain the same doubt concerning the relevance of psychological and sociological factors if a building like" the jail were constructed in a posh middle class neighborhood.

57. Id. at 840.

58. The panels in the cases were entirely different. Judges Waterman, Hays and Feinberg sat on *Hanly I*, while Judges Mansfield, Timbers and Friendly sat on *Hanly II*.

59. In the *Hanly* cases, determining the weight assigned to environmental factors was necessary in order to judge whether an impact statement had to be undertaken. When an impact statement has been issued, the value assigned to environmental factors would be tacitly reflected in the court's determination of whether the EIS gave adequate attention to certain factors.

The issue is succinctly stated in Warm Springs Dam Task Force v. Gribble, 378 F. Supp. 240 (N.D. Cal. 1974). In dismissing the plaintiff's challenge to the sufficiency of an EIS drafted by the Army Corps of Engineers, the court stated:

> The Corps is not required to give the same weight to plaintiffs' concerns as plaintiffs do. Its essential responsibility is to actually consider them, which it has done in the instant case. Obviously the amount of consideration given to each point is in direct proportion to the Corps' belief as to its relevancy and import, and disagreement over the amount of attention given is the gravamen of many of plaintiffs' objections.

Id. at 251 (footnote omitted). A stay in the case was granted, pending appeal, by Justice Douglas

At least theoretically the critics of NEPA are correct in asserting that environmental impacts and plausible alternatives present a boundless array of factors to consider.[60] Yet it also seems elementary that a violation of NEPA occurs only if an important factor or an important alternative is omitted. Thus the problem is that the ability of the courts objectively to review agency compliance and the ability of the agencies effectively to comply with NEPA's procedural duties depend upon developing some formula to separate the wheat from the chaff.

III. SUBSTANTIVE COMPLIANCE AND SUBSTANTIVE REVIEW

A. The Substantive Issues

To define in broad terms NEPA's substantive policy, it is easiest to begin by a process of exclusion.[61] NEPA did not create a "right" to a clean environment.[62] Such a legal "right" may have prevented any governmental action which invaded that right by authorizing environmental harm. Nor did NEPA make environmental factors paramount in agency decision-making. Such an interpretation implies that in taking any action the agency must choose the least environmentally harmful alternative despite other considerations. Since NEPA calls for a "balancing" of environmental, economic and technical factors, it appears to put all these factors on the same plane.[63]

What NEPA requires is the "optimally beneficial action,"[64] taking into account environmental factors. Such a choice is not determined solely or primarily by environ-

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sitting as Circuit Justice. Warm Springs Dam Task Force v. Gribble, 417 U.S. 1301 (Douglas, Circuit Justice, 1974).

60. The prospect of a detailed procedural review can affect agency compliance as was recently illustrated in Scientists' Institute for Pub. Information, Inc. v. AEC, 481 F.2d 1079 (D.C. Cir. 1973). The court stated:

> It is apparent, however, that the Commission seeks to avoid issuing its forthcoming "environmental survey" as an impact statement under Section 102, not out of any desire to circumvent NEPA's procedural requirements, but rather because of a fear that Section 102's requirements are so strict, particularly as to the need for "detail" in the statement, that any Commission attempt to issue its environmental survey as a NEPA statment would be doomed to failure.

Id. at 1091.

61. There are relatively few law review articles on NEPA's substantive policy. See, Note, Substantive Review, supra note 6. See also Note, Cost-Benefit Analysis and the National Environmental Policy Act of 1969, 24 Stan. L. Rev. 1092 (1972) [hereinafter Note, Cost-Benefit Analysis]; Emery, The National Environmental Policy Act of 1969, An Attempt to Tailor the Government Processes to Environmental Needs, 26 Okla. L. Rev. 141, 151-57 (1973); Leventhal, supra note 8, at 527-29; Cohen & Warren, Judicial Recognition of the Substantive Requirements of the National Environmental Policy Act of 1969, 13 B.C. Ind. & Com. L. Rev. 685 (1972).

For an analysis accepting the premise that NEPA contains no substantive mandate but nevertheless arguing that agency compliance will sometimes be impossible at the procedural level, see Note, Evolving Judicial Standards, supra note 8.

62. 115 Cong. Rec. 40417 (remarks of Senator Jackson, Exhibit 1):

> The Conference Committee amended the language which read "each person has a fundamental and inalienable right to a healthful environment." Section 101(c) now reads "each person should enjoy a healthful environment."

63. See note 32 supra and accompanying text.

64. In Calvert Cliffs' Coordinating Comm., Inc. v. AEC, 449 F.2d 1109, 1123 (D.C. Cir. 1971) the court stated:

> NEPA mandates a case-by-case balancing judgment on the part of federal agencies. In each individual case, the particular economic and technical benefits of planned action must be assessed and then weighed against environmental costs; alternatives must be considered which

mental concerns. The choice dictated is the one which will provide the maximum net benefits to society.[65] For example, a particular objective may be achieved by two alternatives: alternative one will result in $1000 of benefits and cost $500, of which $200 are environmental costs; alternative two will yield the same benefits but cost $800, of which only $100 are environmental costs. Although alternative two has lower environmental costs, alternative one is preferable since it has a higher benefits to cost ratio than alternative two.[66] Even if this approach does not greatly alter decision-making, it does make environmental costs part of the decision-making calculus. In legal terms NEPA made environmental effects a relevant factor in agency decision-making.[67] Agencies which heretofore lacked a statutory directive to consider environmental values are compelled to weigh these factors under NEPA. The change is significant for it focuses attention on the need to preserve environmental amenities in any situation where the costs of preservation are less than the value of the amenities.

The foregoing standard of "optimum beneficial action" presents two issues, however, one of which is legal and one of which is essentially economic. The legal problem is the reluctance or inability to articulate valuing judgments. It may be illustrated by two court cases which deal with the question of substantive compliance with NEPA. In the first case, *Zabel v. Tabb*,[68] the Army Corps of Engineers denied a dredge and fill permit to an applicant who wanted to construct an island park for mobile homes because the construction would cause substantial harm to the marine environment. The plaintiff-applicant asserted that attaching any weight to environmental factors was *ultra vires*.[69] The court held that the Corps was entitled, if not required, to consider ecological factors, and being persuaded by them, to deny the application.[70] This holding very nearly gives the agency exclusive discretion over the substantive consideration of environmental harm,[71] and, if accepted, would foreclose judicial review of the agency determination under section 701(a)(2) of the Administrative Procedure Act (APA).[72] On the

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> would affect the balance of values. . . . In some cases, the benefits will be great enough to justify a certain quantum of environmental costs; in other cases, they will not be so great and the proposed action may have to be abandoned or significantly altered so as to bring the benefits and the costs into proper balance. The point of the individualized balancing analysis is to ensure that, with possible alterations, the optimally beneficial action is finally taken.

65. This assumption is derived from a cost-benefit approach to NEPA. For an argument that NEPA requires such an approach and an analysis of the cost-benefit principles, see Note, Cost-Benefit Analysis, supra note 61.

66. For an explanation of the economic principles behind such a choice, see generally E. Mishan, Cost-Benefit Analysis (1967). Legislative history reveals that the economic analysis applied in this example was part of the thinking involved in drafting NEPA. See Hearings on S. 1075, S. 237 and S. 1752 Before the Senate Committee on Interior and Insular Affairs, 91st Cong., 1st Sess., 34-35 (1969).

67. Compare New Hampshire v. AEC, 406 F.2d 170 (1st Cir.), cert. denied, 395 U.S. 962 (1969) with Calvert Cliffs' Coordinating Comm., Inc. v. AEC, 449 F.2d 1109 (D.C. Cir. 1971).

68. 430 F.2d 199 (5th Cir. 1970), cert. denied, 401 U.S. 910 (1971).

69. Id. at 203.

70. Id. at 201.

71. Note, Environmental Law—Consideration Must be Given to Ecological Matters in Federal Agency Decisions—*Zabel v. Tabb*, 12 B.C. Ind. & Com. L. Rev. 674, 679 (1971). The author comments about the basis for the decision under the Rivers and Harbors Appropriation Act, 33 U.S.C. § 403 (1907):

> Unless the court can uncover the current standard from within the statute, then there exist no guidelines at all by which administrators remain bound.

The author assumes that NEPA provides such a standard as a supplement to the controlling legislation. But the same critique that was applied to the Rivers and Harbors Appropriation Act could be applied to NEPA.

72. 5 U.S.C. § 701(a)(2) (1970). See notes 119-28 infra and accompanying text.

other hand, faced with a situation where the Army Corps of Engineers was proceeding with a project despite substantial environmental harm, the court in *Sierra Club v. Froehlke*[73] suggested that the agency's discretion was limited. In this case the Corps had conducted a mathematical cost-benefit analysis which justified the project. The court reviewed the analysis and criticized the agency for assigning disparate values to essentially similar environmental benefits,[74] implying that such treatment would be reversible error because it indicated a manipulative approach to environmental benefits and thus an evaluation in bad faith.[75] Such a standard would seem to be equally applicable to environmental harm.

Although the two cases indicate the inconclusive judicial approach to substantive compliance with NEPA, their focus is on the substantive issue. Both decisions assume that environmental factors are a substantively relevant agency consideration, yet neither decision articulates or requires articulation of why a particular value was assigned to environmental harm. One decision leaves such valuing to the agency's discretion, the other reviews such valuing only to the extent it may have been undertaken in bad faith.

The economic issue raises the problem the courts avoid—valuing environmental amenities—but does not resolve it. In the example above[76] it was assumed that environmental costs could be reduced to a dollar amount. Economists are generally the ones who attempt to transpose environmental values into dollar equivalents, but they recognize the limitations inherent in developing such equivalents.[77] Unlike the other factors in the cost-benefit analysis, environmental factors cannot be valued by market forces. For this reason the latter are usually labeled externalities, which simply means that they are unintended or unaccounted for costs.[78] Many environmental benefits do not have costs because they are "public goods"—goods which a seller cannot deny to those who do not pay the market price.[79] Although efforts can be made to assign costs to these benefits, essentially by mimicking the market, such efforts are disfavored by economists because the result is not necessarily economically efficient,[80] which is the

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73. 359 F. Supp. 1289 (S.D. Tex. 1973).

74. Id. at 1362-81. The court found among other things, that recreational benefits were included only when necessary to justify high economic costs. Otherwise, environmental factors were excluded. Id. at 1379-80.

75. Id. at 1380-81.

76. See text following note 65 supra.

77. For the attempts of economists to transpose environmental values into dollar equivalents, see, e.g., Ackerman, Ackerman & Henderson, The Uncertain Search for Environmental Policy: The Costs and Benefits of Controlling Pollution Along the Delaware River, 121 U. Pa. L. Rev. 1225 (1973); Jaskow, Cost-Benefit Analysis for Environmental Impact Statements, 91 Pub. Util. Fort. 21 (1973). For general critiques of the application of economics to the study of legal problems, see Polinsky, Economic Analysis as a Potentially Defective Product: A Buyer's Guide to Posner's *Economic Analysis of Law*, 87 Harv. L. Rev. 1655 (1974); Samuels, The Coase Theorem and the Study of Law and Economics, 14 Nat. Res. J. 1 (1974). For more specific critiques of the application of economics to environmental problems, see Note, Cost-Benefit Analysis, supra note 61, at 1106-11; Tribe, Ways Not to Think About Plastic Trees: New Foundations for Environmental Law, 83 Yale L.J. 1315 (1974).

78. Note, Cost-Benefit Analysis, supra note 61, at 1106.

79. Polinsky, supra note 77, at 1672-73.

80.

> An allocation of resources is . . . efficient if there is no rearrangement of resources which can make anyone better off without making at least one other person worse off (where "better off" and "worse off" are defined in terms of each individual's evaluation of his own welfare). Conversely, and perhaps more intuitively, if resources are allocated inefficiently in this sense, then it is possible to improve at least one person's welfare without making anyone else worse off.

Id. at 1663-64 (footnotes omitted).

goal of the cost-benefit analysis.[81] Although economists thus recognize that valuing environmental factors is an imprecise art, they nevertheless emphasize the importance of attempting to do so in order to reach the "optimally beneficial action."[82]

B. Agency Substantive Compliance

The Atomic Energy Commission (AEC) is the only agency that has issued what might be considered substantive regulations under NEPA.[83] The regulations mandate in every case a cost-benefit approach and the selection of the "optimally beneficial action."[84] The analysis must "to the fullest extent practicable quantify the various factors. To the extent that such factors cannot be quantified, they should be discussed in qualitative terms."[85]

This approach was applied in a recent AEC case involving an application by Consolidated Edison of New York to operate a nuclear power plant on the Hudson River.[86] The AEC Licensing Board, applying the NEPA regulations, required construction of cooling towers for a nuclear power plant to prevent damage to fish.[87] The AEC found the cooling towers would cost $16 million a year over their useful life.[88] Estimates of the economic value of the lost striped bass fish in the Hudson and the associated recreational benefits ranged from $1.4 to $5.6 million.[89] Recognizing that the quantified environmental costs were less than the costs of constructing the cooling towers, the Board nonetheless required the cooling towers because it held that NEPA mandates protection of "a natural resource like the Hudson River" when "economic means having less adverse environmental impact are available."[90] Consolidated Edison appealed the decision within the AEC, claiming that it was arbitrary and capricious.[91]

The AEC Appeals Board endorsed the optimally beneficial action standard but it rejected the Licensing Board's decision, which was presumably based upon the same standard.[92] The Appeals Board criticized the Licensing Board's valuation of the quanti-

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81. Id. at 1674.

82. See, e.g., Ackerman, Ackerman & Henderson, supra note 77.

83. 10 C.F.R. § 50.110, app. D. (1974) (licensing of nuclear power plants and facilities).

84. 10 C.F.R. § 50.110, app. D., (A)(8) (1974) provides:

> On the basis of the foregoing evaluations and analyses, the detailed statement will include a conclusion by the Director of Regulation or his designee as to whether, after weighing the environmental, economic, technical and other benefits against environmental costs and considering available alternatives, the action called for is issuance or denial of the proposed permit or license or its appropriate conditioning to protect environmental values.

See note 64 supra.

85. 10 C.F.R. § 50.110, app. D., (A)(3) (1974).

86. In re Consolidated Edison Co. of New York, No. 50-247, 1973 AEC Regulatory Adjudications Issuances 751.

87. Id. at 782.

88. Id. at 775.

89. Id. at 771. Other species of fish and living organisms would also be injured by the operation of the nuclear facility, but the damages could be assessed only in qualitative terms. Id. at 771-72. The value of striped bass could be quantified because those fish were caught for sport and commercial purposes.

90. Id. at 782. In order to arrive at the conclusion that the damage to the entire Hudson River fishery justified construction of the cooling towers, the Licensing Board relied on Section 101(b)(3) of NEPA, which provides that the Federal Government should seek the widest range of beneficial uses of the environment. In so doing, it seems likely that the Board's statement quoted in the text articulated a value judgment about the Hudson River fishery rather than a rule of law about environmental protection under NEPA. For the importance of this distinction, see text accompanying notes 94-96 infra.

91. Brief for Appellant at 2, In re Consolidated Edison Co. of N.Y., No. 50-247, 1973 AEC Regulatory Adjudications Issuances 751.

92. 2CCH Atom. En. L. Rep. ¶ 11,256.10 at 17,307-32 (Atomic Safety and Licensing Appeals

fied costs of the striped bass as too high.[93] It also concluded that the Licensing Board may have incorrectly viewed environmental protection as the exclusive goal under NEPA.[94] In so doing the Appeals Board did not squarely face the contention of the petitioners in opposition to Consolidated Edison that the unquantified environmental costs when added to the loss represented by the destruction of the striped bass population justified the cooling towers.[95] As a remedy the Appeals Board delayed construction of the towers for one year and suggested the possibility of a longer delay.[96]

Insofar as the Appeals Board excluded the possibility that the standard of optimally beneficial action could never require a more costly but less detrimental alternative, it was clearly wrong. In a case like Consolidated Edison's, where benefits are a constant[97] and it is assumed that benefits always exceed costs,[98] a less detrimental alternative is always "optimal" if the value of the extinguished environmental amenities exceeds the costs of preserving them. The Appeals Board faced the issue of environmental value only indirectly, yet it was the determinative issue. The Board took exception to the speculative nature of the data used by the Licensing Board, and thus lowered the costs. The Appeals Board rejected the valuing of the Licensing Board without reference to NEPA's substantive goals, a factor considered by the Licensing Board,[99] and without any articulation of how the unquantified harm was to be valued. All estimates of future harm and present value are highly speculative; the Board's refusal to explicitly face the question of environmental value, especially for unquantified factors, leaves its decision open to doubt.

The Consolidated Edison case illustrates the problem of agency compliance with NEPA's substantive mandate. The focus of the decision is on the EIS data and on the reformulation of legal principles; yet the decision actually turns on the value assigned to environmental benefits. In this respect, the Appeals Board generally failed to make its value judgment explicit and specifically failed to make its judgment by reference to the appropriate statutory goals.

C. Judicial Review of Substantive Compliance

In the courts the debate over substantive compliance with NEPA has focused on the appropriateness of judicial review rather than upon the validity of a particular valuing decision. On one hand, some courts have held that NEPA is simply a procedural statute, requiring the full disclosure of environmental effects before an agency action is undertaken.[100] On the other hand, at least two Circuit Courts of Appeals have decided

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Bd., 1974). The Appeals Board stated that the Licensing Board's "interpretation would do violence to the fundamental objective of using an individualized balancing to ensure that the optimally beneficial action is finally taken." Id. at 17,307-37.

93. Id. at 17,307-38.

94. Id. at 17,307-37.

95. Id.

96. Id. at 17,307-39.

97. The Appeals Board has decided that the benefits of electricity are "priceless." See In re Vermont Yankee Nuclear Power Corp., 2 CCH Atom. En. L. Rep. ¶ 11,267.16 at 17,503-101 (Atomic Safety and Licensing Appeals Bd., 1974) (". . . the value of electricity cannot be measured by the amount of the bill received by the consumer—it is, in a real sense, 'priceless' ").

98. This can be assumed where there is a private applicant, as in the AEC cases, because if the costs to the applicant exceed the benefits to him, he will almost certainly withdraw the application. It may also be assumed because the Appeals Board regards the benefits as "priceless." See note 97 supra.

99. 1973 AEC Regulatory Adjudications Issuances at 782. See note 90 supra.

100. National Helium Corp. v. Morton, 455 F.2d 650, 656 (10th Cir. 1971), 486 F.2d 995 (10th Cir. 1973), cert. denied, 416 U.S. 993 (1974); Environmental Defense Fund, Inc. v. Armstrong, 487 F.2d 814, 822 n.13 (9th Cir. 1973); City of New York v. United States, 344 F. Supp. 929, 940 (E.D.N.Y. 1972). For the ambiguous position of the Fifth Circuit, compare Hiram Clarke Civic

that agency action taken under NEPA is subject to judicial review on the merits.[101] Although it may be possible to treat judicial review and substantive policy as separate issues in some instances, this is impossible under NEPA. The articulation of NEPA's substantive policy is interwoven with the issue of whether judicial review on the merits is or is not appropriate.

The judicial issue is crystalized by two conflicting Court of Appeals decisions. In *National Helium Corp. v. Morton*[102] the Tenth Circuit reviewed the claim of helium sellers that the Government had not adequately complied with NEPA when it terminated the sellers' supply contracts. The district court enjoined the Government because it found the EIS insufficient.[103] The Court of Appeals reversed on the procedural issue of the sufficiency of the EIS and did not reach the substantive issue because in an earlier case the court declared that NEPA was simply a full disclosure statute.[104] A concurring opinion, however, interpreted the earlier decision to mean only that the "adequacy" of the EIS could not be tested in the courts.[105] The concurrence then declared in one paragraph that the agency decision was reviewable and that in this instance the decision was valid because it was not arbitrary or capricious.[106]

On the other hand, in *Environmental Defense Fund, Inc. v. Corps of Engineers*,[107] the Eighth Circuit reached the opposite result on the issue of judicial review of NEPA's substantive mandate. The case involved the construction of a dam on the Cossatot River in Arkansas. The plaintiffs challenged the Corps of Engineers' EIS and the agency decision on the merits. The district court found the EIS adequate but refused to permit the plaintiffs' challenge of the agency decision on the grounds that NEPA required only full disclosure.[108] The Eighth Circuit agreed with the district court that the EIS was adequate but permitted the plaintiffs to challenge the agency decision on the merits.[109] The court predicated its review of substantive compliance on a statutory construction of NEPA and the APA, and upon some prior case law which appeared to favor such review.[110] Judging the agency action by APA standards, the court found that it was not arbitrary or capricious.[111]

The Eighth Circuit recognized that agency action is presumptively reviewable unless by implication or express language Congress has foreclosed review.[112] It found

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Club, Inc. v. Lynn, 476 F.2d 421, 425 (5th Cir. 1973) with Environmental Defense Fund, Inc. v. Corps of Eng'rs, 492 F.2d 1123, 1139-40 (5th Cir. 1974).

101. Conservation Council of N.C. v. Froehlke, 473 F.2d 664, 665 (4th Cir. 1973); Environmental Defense Fund, Inc. v. Corps of Eng'rs, 470 F.2d 289, 298 (8th Cir.) cert. denied, 409 U.S. 1072 (1972). See also Environmental Defense Fund, Inc. v. Corps of Eng'rs, 492 F.2d 1123, 1139-40 (5th Cir. 1974); Environmental Defense Fund, Inc. v. Froehlke, 473 F.2d 346, 352-53 (8th Cir. 1972); Calvert Cliffs' Coordinating Comm., Inc. v. AEC, 449 F.2d 1109, 1115 (D.C. Cir. 1971).

102. 486 F.2d 995 (10th Cir. 1973), cert. denied, 416 U.S. 993 (1974).

103. 361 F. Supp. 78 (D. Kan. 1973).

104. 455 F.2d 650, 656 (10th Cir. 1971) (". . . the mandates of the NEPA pertain to procedures and do not undertake to control decision making within the departments" [footnote omitted]).

105. 486 F.2d at 1006. For an explanation of the "adequacy" standard, see note 37 supra.

106. 486 F.2d at 1006.

107. 470 F.2d 289 (8th Cir.), cert. denied, 409 U.S. 1072 (1972). See also Environmental Defense Fund, Inc. v. Froehlke, 473 F.2d 346 (8th Cir. 1972).

108. 342 F. Supp. 1211 (E.D. Ark. 1972).

109. 470 F.2d at 297.

110. Id. at 298-300. For an analysis of the justification, see Note, Substantive Review, supra note 6, at 182-87.

111. 470 F.2d at 300-01. The court stated that it was applying the scope of authority test, derived from Citizens to Preserve Overton Park v. Volpe, 401 U.S. 402, 416 (1971). However, since the court appeared to view procedural compliance as the equivalent of the scope of authority test, it only tested the substantive decision under the arbitrary or capricious rule, a subcategory of the scope of authority test. See note 22 supra.

112. See 4 K. Davis, Administrative Law Treatise § 28.05 (1958).

that NEPA was "silent as to judicial review" and "no special reasons" existed for precluding review.[113] Judicial support for this proposition was derived from dicta in *Calvert Cliffs'* where Judge Wright stated that an agency decision could be reversed if the balancing of costs and benefits was arbitrary or the product of underassessed environmental values.[114]

On the other hand, *National Helium* ignored the presumption created by traditional statutory foundations of reviewability.[115] Instead, the Tenth Circuit simply assumed that NEPA only requires full disclosure.[116] But this position merely avoids the issue for the purpose of disclosure is to affect the agency decision. The concurring opinion underscores the majority's confusion because it implies that, although environmental issues may not be reviewable, the agency decision, presumably minus the input of environmental values, is subject to review. *National Helium* therefore fails to rebut the presumption of reviewability; moreover, its foreclosure of review runs counter to the congressional directive to "insure" that environmental factors are given the appropriate weight.[117]

By excluding the environmental factors from review the court in *National Helium* suggested a purely discretionary standard for agency action, just as the court did in *Zabel v. Tabb*.[118] Section 701(a)(2) of the APA precludes judicial review when the agency action is "committed to agency discretion by law."[119] Thus *National Helium* implied that the "committed to agency discretion" exception of the APA is applicable. The Eighth Circuit, on the other hand, noted that the Supreme Court, in an analogous environmental case, construed the APA exception as "a very narrow" one, available only where there is "no law to apply."[120] The Eighth Circuit stated that NEPA's catalogue of goals and its balancing requirement are sufficient law to take decisions under NEPA out of this narrow exception.[121]

The NEPA balancing requirement is certainly applicable law which must be considered. The agency may not ignore totally either environmental values or economic costs. If the agency did so explicitly, the decision would be reviewable and reversible as a matter of law. What *National Helium* more narrowly suggests, however, is that if the agency considers both economic and environmental factors, the environmental valuing process and its results are not reviewable. More specifically, under *National Helium* it may be argued that NEPA's goals are drawn so broadly that they constitute discretionary standards which make the valuing process nonreviewable.[122]

However attractive the foregoing argument appears initially, it fails to persuade upon a closer examination. NEPA's catalogue of goals may not require that a particular

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113. 470 F.2d at 299.

114. Calvert Cliffs' Coordinating Comm., Inc. v. AEC, 449 F.2d 1109, 1115 (D.C. Cir. 1971).

115. See 4 K. Davis, Administrative Law Treatise § 28.05 (1958).

116. 455 F.2d at 656.

117. Section 102(2)(B) of NEPA requires the agency to "insure" that environmental amenities be given "appropriate" value.

118. 430 F.2d 199 (5th Cir.), cert. denied, 401 U.S. 910 (1970); see notes 68-72 and accompanying text.

119. 5 U.S.C. § 701(a)(2) (1970) ("This chapter applies, according to the provisions thereof, except to the extent that . . . agency action is committed to agency discretion by law.").

120. Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 410 (1971). The Court stated:

> This is a very narrow exception. The legislative history of the Administrative Procedure Act indicates that it is applicable in those rare instances where "statutes are drawn in such broad terms that in a given case there is no law to apply" [citation omitted].

121. 470 F.2d at 298 n.14.

122. See note 120 supra.

value be assigned to an environmental factor,[123] but it does establish variables that must be utilized in arriving at a value. Regardless of the broad range of values that utilization of these variables may yield, the balancing process may indicate that some values are rated too high while others are too low. In other words, the balancing requirement and the valuing requirement cannot be viewed as separate standards.[124] Furthermore, policy arguments strongly favor judicial review of the valuing process. Judicial deference underlying a discretionary approach is inappropriate because NEPA was designed specifically to reform agency decision-making; agencies are still ignoring their clearly established procedural duties.[125] Even if one assumes that the agencies will utilize economic expertise to arrive at suitable valuations of environmental factors, one must recognize the limitations of a purely economic approach.[126] Judicial review, on the other hand, will foster an articulation of the valuing process which is more in line with what the economists suggest is appropriate.[127] Finally, NEPA applies to all federal agencies and requires a consistent standard of environmental valuing,[128] a goal which would be thwarted by the preclusion of judicial review.

In sum, the judicial review accorded by the Eighth Circuit in *Environmental Defense Fund, Inc. v. Corps of Engineers* is required on statutory and policy grounds. Although judicial experience with the application of NEPA's substantive policy is now limited, judicial review can only enhance the integrity of decision-making under NEPA and further the congressional purpose behind the Act. Judicial review will not only correct egregious abuses but will foster a rational approach to environmental issues at the agency level. As the valuing process and its judgments become more explicit, the boundaries of the procedural duties will also become clearer, encouraging effective agency compliance.

IV. ARTICULATION OF THE SUBSTANTIVE MANDATE

A. The Purposes and Boundaries

To hold that NEPA contains a judicially reviewable substantive mandate is only the first step in the process of judicial review. If substantive review is required, to be worthwhile the review must explain the substantive policy. The goal must be to foster compliance at the agency level by articulating the policy, rather than to discourage compliance by treating significant issues only tacitly or indirectly.[129] Judicial review must defer to agency judgments that are within a broad range of acceptable values, but it must not defer to such a degree that it becomes a rubber stamp.

The difficulty with NEPA's substantive mandate is that the standard of optimally beneficial action—the balancing standard—is inextricably interwoven with valuing judg-

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> 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.

Calvert Cliffs' Coordinating Comm., Inc. v. AEC, 449 F.2d 1109, 1112 (D.C. Cir. 1971).

124. See note 127 infra and accompanying text.

125. See, e.g., Harlem Valley Transp. Ass'n v. Stafford, 500 F.2d 328 (2d Cir. 1974).

126. See Note, Cost-Benefit Analysis, supra note 61, at 1106-11.

127. The economists do not state explicitly that an articulation of the valuing process is necessary. Yet it follows from their own analysis of the weaknesses of a purely economic approach. "Each case must be examined in detail for the source of the market failure, and an appropriate remedy designed in light of them." Polinsky, supra note 77, at 1673.

128. See 115 Cong. Rec. 40,419 (1969) (remarks of Senator Jackson, Exhibit 2, decrying the lack of "experience or precedent to assure substantial and consistent consideration of environmental factors in decisionmaking"). Section 102(2)(A) of NEPA requires a "systematic" approach in decision-making.

129. See note 59 supra and accompanying text.

ments. Judicial review may easily and incorrectly focus only on the balancing process. For example, where a particular project will produce $1000 of benefits and have only $100 in economic costs but $1000 in environmental costs, the project should be abandoned unless the total costs can be reduced by over $100. Yet a decision to abandon the project might be interpreted as one giving "exclusive" consideration to environmental values. Likewise, a project producing $1000 in benefits and having $300 in economic costs and $300 in environmental costs should proceed, even though the environmental costs might be totally eliminated by an additional expenditure of $500 in economic costs. Yet such a decision might appear to ignore environmental costs altogether. In each of these examples judicial review might easily reverse the agency decision by focusing solely on the balancing requirement and ignoring the valuing judgments.[130]

On the other hand, the valuing judgment itself presents difficult problems. NEPA requires that environmental factors be given an appropriate value, but that value cannot be determined on any objective scale. Appropriate values are those which make reference to the section 101(b) variables of NEPA[131] but since there has been almost no experience in applying these variables to actual situations, they do not now constitute established standards. For this reason *Environmental Defense Fund, Inc. v. Corps of Engineers*[132] reflects the ineffectiveness of reviewing agency decisions under the APA arbitrary or capricious standard,[133] without a fuller articulation than that standard permits. In one paragraph the Eighth Circuit affirmed the agency decision without explaining why the decision was not arbitrary or capricious despite substantial environmental costs.[134] The court also did not explain what might constitute an arbitrary or capricious decision in other situations.

Courts may focus on the articulation of NEPA's substantive policy in several ways. First, a court may require the agency to explain its balancing process, giving particular emphasis to the valuing of environmental factors. Second, a court itself may undertake the balancing, establish boundaries for the valuing judgments, and create precedent by applying these concepts. Finally, a court may utilize some combination of these two approaches.

B. Agency Articulation

Environmental Defense Fund, Inc. v. Ruckelshaus[135] stands for the proposition that, if in the first instance the agency has the responsibility for formulating substantive standards, courts must require the standards to be articulated as they are applied to particular situations. In the *Ruckelshaus* case the plaintiffs challenged the failure of the Administrator of the Environmental Protection Agency to suspend a pesticide from use pursuant to a statute[136] which authorized the suspension in order "to prevent an imminent hazard to the public," but which also permitted the Administrator to balance "the benefits of a pesticide against its risks" in determining when such a hazard existed.[137] In this instance, the Administrator explicitly recognized that use of the challenged pesticide posed substantial health risks.[138] Nonetheless, he refused to require suspension.[139] Although the argument was made that the Administrator implicitly bal-

130. This is a plausible explanation of why the Appeals Board reversed the Licensing Board in the Consolidated Edison case. See notes 92-99 supra and accompanying text.

131. See notes 30-31 supra and accompanying text.

132. 470 F.2d 289 (8th Cir. 1972), cert. denied, 412 U.S. 931 (1973). See notes 107-11 supra and accompanying text.

133. See note 22 supra and accompanying text.

134. 470 F.2d at 301-02. For a similar observation, see Note, Substantive Review, supra note 6, at 189-90.

135. 439 F.2d 584 (D.C. Cir. 1971).

136. Federal Insecticide, Fungicide and Rodenticide Act, 7 U.S.C. § 135b(c) (1970).

137. 439 F.2d at 594.

138. Id.

139. Id. at 595.

anced the risks and benefits to reach a negative determination, the court held that it was improper to make such an assumption "in the absence of adequate explanation."[140] Therefore, the court remanded the decision to the agency to identify "the factors relevant" to a determination to suspend.[141] The purpose of such articulation was "to ensure that the administrative process itself will confine and control the exercise of discretion."[142] Under this approach judicial review fosters a rational use of discretion by requiring the agency to provide "reasoned decisions."[143] However, such an approach also preserves a large degree of freedom for the agency in setting its own standards under a statute and, presuming a traditional deference to agency determinations, leaves for the courts only the question of whether the interpretation reasonably follows from the statute.[144]

NEPA arguably presents a situation similar to that faced by the court in the *Ruckelshaus* case. Certainly NEPA requires federal agencies to develop the balancing and valuing process in the first instance and leaves them some discretion in doing so.[145] Consequently, courts simply may require an agency to articulate its standards for balancing and evaluating environmental factors, much as the court did in *Ruckelshaus*. But a review process which focuses primarily on agency articulation has limited application under NEPA. Cases wherein agency articulation alone is fostered usually are based on the agency's unique expertise and experience in the area and a legislative policy that places the development of a policy in one agency.[146] Under NEPA a legislative policy must be applied by all agencies and presumably with some consistency from one to another. Many of the agencies have neither the expertise nor experience in weighing environmental factors under NEPA;[147] moreover, in some cases, they have displayed a marked resistance to NEPA's requirements.[148] In *Ruckelshaus* the court recognizes the difficulty of valuing factors on both sides of the equation and the agency's sensitivity to crucial judgments.[149] Under NEPA the economic and technological factors usually are easily recognized and frequently represent substantial monetary sums, leaving the unquantified environmental factors dwarfed by comparison.[150] Agency inexperience and insensitivity are all too likely to mean that even "reasoned decisions," explaining the criteria used to arrive at the final judgment, may be little more than post-hoc rationalizations.[151]

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140. Id. at 596.

141. Id.

142. Id. at 598.

143. Id.

144. Once the agency rests its decision upon a valid statutory interpretation, the court must affirm the decision if it has a rational basis in law. NLRB v. Hearst Publications, Inc., 322 U.S. 111, 131 (1944).

145. Section 102(2)(B) of NEPA requires the agency to develop such processes in the first instance. See note 123 supra.

146. Compare NLRB v. Hearst Publications, Inc., 322 U.S. 111 (1944) with Federal Maritime Bd. v. Isbrandtsen Co., 356 U.S. 481 (1958).

147. Indeed, NEPA was an effort to stimulate the agencies to develop such experience and expertise. See, e.g., 115 Cong. Rec. 3698 (1969) (remarks of Senator Jackson).

148. See, e.g., Strohbehn, NEPA's Impact on Federal Decisionmaking: Examples of Noncompliance and Suggestions for Change, 4 Ecology L.Q. 93 (1974).

149.

> In the course of this and subsequent litigation, the Secretary has . . . resolved some questions of statutory intrepretation. . . . These interpretations all seem consistent with the statutory language and purpose. An important beginning has been made, and the task of formulating standards must not be abandoned now.

439 F.2d at 596-97.

150. Note, Cost-Benefit Analysis, supra note 61, at 1106-07.

151. Such post-hoc rationalizations were disapproved by the Supreme Court in Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 420 (1971).

C. Judicial Articulation

At the opposite extreme from agency articulation is judicial articulation of NEPA's substantive standards. *Citizens to Preserve Overton Park, Inc. v. Volpe*[152] is an example of this approach. The controversy in *Overton Park* evolved from the Secretary of Transportation's authorization of federal funds for the construction of a highway through a large and scenic park in Memphis. The plaintiffs alleged the authorization violated a federal statute which required the Secretary to deny funding for highways which crossed parklands unless no "feasible or prudent alternative" existed.[153] The Supreme Court declined to remand the agency decision to permit further articulation of the standards under which the Secretary decided to authorize funding.[154] Supported by the legislative history of the statute,[155] the Secretary argued that the statute required him to engage in "a wide-ranging balancing of competing interests" and to value these interests as he found appropriate.[156] The Court flatly rejected this arrogation of discretion. Instead, the Court found that there was "law to apply"[157] and the law required the Secretary to ignore both the costs of community disruption unless they reached "extraordinary magnitudes" and the technological problems of an alternative route unless they presented "unique" problems.[158] By so holding, the Court set the value of the parklands at the sum of the costs common to normal nonparkland routes, including such factors as community disruption, land condemnation, and modifications of the highway's design.[159] Although the Court purported to find support for this trade-off in a congressional determination, in fact the Court ignored the legislative history.[160]

Clearly NEPA is not so susceptible to the judicial valuing as that which took place under the statute construed in *Overton Park*. NEPA does not provide statutory ground in which the Court rooted its opinion. Similarly, NEPA covers the whole range of environmental values vis-à-vis a complete list of federal actions, such that a NEPA decision involves more variables than the simple highway-parkland trade-off dictated in *Overton Park*.[161] Under NEPA Congress expressed a general preference for environmental values while under the statute at issue in *Overton Park* Congress expressed a specific preference for parkland preservation over highway construction.

Yet to discard *Overton Park* as a precedent in NEPA cases is to overlook the role it creates for judicial articulation of the valuing process. *Overton Park* involved legislation which stated that a specific environmental amenity be given some value but provided only an ambiguous formula for determining when the costs of preservation exceed that value.[162] Rejecting the argument that the formula should be articulated by the agency alone, the Court found that in order to give the preference "any meaning" the courts must define the variables that limit the agency's discretion.[163] This choice must be explained to some degree by the unstated assumption that it would be ineffective to entrust parkland preservation solely to the discretion of the Secretary of Transportation.[164]

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152. 401 U.S. 402 (1971).

153. Department of Transportation Act § 4(f), 49 U.S.C. § 1653(f) (1970); Federal-Aid Highway Act § 18, 23 U.S.C. § 138 (1970).

154. 401 U.S. at 408-09.

155. Id. at 412 n.29.

156. Id. at 411.

157. Id. at 413.

158. Id. at 412-13.

159. See Note, *Citizens to Preserve Overton Park v. Volpe*: Environmental Law and the Scope of Judicial Review, 24 Stan. L. Rev. 1117, 1129 (1972) [hereinafter Note, *Overton Park*].

160. See The Supreme Court, 1970 Term, 85 Harv. L. Rev. 315, 323-25 (1971).

161. See Note, *Overton Park*, supra note 159, at 1131-33.

162. See id. at 1126-27.

163. "If the statutes are to have any meaning, the Secretary cannot approve the destruction of parkland unless he finds that alternative routes present unique problems." 401 U.S. at 413.

164. See Note, *Overton Park*, supra note 159, at 1126 n.56.

It is exactly this policy rationale that dictates a degree of judicial activism in reviewing NEPA decisions. Unless the courts themselves limit the agency's discretion, the congressional preference for environmental preservation is likely to have no meaning at all.

D. A Synthesis

The crucial issue in NEPA's substantive policy is the valuing of environmental amenities. The underlying problem is the failure of the market place to price these factors so that they may appear naturally in the balancing process.[165] If it cost the Secretary of Transportation an "ideal" price to use parklands to build highways, it would have been unnecessary for Congress to restrain the Secretary because he would have paid the price for such lands only in the most compelling circumstances. It would also have been unnecessary for the Court to set the price artificially in *Overton Park*. But it appears that Congress was dissatisfied with the present "costlessness" of parklands and by legislation changed that fact.

Economists state this proposition in the positive.[166] If there were no externalities such that everyone's preference for using parklands was demonstrable by a market price, then this would be the "efficient" price. The price is "efficient" because "there is no rearrangement of resources which can make anyone better off without making at least one other person worse off (where 'better off' and 'worse off' are defined in terms of each individual's evaluation of his own welfare)."[167] This oversimplified explanation leaves out many assumptions which explain how real world problems affect the theoretical search for the "efficient" solution.[168] However, it does express the ideal: an equilibrium where everyone's preference for environmental amenities is satisfied vis-à-vis their preference for all other items. The fact that Congress has enacted NEPA is an indication that Americans' preferences for environmental amenities have not been satisfied to the optimum degree.

Professor Posner has suggested in a recent book[169] that legal rules, to achieve an "efficient" solution,[170] should minimize transaction costs[171] and, if that still does not work,[172] the rules should be designed to mimic the market.[173] One of the ways of minimizing transaction costs in valuing environmental amenities is to categorize such factors in a protective scheme by congressional action.[174] However, by enacting NEPA Congress chose to increase transaction costs by requiring an EIS and to avoid any categorical

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165. See notes 76-82 supra and accompanying text.

166. See Note, Cost-Benefit Analysis, supra note 61, at 1098-101; Polinsky, supra note 77, at 1665-69.

167. Polinsky, supra note 77, at 1664.

168. In the competitive market paradigm, from which this explanation is derived, three important assumptions are made: (1) there are no transaction costs involved in marketplace exchanges; (2) people's preferences for goods are uninfluenced by the existence of market failures; and (3) there is no cost to the redistribution income. See Polinsky, supra note 77, at 1671-80. For an explanation of how the failure of these assumptions affects a NEPA cost-benefit analysis, see Note, Cost-Benefit Analysis, supra note 61, at 1106-11.

169. R. Posner, Economic Analysis of Law (1973).

170. See text accompanying note 164 supra.

171. Transaction costs may be thought of as the costs of coming to a mutually agreeable solution. Transaction costs in the real world are frequently high, especially in terms of environmental problems. EIS statements under NEPA reveal the scope of the transaction costs.

172.

> If after minimizing transaction costs through the law, they are not small enough to facilitate the working of the market, then nothing may be gained thereby.

Polinsky, supra note 77, at 1665 n.59.

173. For an explanation of what the phrase "mimic the market" means in terms of environmental amenities, see text accompanying notes 178-84 infra.

174. See Tribe, supra note 77, at 1346; Note, Cost-Benefit Analysis, supra note 61, at 1114-15.

schemes, at least at the congressional level. The cost of developing an EIS serves no useful function, however, if the information produced does not reveal people's preference for environmental amenities.[175] It is the assumption that preferences are not revealed or revealed inadequately,[176] that has led some legal commentators to call for a categorical protective scheme which at least minimizes transaction costs.[177]

On the other hand, an EIS sometimes can be translated into monetary values by economists, such as the value of the striped bass fish in the Consolidated Edison case.[178] Nevertheless, for reasons too complex for exposition here,[179] some economists believe that the resulting economic value will frequently underestimate people's preference for these goods.[180] This underestimation does not deny that the resulting quantification is "with some degree of accuracy" a measure of preferential value.[181] But it might be a reason for taking upper value estimates or even adding on a percentage increase to the resulting monetary sum.

Yet in many instances environmental factors cannot be quantified, as was also the case in the Consolidated Edison controversy.[182] In these situations, while qualitative discussions are helpful, they do not express a preference value and are easily ignored when compared with a quantified value.[183] In evaluating such environmental factors, reaching an "efficient" solution requires some agreed-upon compromise, such as assigning a categorical value which may be collectively revised later if it does not accurately reflect people's preferences or if their preferences change.[184]

Since NEPA may be viewed as a collective objection to marketplace failures, it is sensible to look to marketplace solutions in implementing it.[185] As the foregoing discussion pointed out, such an approach calls for a reliance upon "quantified" environmental values and a consistent approach to the valuing of nonquantifiable factors. Translating this back into the problem of court-agency articulation, it is apparent that a greater degree of judicial deference is owed to agency valuations based upon economic extrapolations than to valuations that are "unquantified." The problem with unquantifiable factors is that they involve no expertise and, in order eventually to arrive at an efficient result, a degree of uniformity among agencies is required which only judicial review may provide.[186]

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175. The EIS produces information only. Until a judgment is made as to how much we prefer the underlying amenities that the information reveals will be lost, the information is meaningless.

176. See text accompanying notes 178-84 infra.

177. See note 174 supra and accompanying text.

178. See note 89 supra and accompanying text.

179. These reasons have to do with the failure of the world to conform to the assumptions of the competitive market paradigm. See note 168 supra.

180. See, e.g., E. Mishan, Cost-Benefit Analysis, 323-24 (1967); Note, Cost-Benefit Analysis, supra note 61, at 1107.

181. Note, Cost-Benefit Analysis, supra note 61, at 1107 n.105.

182. See note 89 supra and accompanying text.

183. See Note, Cost-Benefit Analysis, supra note 61, at 1106-07.

184. See Polinsky, supra note 77, at 1671-75. Professor Polinsky suggests that for many "unquantifiable" values a compromise solution, like a decision to abide by majority voting, is necessary to achieve an efficient solution. However, what is necessary is a reasonably valid compromise solution. The commentators seem to assume that the *only* valid compromise is one imposed by Congress. See note 174 supra and accompanying text. However, if the actual choice for the compromise formulator is between agencies and courts, courts seem to be the more valid forum for resolving issues of broad national policy. Cf. Schwartz, Legal Restriction of Competition in Regulated Industries: An Abdication of Judicial Responsibility, 67 Harv. L. Rev. 436, 471-75 (1954). For an analysis of the job the agencies have done in developing compromise solutions, see Note, Cost-Benefit Analysis, supra note 61, at 1103-05.

185. For the meaning of marketplace solutions, see text accompanying notes 178-84 supra.

186. It may seem inappropriate to suggest that courts take an active role in reviewing the value of unquantifiable factors. Yet the courts have grappled with the problem of assessing the values of

On the other hand, principles of administrative law mandate clear limits on judicial activism under NEPA.[187] To the extent that agency expertise and experience are reflected in a responsible treatment of the facts and are in accord with a realization of statutory goals, agency decisions should be treated with deference by the courts.[188] Moreover, judicial activism which usurps agency judgments is both legally unwarranted and ineffective in fostering agency compliance. The purpose of judicial review should be to articulate the balancing requirement and the criteria for environmental valuing in principles which the agencies may then apply.

From the perspective of administrative law and NEPA's legislative history, there is nevertheless one class of cases where the courts clearly should engage in active review. Where the judgment of the responsible agency and the judgment of environmentally oriented agencies differ, it is appropriate for a court to resolve the conflict. While the determinations of the responsible agency should be accorded great deference in such a situation, as Justice Douglas has recently held, when an environmentally oriented agen- disagrees, "[t]hat agency determination [also] is entitled to great weight."[189] Although it would be statutorily improper for the court to allow the objections of environmentally concerned agencies to determine the issue of substantive compliance with NEPA,[190] the Act's legislative history reveals that Congress believed such objections would influence the responsible agency's determinations.[191] Therefore it would be consistent with congressional expectations for a court to resolve these conflicts by carefully reviewing substantive compliance with NEPA. Concentrating on the valuing judgments, a court's review would be delimited by the differing appraisals of the agencies embodied in the interagency comments contained in the final EIS.[192] Substantive review would insure that the disclosure requirements imposed by Congress assist the agencies in arriving at a mutually agreeable compromise which would, in turn, promote an economically efficient valuing process.[193]

V. CONCLUSION

The foregoing discussion has explored at some length the need for and articulation of NEPA's substantive policy. Analysis of the cases and criticism reveals that to imple-

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some environmental benefits in the analogous area of the public trust doctrine. See Sax, The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention, 68 Mich. L. Rev. (1970). In the leading case of Illinois Central R.R. v. Illinois, 146 U.S. 387 (1892), the Supreme Court invalidated a grant of public harbor lands by the Illinois legislature. The Court relied upon common law tradition which placed a high value on the preservation of free access to navigable waterways. Id. at 435-37. The Court recognized the usefulness of permitting private development of harbor lands. Yet it distinguished this excessive grant from the many previous valid grants on the grounds that this grant would deprive the vast majority of residents of uninhibited access to the waterways without compensating benefits. Id. at 454-55. The variables that were within the common law tradition applied by the Court in *Illinois Central* have been subsumed, to some degree, under the broad goals of NEPA. However, as with *Illinois Central*, NEPA's variables must be given concrete application before their meaning is clear.

187. Leventhal, supra note 8, at 511-12.

188. The decision should be upheld where it is "the product of administrative experience, appreciation of the complexities of the problem, realization of the statutory policies, and responsible treatment of the uncontested facts." SEC v. Chenery Corp., 332 U.S. 194, 209 (1947).

189. Warm Springs Dam Task Force v. Gribble, 417 U.S. 1301, 1310 (Douglas, Circuit Justice, 1974).

190. Congress did not choose to make either the Council on Environmental Quality or the Environmental Protection Agency the environmental superagency. See Leventhal, supra note 8, at 516.

191. See note 14 supra and accompanying text.

192. See note 15 supra and accompanying text.

193. See text accompanying notes 182-84 supra.

ment properly even NEPA's procedural duties both the agencies and the courts must be able to articulate the substantive judgments called for by NEPA. For the agencies the alternative to formulating such value judgments is to explore all environmental factors and all alternatives; as the NEPA critics point out with some accuracy, however, such an exhaustive investigation is unduly burdensome if not impossible. The alternative for the courts is to gauge agency compliance by some standard unrelated to the purpose of preserving environmental values, such as whether the agency has undertaken its investigation in good faith. While such a standard might make compliance with NEPA's duties more manageable for the agencies, it would not insure that important environmental benefits are included in the agency decision-making calculus.

The discussion has also explored the current problems experienced when the substantive mandate of NEPA is applied in its nascent condition. The Consolidated Edison case showed that where an agency makes an effort to comply with NEPA's substantive mandate it does not necessarily deal with the central issue of valuing environmental factors. On the other hand, the courts, which have the power to focus the attention of the agencies on this issue, are distracted by the preliminary question of whether they should utilize this power. As a matter of law and policy it is clear that the courts should engage in a limited review of substantive compliance with NEPA. More importantly, an independent review of such judgments is called for in some circumstances. Recognizing that an independent review of all agency substantive judgments is impractical and runs counter to traditional notions of judicial deference does not require that all agency decisions should be exempted from review or given a limited review. Where two agencies disagree about the value of environmental factors (and therefore about whether a particular project should proceed), the appropriate forum for resolving the dispute is the courts. NEPA's interagency review process requires both the lead agency and one or more environmental protection agencies to interpret the Act's substantive mandate and, where the interpretations result in differing value judgments, both value judgments are entitled to equal weight. It is the role of the courts to resolve such conflicting interpretations in an independent review. Such review will insure that the values utilized are in accord with NEPA's substantive goals and that these goals are applied as variables to arrive at the "appropriate" value.

The articulation of NEPA's variables and their application to specific environmental factors will be difficult at first both for the agencies and the courts. Experience may alleviate the difficulty to some degree, but the underlying problem will remain—the costlessness of environmental factors in the marketplace. Nevertheless Congress has directed that these factors be given some preferential value in agency decision-making. The economic analysis in the foregoing discussion has shown that it is necessary for the system to reach only some compromise solution. The consistency inherent in such a solution cannot be achieved without some degree of judicial review of the valuing judgments. The compromise solution thus worked out by the courts and the agencies then may become, perhaps with the assistance of some congressional adjustments, a satisfactory solution.

Recognizing the need for a consistent compromise rather than chaotic judgments does not make the problem any more tractable; it simply clarifies the aim. The process of giving value to environmental factors will always seem out of line with the economic reality to which judges, administrators and the public are accustomed. Indeed, the current reluctance of the courts to review substantive decisions under NEPA may reflect the difficulty of viewing the valuing judgments as the results of a process with which the courts are capable of dealing. Traditional forms of logic cannot determine whether the value selected is "good" or "bad." The choice selected can only be evaluated in the long run by experiencing the consequences.[194] The judicial process is not naturally

194. For an explanation of how the means must be experienced before the ends are known, see Tribe, supra note 77, at 1338-46.

suited to a process in which the selection of the means—the valuing judgment—must be undertaken while the end to be achieved—the efficient solution—is at best obscure. In this sense, the reluctance of the courts to become involved in reviewing the application of NEPA's substantive mandate to raw facts may be understandable.[195]

NEPA calls for the difficult independent judicial review only where conflicting value judgments are presented by two agencies both of which are responsible for interpreting the Act's substantive mandate. In this context the agency judgments themselves should articulate the appropriate calculus of variables necessary to realize NEPA's goals. In such situations the courts will be in the more comfortable position of reconciling competing formulations of the variables rather than having to work them out independently from the technical findings reported in the EIS. Independent judicial review in these situations is essential however, since it will foster articulation of the valuing judgments and insure that a compromise solution is reached.

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195. Cf. Note, Cost-Benefit Analysis, supra note 61, at 1112-13. The interagency comments in the EIS now focus on the factual content and the adequacy of the lead agency's investigation of environmental factors. But the adequacy judgments frequently camouflage differing value judgments. The review process could easily accommodate the necessary shift in emphasis. See generally Warm Springs Dam Task Force v. Gribble, 417 U.S. 1301 (Douglas, Circuit Justice, 1974).