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ALTERNATIVES TO ADMINISTRATIVE TRIAL-TYPE HEARINGS FOR RESOLVING COMPLEX SCIENTIFIC, ECONOMIC, AND SOCIAL ISSUES

Barry B. Boyer*

I. INTRODUCTION

WITHIN the current wave of criticism directed at the federal administrative agencies, a traditional theme of administrative law is frequently echoed: agencies have allowed their proceedings to become over-judicialized, and ought to engage in more rule-making to avoid the slow, cumbersome, and repetitious process of case-by-case adjudication.¹ As if to confirm the urgency of these calls for greater use of the rule-making power, examples occasionally surface which suggest that trial-type proceedings may collapse under their

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This Article originated as a staff report to the Chairman of the Administrative Conference of the United States, and the author is indebted to the staff, members, and consultants of the Administrative Conference for their generous help in commenting on prior drafts. As usual, however, responsibility for this Article is solely the author's, and the views expressed herein do not necessarily reflect those of either the Administrative Conference or the Department of Justice.

1. See, e.g., THE PRESIDENT'S ADVISORY COUNCIL ON EXECUTIVE ORGANIZATION, A NEW REGULATORY FRAMEWORK: REPORT ON SELECTED INDEPENDENT REGULATORY AGENCIES 38-39 (1971) [hereinafter *ASH COUNCIL REPORT*]:

The legalistic environment resulting from commission predisposition to case-by-case analysis contributes to a passive, overly judicial approach in regulation. Further, since the commissions are constantly absorbed with cases that are presented to them, they lack the time and opportunity to establish and further regulatory priorities. . . . Agency staff has frequently become occupied with legalistic solutions to problems to the exclusion or deemphasis of other valuable input from economists, engineers, environmentalists, and persons trained in related disciplines. Equally important is the fact that the industry and the public in general are required to shoulder excessive costs in the search for clear expression of regulatory policy

Similarly, one of the "Nader Reports," R. FELLMETH, THE INTERSTATE COMMERCE COMMISSION 11-12 (1970), charges that the ICC's reliance on trial-type proceedings "provides a legal arena for disputes among business interests Two clear examples indicating whom the ICC almost exclusively serves are its failure to provide for a consumer or public interest representative in adjudications and its inadequate use of the ICC rule-making function." See also Letter from Philip Elman to Sen. Edward M. Kennedy, in SUBCOMM. ON ADMINISTRATIVE PRACTICE & PROCEDURE OF THE SENATE COMM. ON THE JUDICIARY, RESPONSES TO QUESTIONNAIRE ON CITIZEN INVOLVEMENT AND RESPONSIVE AGENCY DECISION-MAKING, 91st CONG., 1st Sess. 122, 166-70 (Comm. Print, 1969).

Each of these analyses finds somewhat different causes for the failure to use rule-making powers. The *Ash Council Report* attributes overjudicialization to the collegial structure of regulatory commissions, *ASH COUNCIL REPORT, supra*, at 34-35, while Fellmeth suggests that it is a result of the agency's captivity by the regulated industry, R. FELLMETH, *supra*, at 13, and Elman indicates that doctrinal misunderstandings and timidity on the part of the commissioners may be to blame, P. Elman, *supra*, at 168.

own weight and force some agencies to resort to rule-making if they are to accomplish anything at all. Thus, the Interstate Commerce Commission has announced that a massive rail-merger case has become so unmanageable that the hearing examiner's initial decision must be issued in multiple volumes,² and an experienced commentator has concluded that the Atomic Energy Commission's duty to consider the environmental impact of nuclear reactors in trial-type hearings³ places AEC licensing boards "in an impossible position" and may well prove "undoable."⁴ At the same time, however, those who may be adversely affected by agency rule-making action often prefer what they conceive to be the greater procedural safeguards of trial-type hearings,⁵ and usually can find support in Congress;⁶

2. Interstate Commerce Commission News Release, Sept. 1, 1971, at 1. The release describes the elephantine record compiled before the examiner in the following superlatives:

The [Rock Island] case, embracing some 14 separate applications and various cross petitions for inclusion, is the largest and most complex unification in the Commission's history. The complete record consists of almost 50,000 pages of transcript of testimony developed at hearings held throughout the United States, over 1,700 exhibits aggregating about 100,000 pages including direct testimony submitted in the form of written, verified statements, and almost 5,500 pages devoted to the writing of briefs. Petitions and various pleadings too numerous to mention have been considered and disposed of by the Commission throughout the course of the proceeding. Every railroad of importance lying west of the Mississippi River is involved in these proceedings.

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

4. Murphy, *The National Environmental Policy Act and the Licensing Process: Magna Carta or Coup de Grace?*, April 7, 1972, at 18, 2 (report to the Committee on Licenses and Authorizations, Administrative Conference of the United States [ACUS]), on file with the *Michigan Law Review*. The AEC's Director of Regulation has acknowledged the need for more precise standards and guides. Remarks of L. Manning Muntzing, 2 AEC News Releases No. 47, at 15, 16 (Nov. 24, 1971). See generally Berg, Boyer & Johnston, *Current Problems in AEC Reactor Licensing*, April 19, 1972, at 11-20 (report to the Chairman, ACUS), on file with the *Michigan Law Review*.

5. See, e.g., Hamilton, *Rulemaking on a Record by the Food and Drug Administration*, Sept. 23, 1971, (report to the Committee on Rulemaking, ACUS), on file with the *Michigan Law Review*:

[One] justification for the evidentiary hearing [in FDA rule-making proceedings] has been put forth by Mr. Austern, a leading member of the FDA bar. He suggests that section 701(e) [of the Federal Food, Drug, and Cosmetic Act, 21 U.S.C. § 371(e) (1970)] proceeds on the theory that "he who regulates ought to appear publicly if there is a challenge, and put on the table, subject to cross-examination, the facts on which he grounds his proposal." . . . The advantage of the proceeding is to give the industry on whom the proposed rules are being imposed, an opportunity, by cross-examination, to point out to the agency that the factual assumptions on which the agency is proceeding are erroneous.

Id. at 38-39, quoting Austern, *Food Standards: The Balance Between Certainty and Innovation*, 24 FOOD DRUG COSM. L.J. 440 (1969).

6. For example, the lack of "procedural safeguards" such as cross-examination has been a recurrent theme in the recent debates over legislation designed to grant the Federal Trade Commission power to issue substantive trade regulation rules defining unfair or deceptive acts or practices. See, e.g., CONG. REC. S.17847 (daily ed. Nov. 8, 1971) (remarks of Senator Hruska).

indeed, a recent study concluded that, with very few exceptions, the major grants of rule-making authority made by Congress within the past decade have contained procedural requirements that go beyond the notice-and-comment practice prescribed for informal rule-making by the Administrative Procedure Act (APA).⁷ Perhaps in recognition of these practical pressures, some commentators have urged that the distinction between adjudication and rule-making can impede analysis⁸ and that it may be useful in some areas to acknowledge hybrid forms of procedure incorporating various elements of both adjudication and rule-making, and other procedural techniques as well.⁹ Similarly, some of the current literature on environmental law contains references to "generic" and "ad hoc" or "particularized" proceedings, terms which seem designed to avoid the procedural im-

7. Act of June 11, 1946, ch. 324, 60 Stat. 237, as amended, 5 U.S.C. §§ 551-59, 701-06 (1970). See Hamilton, *Procedures for the Adoption of Rules of General Applicability: The Need for Procedural Innovation in Administrative Rulemaking*, 60 CALIF. L. REV. 1276, 1277 (1972).

8. E.g., Robinson, *The Making of Administrative Policy: Another Look at Rule-making and Adjudication and Administrative Procedure Reform*, 118 U. PA. L. REV. 485, 536 (1970):

It is time to ask whether the approach of the Administrative Procedure Act classifying all administrative procedures as either adjudication or rulemaking, and in attempting to prescribe procedures in accordance with this classification, is not a hindrance to adopting administrative procedures more closely tailored to the needs of different agencies and distinctive agency functions. It is true, of course, that in setting down certain basic procedural standards for rulemaking and adjudication, the APA does not mandate detailed procedures. It does not necessarily preclude reasonable flexibility by an agency in adapting rulemaking or adjudicatory procedures to the variable needs of the agency and the interests of affected private parties. . . .

. . . [However,] the fact remains that the present approach of the APA and the individual regulatory statutes fosters a general tendency to adopt doctrinal distinctions which are not conducive to a pragmatic use of either rulemaking or adjudicative techniques.

Cf. *City of Chicago v. FPC*, 29 Ad. L.2d 944, 953 (D.C. Cir. 1971):

In many cases, it is unnecessary and even unwise to classify a given proceeding as either adjudicatory or rulemaking. The line between the two is frequently a thin one and resolution of a given problem will rarely turn wholly on whether the proceeding is placed in one category or the other. Moreover, obsession with attempts to place agency action in the proper category may often obscure the real issue which divides the parties and requires our resolution.

9. E.g., Murphy, *supra* note 4, at 42-50; Clagett, *Informal Action—Adjudication—Rule Making: Some Recent Developments in Federal Administrative Law*, 1971 DUKE L.J. 51, 70:

[T]here is no statutory reason why an agency, even in a proceeding labeled "rule making," may not incorporate some or all of the procedures characteristic to an adjudication and vice versa. . . . [I]n at least a significant number of instances agencies should thus exercise their discretion to fashion hybrid or conglomerate procedural devices which would utilize those characteristics of both adjudication and rule making that are most appropriate in light of the circumstances and issues of the particular case. It is submitted, further, that, like any other exercise of agency discretion, an agency's decision whether to employ procedural devices not uniformly required by statute is subject to judicial review for abuse of discretion and should be set aside when such abuse is found.

plications of labeling a certain form of agency activity as either adjudication or rule-making.¹⁰ Since the problems and uncertainties surrounding the administrative uses of trial-type proceedings seem substantial, it may be helpful to take a fresh look at both the kinds of issues that seem to be causing the most difficulties in the administrative process and the attributes of the trial-type hearing in comparison to other forms of decision-making.

II. ADJUDICATION AS A DECISION-MAKING TECHNIQUE

A. *Development of the Doctrines*

The propriety of a division of formal administrative proceedings into adjudication and rule-making was apparently not questioned at the time the Administrative Procedure Act was adopted,¹¹ although there was some difficulty in defining the proper sphere of each type of proceeding.¹² A major advance over the practice of classifying an entire proceeding as either adjudication or rule-making¹³ came through Professor Davis' development of the more functional concepts of legislative and adjudicative facts. In his analysis, trial-type

10. See, e.g., Special Committee on Electric Power and the Environment of the Association of the Bar of the City of New York, *Electricity and the Environment: The Reform of Legal Institutions VIII-24 to VIII-25* (1972); Murphy, *supra* note 4, at 32-35.

11. See, e.g., *Hearings on Administrative Procedure Before the House Comm. on the Judiciary*, 79th Cong., 1st Sess. 29 (1945) (testimony of Carl McFarland, Chairman of the ABA Committee on Administrative Law): "There are two kinds of operations as all studies have indicated and any practitioner knows: Number 1, the issuance of a general regulation, which is similar to a statute; Number 2, the matter of an adjudication, similar to the judgment of a court."

12. The APA defines adjudication as "agency process for the formulation of an order," and provides that "'order' means the whole or a part of a final disposition, whether affirmative, negative, injunctive, or declaratory in form, of an agency in a matter other than rule making but including licensing." 5 U.S.C. § 551 (6)-(7) (1970). Cf. SENATE COMM. ON THE JUDICIARY, 79th CONG., 2d Sess., *ADMINISTRATIVE PROCEDURE ACT: LEGISLATIVE HISTORY* 14 (1946): "'Adjudication' has not been defined generally in statutes, except by implication or reference to particular subjects and orders. However, since there are only two basic types of administrative justice—rule making and adjudication—the words 'other than rule making' serve to make the essential distinction."

The background of these definitional sections is described in Bernstein, *The NLRB's Adjudication-Rule Making Dilemma Under the Administrative Procedure Act*, 79 *YALE L.J.* 571, 615 (1970):

The legislative history appears to demonstrate that while many changes in APA drafts attempted to distinguish between rule making and adjudication, Congress simply did not resolve the difficulties posed by the substantial area of overlap between the two. Agencies were expected to decide policy issues of future significance to non-parties in adjudication, but rules of general applicability and future effect were to be formulated in rule making (even if the parties to the proceeding were named and few in number). The *terms* used to define the two simply do not provide the means for distinguishing one from the other.

13. See K. DAVIS, *ADMINISTRATIVE LAW TREATISE* § 7.03, at 320 (Supp. 1970) [hereinafter K. DAVIS SUPP.]: "Probably the earlier tendency of some courts to decide whether trial-type hearings are required by characterizing whole proceedings as either 'judicial' or 'nonjudicial' is declining, as it should."

proceedings are useful only for resolving questions of adjudicative fact "about the parties and their activities, businesses and properties," such as "who did what, where, when, how, why, with what motive or intent"; legislative facts, on the other hand, "do not usually concern the immediate parties but are general facts which help the tribunal decide questions of law and policy and discretion" and therefore are best resolved on the basis of written submissions or oral arguments, the primary procedural techniques of rule-making.¹⁴

While the distinction between legislative and adjudicative facts has greatly improved procedural analysis, some conceptual difficulties have persisted. As in most distinctions, there is admittedly a "borderland" where the principle has "little or no utility."¹⁵ Moreover, critics have contended that "[g]eneral or legislative facts consist of a host of particulars,"¹⁶ and consequently it may be possible to justify any procedural result by stating the relevant issues either broadly or narrowly.¹⁷ Courts applying the distinction often emphasize factors other than the generality or specificity of the factual questions, such as whether the substantive issue is "important"¹⁸ or technically complex,¹⁹ and whether the procedures used by the

14. 1 K. DAVIS, *ADMINISTRATIVE LAW TREATISE* § 7.02, at 413 (1958) [hereinafter K. DAVIS TREATISE]. See also Davis, *The Requirement of a Trial-Type Hearing*, 70 HARV. L. REV. 193 (1956).

15. 1 K. DAVIS TREATISE, *supra* note 14, § 7.02, at 414. Davis provides the following illustration of this "borderland":

An example of a case in which the distinction between adjudicative and legislative facts is unhelpful is *New York Water Service Corp. v. Water Power & Control Commission* [283 N.Y. 23, 27 N.E.2d 221 (1940)]. A private water company applied for authorization to use certain underground water for designated purposes. The Commission denied the application, relying upon a report of its executive engineer about underground water conditions in the area. The court approved the reliance But the court set aside the order for lack of specific findings, and declared that the company had not had "an adequate opportunity either to test by cross-examination the basis of the executive engineer's conclusions or to offer evidence material to those conclusions"

Id., quoting 283 N.Y. at 31, 27 N.E.2d at 224. For a further discussion of the difficulties of classifying borderland facts as either legislative or adjudicative in the context of official notice, see K. DAVIS SUPP., *supra* note 13, § 15.00, at 520-21 n.43, § 15.03, at 529.

16. Fuchs, *Agency Development of Policy Through Rule-Making*, 59 NW. U. L. REV. 781, 800 (1965).

17. See Robinson, *supra* note 8, at 521-22. Cf. Fuchs, *supra* note 16, at 801: "There is, in other words, an almost limitless range of possibilities about whether to cause the necessary determinations under a statute to be made in proceedings primarily designed to ascertain particular facts or fashioned to gather more general data."

18. See, e.g., *National Air Carrier Assn. v. CAB*, 436 F.2d 185, 191-92 (D.C. Cir. 1970); *Marine Space Enclosures, Inc. v. FMC*, 420 F.2d 577, 584-86 (D.C. Cir. 1969).

19. See, e.g., *National Air Carrier Assn. v. CAB*, 436 F.2d 185, 191-92 (D.C. Cir. 1970); *Marine Space Enclosures, Inc. v. FMC*, 420 F.2d 577, 589 n.36 (D.C. Cir. 1969); *American Airlines, Inc. v. CAB*, 359 F.2d 624, 633 (D.C. Cir.), *cert. denied*, 385 U.S. 843 (1966).

agency comport with the court's notions of fairness.²⁰ Conversely, the agency's need to expedite proceedings or other countervailing considerations may justify restrictions on some of the procedural rights which parties would otherwise enjoy in evidentiary hearings.²¹ Finally, wholly apart from the question of what procedural rights a participant in a proceeding may claim, it has long been asserted that there are situations in which it would be desirable to use trial-type procedures for resolving issues of legislative fact.²² In light of these seemingly substantial areas in which the proper choice of procedural techniques remains open to dispute, it is useful to compare the attributes and functions of trial-type hearings to other decision-making procedures available to the administrative agencies.

B. The "Polycentric" Problem

Before examining procedural techniques, it is necessary to attempt a more precise definition of the kinds of complex problems that are currently creating these great difficulties in administrative decision-making. One useful approach, developed by Lon Fuller, is the concept of the "polycentric" ("many-centered") problem. As

20. See, e.g., *Walter Holm & Co. v. Hardin*, 449 F.2d 1009, 1016 (D.C. Cir. 1971); *American Airlines, Inc. v. CAB*, 359 F.2d 624, 632 (D.C. Cir.), cert. denied, 385 U.S. 843 (1966). See also Transcript, Seventh Plenary Session, ACUS, June 9, 1972, at 214-15 (remarks of Judge Leventhal).

21. See, e.g., *National Air Carrier Assn. v. CAB*, 436 F.2d 185, 192-94 (D.C. Cir. 1970); *Pennsylvania Gas & Water Co. v. FPC*, 427 F.2d 568, 576 (D.C. Cir. 1970); *Marine Space Enclosures, Inc., v. FMC*, 420 F.2d 577, 589-90 (D.C. Cir. 1969). 1 K. DAVIS TREATISE, *supra* note 13, §§ 7.08-.09. Cf. K. DAVIS SUPP., *supra* note 14, § 7.16, at 355.

22. E.g., 1 K. DAVIS TREATISE, *supra* note 14, § 7.06, at 430-31: "[L]ack of legal requirement does not mean that the method of trial ought never to be used to resolve issues of legislative fact. Even when no legal right to a trial exists, a trial may still be appropriate. The question of whether to use the method of trial for legislative facts is one of convenience, not one of legal right."

Similar thoughts were expressed in the 1941 Attorney General's Report:

Rule-making proceedings do occur . . . in which an adversary element is present. It may be clear in advance which interests will benefit and which will suffer if proposed regulations are issued. . . . The content of the regulations when issued may be definite and the consequences of non-compliance severe, such as the loss of the right to do business. Under these circumstances it may be desirable to let affected parties treat the rule-making proceedings as adversary, so that all the information, conclusions, and arguments submitted to the agency may be publicly disclosed to opposing interests which may answer, explain, or rebut. . . .

The application of the procedures of a judicial trial to administrative rule-making is limited, however, by the distinctive characteristics of rule-making proceedings. The issues are normally complex and numerous; the parties may be diverse and not alignable into classes; the outcome will involve a judgment concerning the consequences of rules to be prescribed for the future and a discretion in devising measures to effectuate the policies of the statute. . . .

No general statement of the types of rule-making in which adversary hearings should be used seems possible.

ATTORNEY GENERAL'S COMMITTEE ON ADMINISTRATIVE PROCEDURE, FINAL REPORT, S. DOC. No. 8, 77th Cong., 1st Sess. 108-10 (1941).

described by Fuller, the polycentric issue is characterized by a large number of possible results and by the fact that many interests or groups will be affected by any solution adopted;²³ thus, each potential solution will have complex and unique ramifications. In graphic terms, the polycentric controversy can be visualized as a spider web, since "[a] pull on one strand will distribute tensions after a complicated pattern throughout the web as a whole. . . . [E]ach crossing of strands is a distinct center for distributing tension."²⁴ Decisions of this kind can be considered basically economic since they involve trade-offs affecting the allocation of scarce resources. Because the number of relevant variables is large and because this type of decision requires prediction or "planning,"²⁵ the decision-making process should provide input from scientists in technical or behavioral disciplines that have developed techniques for manipulating multiple variables and predicting future occurrences or behavior.

Perhaps the clearest example of problems that seem "polycentric" can be found in the field of environmental protection.

23. Fuller, *The Forms and Limits of Adjudication* 36 (1959) (unpublished article prepared for the Roundtable on Jurisprudence, Association of American Law Schools), on file with the *Michigan Law Review* [hereinafter Fuller on Adjudication]:

Suppose in a socialist regime it were decided to have all wages and prices set by courts which would proceed after the usual forms of adjudication. . . . [T]he forms of adjudication cannot encompass and take into account the complex repercussions that may result from any change in prices or wages. A rise in the price of aluminum may affect in varying degrees the demand for, and therefore the proper price of, thirty kinds of steel, twenty kinds of plastics, an infinity of woods, other metals, etc. Each of these separate effects may have its own complex repercussions in the economy. In such a case it is simply impossible to afford each affected party a meaningful participation through proofs and arguments. It is a matter of capital importance to note that it is not merely a question of the huge number of possibly affected parties, significant as that aspect . . . may be. A more fundamental point is that each of the various forms that an award might take (say a three cent increase per pound, a four cent increase, a five cent increase, etc.) could have a different set of repercussions and might require in each instance a redefinition of the "parties affected."

24. *Id.* See also Jowell, *The Limits of the Public Hearing as a Tool of Public Planning*, 21 *AD. L. REV.* 123, 147-52 (1969).

25. In Reich, *The Law of the Planned Society*, 75 *YALE L.J.* 1227, 1231-32 (1966), administrative control is divided into three general categories: (1) regulation, or the enforcement of prohibitions on specified conduct; (2) allocation, or the apportionment of a scarce resource such as the broadcast spectrum; and (3) planning, as in the FPC's responsibility to assure that hydroelectric projects are consistent with a comprehensive plan for the development of a river basin. Reich's thesis is that administrative legislation is heavily weighed in favor of the regulatory approach, particularly in light of its reliance on adjudication as a decision-making technique, and that as a result planning must be performed in an ad hoc, sub rosa fashion. It should be noted, however, that agency activity which is purely regulatory in nature can have a substantial "planning" impact; for example, agency enforcement of low tolerances for the discharge of pollutants will cause the regulated industry to internalize certain costs, thereby affecting decisions on resource allocation which may have broad-ranging social effects. Cf. Note, *The Cost-Internalization Case for Class Actions*, 21 *STAN. L. REV.* 383 (1969). In other words, problems consigned to regulation can be just as polycentric as issues which are entrusted to a planning process.

Thus, the question of whether water pollution in a particular stream should be wholly or partially abated raises a host of subsidiary issues affecting a variety of interests which include the profit interest of management and stockholders in companies doing business in the area; the health, employment, and taxation concerns of the local populace; the recreational, scenic, or ecological value of the watershed to the region or to the country as a whole; the probable impact on consumers of goods and services produced in the area; and the effect of pollution abatement on broad national goals such as increasing gross national product, fostering competition among companies trading in the same market, and maintaining a sound balance-of-payments position.²⁶ The agencies' task of accommodating these myriad conflicting interests under the National Environmental Policy Act²⁷ has been described by one court as a matter of determining what the "optimally beneficial action" would be in the particular circumstances.²⁸ Similar considerations are inherent in the question of what safety features and practices should be required of enterprises engaged in manufacturing automobiles or designing nuclear reactors or operating coal mines. Regulation of price and entry in certain industries²⁹ and the common requirement that agencies weigh the anticompetitive consequences of industry's activity against projected benefits³⁰ also affect wide varieties of interests, and make it necessary to choose among many possible solutions.

At this point it might be asked whether some problems are inherently and irreducibly polycentric, or, on the other hand, whether polycentric problems are simply situations in which standards of decision have not been fully formulated. On the theoretical level, it seems likely that most of the problems confronting ad-

26. See Sax & Conner, *Michigan's Environmental Protection Act of 1970: A Progress Report*, 70 MICH. L. REV. 1003 (1972).

27. 42 U.S.C. §§ 4321-47 (1970).

28. *Calvert Cliffs' Coordinating Comm. v. AEC*, 449 F.2d 1109, 1123 (D.C. Cir. 1971).

29. See Donahue, Book Review, 70 MICH. L. REV. 195 (1971).

30. See generally *City of Statesville v. AEC*, 441 F.2d 962, 986-87 (D.C. Cir. 1969) (Leventhal, J., concurring). The fact that this type of decision requires an effort to find an "optimal trade-off" similar to many environmental matters is illustrated by *National Air Carrier Assn. v. CAB*, 442 F.2d 862 (D.C. Cir. 1971), which involved CAB approval of a transatlantic air fare agreement allegedly containing anticompetitive features:

There is no single criterion, such as, for example, the failure to recover fully distributed costs, by which to measure conformity to antitrust principles. Rather, "the essential question, from an antitrust standpoint, is whether the existence of a market structure conducive to maximum feasible competition will be imperiled by approval of the agreement."

442 F.2d at 864.

ministrative agencies would prove capable of solution through application of general principles—if social-value preferences were sufficiently established so that the choice among conflicting policies applicable to a given matter were clear,³¹ and if the state of knowledge were sufficient to provide theoretical constructs that would adequately account for all relevant variables.³² When these conditions do not exist, however, the agency confronted with a polycentric problem must seek to find the optimal—or at least an acceptable—trade-off. Frequently, this task must be performed in the context of an administrative adjudication; yet trial-type procedure may well be inherently ill-suited to the job. The Supreme Court recently noted that “courts are of limited utility in examining difficult economic problems,”³³ and concluded that its antitrust rules establishing per se violations must be strictly observed:

If a decision is to be made to sacrifice competition in one portion of the economy for greater competition in another portion, this . . . is a decision which must be made by Congress and not by private forces or by the courts . . . [C]ourts are ill-equipped and ill-situated for such decisionmaking. To analyze, interpret, and evaluate the myriad of competing interests and the endless data that would surely

31. Cf. Lindblom, *The Science of “Muddling Through”*, in READINGS ON MODERN ORGANIZATIONS 154 (A. Etzioni ed. 1969) [hereinafter READINGS].

The idea that values should be clarified, and in advance of the examination of alternative policies, is appealing. . . . The first difficulty is that on many critical values or objectives, citizens disagree, congressmen disagree, and public administrators disagree. . . .

Administrators cannot escape these conflicts by ascertaining the majority's preference, for preferences have not been registered on most issues; indeed, there often *are* no preferences in the absence of public discussion sufficient to bring an issue to the attention of the electorate. Furthermore, there is a question of whether intensity of feeling should be considered as well as the number of persons preferring each alternative. . . .

Even when an administrator resolves to follow his own values as a criterion for decisions, he often will not know how to rank them when they conflict with one another, as they usually do.

Id. at 156-57 (emphasis original).

32. See E. MURPHY, *GOVERNING NATURE* 239 (1967):

[T]he physical and biological scientists have had a dubious view of such constraints as [environmental] quality standards. For years they insisted that the knowledge to set standards simply did not exist, because to get it would require a merging of expertise from engineering, meteorology, geology, zoology, bacteriology, chemistry, soils, and a much longer list of disciplines and technologies.

An example of an area in which the predominance of unique factors in each case makes the development of general standards extremely difficult is the siting of nuclear power plants. Each plant's safety and environmental impact depends upon the interaction of the plant's design features and the characteristics of the site; in addition, the complex physical reactions that could take place during various types of reactor accidents are the subject of scientific debate. See generally Berg, Boyer & Johnston, *supra* note 4, at 11-20. However, it still seems within the realm of theoretical possibility to produce mathematical and other models which would describe the physical processes in sufficient detail to permit establishment of comprehensive general rules.

33. *United States v. Topco Associates, Inc.*, 405 U.S. 596, 609 (1972).

be brought to bear on such decisions, and to make the delicate judgment on the relative values to society of competitive areas of the economy, the judgment of the elected representatives of the people is required.³⁴

Are these same considerations applicable when an administrative agency resolves polycentric controversies using procedures modeled on those of a court? Before attempting an answer, it is necessary to examine the attributes of adjudication in detail.

C. *Adjudication and Related Procedures*

A functional approach to defining the essential elements of the trial-type hearing is provided in Fuller's emphasis on the processes of adjudication:

[T]he distinguishing characteristic of adjudication lies in the fact that it confers on the affected party a peculiar form of participation in the decision, that of presenting proofs and reasoned arguments for a decision in his favor. Whatever heightens the significance of this participation lifts adjudication toward its optimum expression.³⁵

Presumably, this definition could be harmonized with Davis' approach, insofar as the "presentation of proofs"—through trial methods of testimony, cross-examination, and so on—was limited to adjudicative facts, and "reasoned argument" was confined to legislative facts and matters of law, policy, and discretion. The central features of adjudication described by Fuller, party participation and reasoned decision, serve to distinguish it from two closely related forms of decision-making.

The first related method may be described in terms of an investigatory or inquisitorial model. In one respect, this method is similar to adjudication; a decision is reached through a process of "reasoning"—that is, by applying general principles to particular facts. However, the investigatory model differs from Fuller's notion of pure adjudication in that the decision maker rather than the parties has control over whether a proceeding should be initiated, what issues should be decided, and what data and arguments should

34. 405 U.S. at 611-12. The Court's analysis seems consistent with Fuller's more theoretical approach. It is his hypothesis that polycentric issues are particularly unsuited for resolution through adjudicative procedures and that attempts to force these complex issues into the inappropriate judicial mold will result in either poor decisions or a compromising of the "proprieties of adjudication." He concludes that the adjudicator who is confronted with a polycentric problem often "'tries out' various solutions in post-hearing conferences, consults parties not represented at the hearings, guesses at facts not proved and not properly matters for anything like judicial notice." Fuller on Adjudication, *supra* note 23, at 43.

35. Fuller on Adjudication, *supra* note 23, at 11.

be used in support of the decision. There are several situations in which the investigatory model may be preferable to party control of the proceedings. For example, it may be necessary to use an investigatory process when reliance on adversary presentation creates undesirable consequences for the entire group affected by the decision because of the parties' inequality, or because of their disinterest in issues that should be important to the group; similarly, it may be desirable to diminish party control of the proceeding when "wise decision" requires special knowledge that would not be provided to the decision makers in the course of an adversary process.³⁶

Another third-party mechanism for resolving disputes is mediation or conciliation. Here, as in adjudication, the decisional process is characterized by party participation; the difference lies in the fact that the decision is not "reasoned" or based on the application of principles to facts in the same way that adjudication is. In Fuller's words, the "morality of mediation" is geared toward finding an "optimum settlement, a settlement in which each party gives up what he values less, in return for what he values more."³⁷ It has also been suggested that the emotional attitude of parties approaching decision is different in the two processes: "In the [mediation] context, 'bargain' and the emotive connotations of that word are evoked; in [adjudication], 'judgment' and the emotive connotations of that [term] come into play."³⁸

36. See Mentschikoff, *Commercial Arbitration*, 61 COLUM. L. REV. 846, 847-48 (1961).

A related decisional technique described by Professor Mentschikoff has been called "the umpire model":

This model in which typically a single person is normally entrusted to render a decision without the participation of the parties but usually at the instigation of one or both parties, is typified by four characteristics: (1) the dispute itself must be of relatively small dimension . . . ; (2) the standards or norms that are brought to bear by the umpire in making his decision have to be articulated with relative clarity and have to reflect with relative accuracy the group's feelings about the appropriate standards; (3) a desire for speedy settlement must be present; and (4) the relevant facts must be capable of personal ascertainment by the umpire.

Id. at 846. This description corresponds rather closely with some commentators' contentions that the administrative process can be made more efficient through greater reliance on tests, inspections, and investigations rather than trials. See, e.g., Gellhorn, *Administrative Procedure Reform: Hardy Perennial*, 48 A.B.A.J. 243 (1962). Obviously, these kinds of summary procedures are most useful in resolving problems of "mass justice," such as determining eligibility for grants or benefits, or making decisions in areas where scientific or technical standards are well established and thus beyond the scope of present concern.

37. Fuller, *Collective Bargaining and the Arbitrator*, 1963 WIS. L. REV. 3, 23. A similar formulation is the statement that mediation "typically gives each party less than he originally desired or felt was his due." Mentschikoff, *The Significance of Arbitration—A Preliminary Inquiry*, 17 LAW & CONTEMP. PROB. 698 (1952). See generally Fuller, *Mediation—Its Forms and Functions*, 44 S. CAL. L. REV. 305 (1971) [hereinafter Fuller, *Mediation*].

38. Mentschikoff, *supra* note 37, at 698 n.1.

In using this theoretical framework, it is important to remember that adjudication, investigation, and mediation are not mutually exclusive categories. A single procedural structure may contain elements of more than one model simultaneously. Thus, the familiar arbitration device of allowing each party to select one arbiter and then requiring these two to select a third "impartial" arbiter can be viewed as a hybrid of adjudication and mediation because presumably, the partisan stance of the party-selected arbiters will inject a "bargaining" element into what is normally a "reasoning" process of deciding a controversy by adjudication.³⁹ By the same token, a decision-making process can be designed to employ different models at different temporal stages of the proceeding. In the court action, for example, there will typically be a period of investigation, followed by settlement negotiations, and then by adjudication; the initiative at each of these stages lies with the parties in the adversary system, but the tribunal obviously plays some role at each stage through its supervision of discovery and prehearing conferences. In the administrative process, with its greater procedural flexibility and the possibility of casting the agency staff into a variety of roles, the range of possible permutations on the theoretical models is substantial.

Thus, it appears that administrative proceedings can diverge from "pure adjudication" by degrees and that analysis of agency decision-making processes can benefit from a more detailed focus on the various attributes of the adjudicatory model. In general, the attributes of adjudication can be subdivided for analytic purposes into four broad categories—the characteristics of the tribunal, rights of the parties to participate through procedural devices, rationality of the decision, and reviewability—all of which serve to add some content to Fuller's main criteria of party participation and reasoned decision.

1. *Characteristics of the Tribunal*

The primary quality of an adjudicator must be impartiality, for bias or prejudice by the decision maker would seriously undercut, if not obliterate, both the rational and the participatory aspects of adjudication. The fundamental importance of this principle is

39. When arbitration is conducted not by party-selected arbitrators but instead by decision makers furnished by some neutral body such as the American Arbitration Association, the "reasoning" element is correspondingly enhanced. Even in this situation, however, a "bargaining" element is encouraged since the arbiter can simply issue an award without articulating any rationale for it. Thus, arbitration countenances a "split-the-difference" approach, whereas the more rationalized process of court adjudication discourages compromise verdicts.

illustrated by the Supreme Court's holding that arbitrators acting under the United States Arbitration Act,⁴⁰ like the judges of Article III courts, must be disqualified when they appear to have the slightest pecuniary interest in the outcome: "any tribunal permitted by law to try cases and controversies not only must be unbiased but also must avoid even the appearance of bias."⁴¹ Indeed, the Court concluded that "we should, if anything, be even more scrupulous to safeguard the impartiality of arbitrators than judges, since the former have completely free rein to decide the law as well as the facts and are not subject to appellate review."⁴² Administrative adjudicators also are free from some of the evidentiary and substantive limitations of the courts, and thus the requirement of impartiality should be correspondingly important in the trial-type hearing. The introduction of a polycentric issue exacerbates the risk of partiality because of the nebulous standards of decision, very limited role of *stare decisis*, and potentially large number of interests affected—many of these possessed by nonparties who may well be tempted to employ extra-record influence. Safeguards for the independence of some regulatory agencies, prohibitions on *ex parte* communications and conflicts of interest, and the requirement of findings of fact and substantial evidence are all methods of bolstering administrative impartiality against direct attempts at improper influence.

More subtle forms of bias can result from agency structure or from an agency's single-minded dedication to a narrowly defined "mission." For example, agencies that vote complaints may be disinclined to dismiss the case on the merits;⁴³ bodies that are essentially "construction agencies," such as the Army Corps of Engineers, may "tend to favor structural alternatives" when confronted with a problem;⁴⁴ and technical expertise, itself a justification for agency

40. 9 U.S.C. §§ 1-14 (1970).

41. *Commonwealth Coatings Corp. v. Continental Cas. Co.*, 393 U.S. 145, 150 (1968).

42. 393 U.S. at 149.

43. For example, the Commissioners of the Federal Trade Commission vote to issue a proposed complaint on the basis of whether they have "reason to believe" that a violation of the statutes administered by the Commission has occurred. If the matter is not settled by consent negotiations, it will be adjudicated by a hearing examiner, and either the FTC complaint counsel or the respondent can appeal to the full Commission—the same Commissioners who concluded that there was sufficient ground to issue a complaint in the first instance. One former FTC Commissioner has argued that this practice creates risk that the Commissioners will have prejudged the issues when the case comes before them on appeal. See Elman, *A Note on Administrative Adjudication*, 74 *YALE L.J.* 652, 653 (1965).

44. Fox & Herfindahl, *Efficiency in the Use of Natural Resources: Attainment of Efficiency in Satisfying Demands for Water Resources*, 54 *AM. ECON. REV.* 198, 204 (1964). For a discussion of the way in which the National Environmental Policy Act has served to broaden the horizons of administrators who have been devoted to the per-

decisional power, may incline its holder toward a particular substantive result since experts often fall into conflicting schools of thought with mutually exclusive pet theories.⁴⁵ The greater decisional latitude that inheres in polycentric controversy may make these factors more important. The duties imposed on adjudicators of polycentric controversies may also create a risk of actual or apparent bias in another way. Agency decision makers are frequently charged with the duty of balancing the immediate, highly vocal claims of the regulated industry against the diffuse, long-range, and unrepresented interests of those who may be adversely affected by a proposed action.⁴⁶ To perform this task, the adjudicator will have to depart from his traditionally passive role to some degree if he is to take proper account of these remote interests; this may in turn lead to departures from the adjudicator's impartiality.

Another important characteristic of the decision maker is his ability to understand and analyze the materials presented to him for decision. Since the task of deciding polycentric issues frequently requires substantial inputs from various kinds of experts, polycentricity may tend to escalate conflicts between "generalist" lawyers and specialist scientists or technicians.⁴⁷ Trial-type proceedings tend to give the lawyers the whip hand and to place scientists in the decidedly secondary role of witness rather than decision maker. As will be seen in the following section, however, scientists have a more

formance of a single mission, see Cramton & Berg, *On Leading a Horse to Water: NEPA and the Federal Bureaucracy*, 71 MICH. L. REV. — (Jan. 1973).

45. Cf. Levy, *Impartial Medical Testimony—Revisited*, 34 TEMP. L.Q. 416, 421 (1961).

46. This problem has been explained in various ways by different commentators. For example, Reich, *supra* note 25, at 1238-39, asserts: "The effort to balance pulls strongly toward the status quo and against anything radical or bold"; at the same time, "[i]t tends to place emphasis on those interests which have a commercial or pecuniary value as against intangible interests such as scenery or recreation." Similarly, R. NOLL, *REFORMING REGULATION* 39-42 (1971) suggests that the ability of the immediately affected regulated industry to bring criticism on the agency from Congress and the courts tends to make the agency give the industry a little more than it really deserves.

On the other hand, Fuller hypothesizes that the attempt to adjudicate polycentric controversies under vague interest-balancing standards may lead the decision maker into a kind of psychological dependence on the regulated industry, caused by a "desire to escape the frustration of trying to act as judge in a situation affording no standard of decision. To escape from a moral vacuum one has to identify oneself with something and the most obvious object of identification lies in the regulated industry." Fuller on Adjudication, *supra* note 23, at 20.

47. The characterization of the lawyer as a generalist probably is less true in administrative proceedings than in most other areas of the law, since practice before—and within—most agencies is in fact very specialized. However, some critics have contended that even extensive specialization by lawyers will not be sufficient to provide adequate mastery of technical concepts, and that regulatory history suggests that a little learning is indeed a dangerous thing. See generally Donahue, *supra* note 29.

extensive decisional function in the resolution of some polycentric controversies; and there is considerable dispute on the question whether the traditional use of scientists as expert witnesses should be replaced by an administrative structure that gives them more responsibility for decision-making.

2. *Rights of Participation*

The first essential for securing meaningful participation in adjudications is notice of the existence and content of the proceeding. Polycentric issues may complicate the notice problem since the class of potentially affected parties frequently will be large and difficult to determine. Furthermore, the range of alternative results in a polycentric controversy is so large that even those persons who receive some type of notice may not fully realize how the proceeding can affect their interest. In this respect, it has been observed that rule-making-type notice, which contains the proposed final product, better apprises potential participants of what is at stake.⁴⁸

The main difficulties center around the devices customarily used by counsel to present proof of facts in court trials: the right to present evidence, generally by testimonial methods, and the right to confront and cross-examine adverse witnesses. In polycentric controversies, these problems usually involve the role of experts who possess the ability to manipulate multiple variables, project future occurrences or conditions,⁴⁹ or analyze physical and social processes beyond the normal range of human experience.

48. Shapiro, *The Choice of Rulemaking or Adjudication in the Development of Agency Policy*, 78 HARV. L. REV. 921, 932 (1965). Trial-type procedure is not necessarily inconsistent with this kind of notice; the Federal Trade Commission, for example, issues proposed orders with its complaints.

49. It seems debatable whether the task of predicting future occurrences is significantly different from the problem of determining present or past conditions. While Davis' distinction between legislative and adjudicative facts does not emphasize this point but rather focuses on whether the disputed matters are general in nature or particular to the parties, some judicial decisions have accorded weight to the uncertainties of prediction. See, e.g., *American Airlines, Inc. v. CAB*, 359 F.2d 624, 633 (D.C. Cir.), cert. denied, 385 U.S. 943 (1966):

The particular point most controverted by petitioners is the effect of the CAB regulation on their business. The issue involves what Professor Davis calls "legislative" rather than "adjudicative" facts. It is the kind of issue involving expert opinions and forecasts, which cannot be decisively resolved by testimony. It is the kind of issue where a month of experience will be worth a year of hearings.

Other commentators have contended that since we can never know what happened in the past with absolute certainty, the task of determining past events is basically the same as predicting future happenings. See Kaplan, *Decision Theory and the Factfinding Process*, 20 STAN. L. REV. 1065, 1071 (1968); Tribe, *Trial by Mathematics: Precision and Ritual in the Legal Process*, 84 HARV. L. REV. 1329, 1346 (1971); Fuchs, *Fairness and Effectiveness in Administrative Agency Organization and Procedures*, 36 IND. L.J. 1, 44-45 (1960). However, it does seem clear that prediction involves a greater degree of uncertainty than determination of past events, since prediction requires the decision

One basic procedural issue that must be resolved is whether experts should be supplied by the parties or cast in some neutral role. In the past, there have been numerous proposals that the role of experts be changed in both administrative and judicial proceedings. Instead of acting as a partisan witness, an expert might either be the sole decision maker,⁵⁰ or share responsibility with legally trained decisional personnel,⁵¹ or become an assistant to the decision maker and thus assume a role similar to that performed by a special master or a judge's law clerk.⁵² Alternatively, it has been suggested that the expert remain a witness, but an impartial witness of the tribunal rather than a partisan of one party's position.⁵³ Of similar effect is the common provision, found in statutes conferring rule-making power, that requires an agency to consult an independent expert advisory committee, which would typically issue a report and recommendations that form the basis for further proceedings.⁵⁴ The relative desirability of these various approaches presumably would depend upon factors such as whether technical questions can be separated out sufficiently to minimize the possibility that value

maker first to establish what has happened in the past, and then to derive trends or principles that suggest what is likely to take place later. It could be argued, in accord with *American Airlines*, that techniques evolved primarily for determining past events will not be useful in this effort.

50. Several possible variations on the use of experts as decision makers are: making their determinations conclusive, according them prima facie effect, and imposing various burdens on those who would attack their conclusions. See generally Korn, *Law, Fact, and Science in the Courts*, 66 COLUM. L. REV. 1080, 1084 (1966). Cf. *Upjohn Co. v. Finch*, 422 F.2d 944 (6th Cir. 1970).

51. This approach has been adopted in AEC reactor licensing, where Atomic Safety and Licensing Boards are composed of two technically qualified persons and a chairman skilled in the conduct of administrative proceedings. See generally Shapar, *Impact of Science and Technology on Law*, 28 FED. BAR J. 291 (1968).

52. See, e.g., Address of Learned Hand, 3 LECTURES ON LEGAL TOPICS 89, 103 (1926): [W]hen the natural laws under which things behave are outside the experience of the ordinary man, [the decision-makers] need help. My thesis is that help should come to them from an assistant who can inform them and not from one who inevitably or nearly, must take on the attitude of partisan, for partisan they surely become The parties could still call their own experts if they wished and have them testify. They would normally, however, argue from the standard sources of information upon the subject, such as books of reference, compilations, technical monographs, and the like.

53. See W. GELLHORN & C. BYSE, *ADMINISTRATIVE LAW—CASES AND COMMENTS* 769 (5th ed. 1970):

As is generally known, dependence upon expert witnesses who testify at the behest of parties has become increasingly uncongenial to courts, let alone to more specialized bodies. Coloring opinions to suit the needs of the party by whom a witness has been retained is widely suspected. In any event, quite apart from even the slightest shadow of intellectual dishonesty, experts are often retained because their known views are precisely the ones a party wishes to emphasize. . . .

The upshot of the matter has been an accelerating tendency in judicial proceedings to divorce at least one expert from the parties, through an appointment by the trial court.

54. See Hamilton, *supra* note 7, at 1316-17.

judgments will be made by experts under the guise of objective analysis;⁵⁵ whether useful information is already possessed by the parties or must be generated for purposes of making the particular decision;⁵⁶ and whether cost burdens would create a risk of poor decision if the parties had the major responsibility for providing expert input.⁵⁷

If the expert is cast in a role other than decision maker, the question arises whether oral testimony and cross-examination are appropriate. Use of written direct testimony by expert witnesses is common in administrative proceedings and generally not contro-

55. For example, in performing its statutory mandate to evaluate the effectiveness of drugs presently on the market, the Food and Drug Administration procured the services of panels of scientists under the auspices of the National Academy of Sciences—National Research Council, who were asked to perform tests on the various drugs and rank them according to various degrees of efficacy. One of the NAS-NRC panel chairmen who conducted the studies has criticized the program on the grounds that the categories and criteria used to classify drug efficacy were so vague and difficult to apply that panels reached inconsistent results, and that panel members did not realize the legal consequences of their decisions on the efficacy of particular drugs. Lasagna, *FDA Efficacy Rule: Does It Work?*, WALL ST. J., April 8, 1971, at 12, col. 4.

56. When experts must undertake research and analysis solely for the purpose of the particular decision, as in many environmental matters and the FDA's drug efficacy studies, *supra* note 55, it may be more efficient to have the experts be neutral rather than party-sponsored.

Professor Davis' distinction between legislative and adjudicative facts depends in large measure on party control of the relevant information. Because the parties are likely to have better access to the adjudicative facts relating to their particular situation, they are allowed to prove these facts through trial-type procedures. The agency, however, is likely to be in a better position to assess general facts about the industry as a whole, and thus testimonial methods are inappropriate. See K. DAVIS TREATISE, *supra* note 14, § 7.02, at 413. On the other hand, it may be argued that parties with a substantial stake in the outcome of a decision will be more highly motivated than the agency to gather and analyze the relevant information. In addition, agencies with broad jurisdiction over numerous industries, such as the Environmental Protection Agency or the Federal Trade Commission, may in fact have little familiarity with problems and conditions in a particular industry.

57. For example, it can be argued that proof of scientific fact through expert testimony in trial-type proceedings is such an immensely expensive proposition that the battle is usually won by the side with the greatest financial resources. Cf. Kadish, *Methodology and Criteria in Due Process Adjudication—A Survey and Criticism*, 66 YALE L.J. 319, 361 (1957). The problem often arises when public-interest groups intervene in agency proceedings to oppose the claims of industry groups who have a substantial stake in the outcome. In some of the leading cases, the courts have used language suggesting that a departure from the purely adversary system may be necessary to redress the imbalance. Thus, in *Scenic Hudson Preservation Conf. v. FPC*, 354 F.2d 608, 620 (2d Cir. 1965), *cert. denied*, 384 U.S. 941 (1966), the court remarked that the Commission's mandate to protect the public interest did "not permit it to act as an umpire blandly calling balls and strikes for adversaries appearing before it; the right of the public must receive active and affirmative protection at the hands of the Commission." In *Office of Communication of the United Church of Christ v. FCC*, 425 F.2d 543, 546 (D.C. Cir. 1969), the court expressed the same idea through a different metaphor, analogizing the intervenors to "a complaining witness who presents evidence to police or a prosecutor whose duty it is to conduct an affirmative and objective investigation of all the facts and to pursue his prosecutorial or regulatory function if there is probable cause to believe a violation has occurred."

versial.⁵⁸ However, opinions concerning the utility of cross-examination are sharply, and often bitterly, divided.⁵⁹ Critics attack the expense and delay of cross-examination, and express doubt that it is a useful means of detecting errors or weaknesses in expert testimony.⁶⁰ Moreover, some experts may view cross-examination as a fruitless and demeaning exercise, and therefore refuse to take part in administrative decision-making involving public interrogation.⁶¹ However, proponents of cross-examination are quick to reply that properly controlled interrogation can be an invaluable aid to understanding and assessing expert testimony⁶² and that in some cases "cross-examination can serve a more valuable function in testing forecasts and generalized conclusions underlying future policy planning than in making findings concerning specific past events."⁶³

58. In addition to the savings of time and money that can be realized by use of written direct testimony, it has been argued that demeanor evidence has only marginal value for assessing expert testimony in administrative proceedings, and that since the decision maker will have at least a general familiarity with the subject-matter of the controversy, there is no need to have the direct evidence proceed at the "sedate pace" afforded by interrogation of counsel. W. GELLHORN & C. BYSE, *supra* note 53, at 711-12.

59. The Administrative Procedure Act merely provides that in adjudicative proceedings, "a party is entitled . . . to conduct such cross-examination as may be required for a full and true disclosure of the facts." 5 U.S.C. § 556(d) (1970).

60. *E.g.*, Hamilton, *supra* note 5, at 69-74; Westwood, *Administrative Proceedings: Techniques of Presiding*, 50 A.B.A.J. 659 (1964). Cf. Homburger, *Functions of Orality in Austrian and American Civil Procedure*, 20 BUFFALO L. REV. 9, 36 (1970): "If cross-examination really is the 'greatest legal engine ever invented for the discovery of truth,' one wonders why other legal systems have not imported that fabulous 'engine.'"

61. *See, e.g.*, The National Academy of Sciences and the Provision of Advice on Regulatory Matters to Federal Agencies, July 30, 1971, at 9 (unpublished memorandum prepared for the ACUS), on file with the *Michigan Law Review*: "NAS/NRC committee or panel members have not had to testify about the [drug efficacy] reports at administrative hearings or in court. Indeed, it is likely that many of the people who presently work on these reports would be unwilling to do so if requirements for such testimony were stipulated in arrangements with the agency." Similarly, Hamilton, *supra* note 7, at 1290, notes that the FDA's use of rule-making on a record has "tended to cause alienation between the scientific community and FDA," and concludes: "In part, this has been the result of subjecting volunteer, expert witnesses to a grueling cross-examination; in part, it arises from the common-sense notion that a formal evidentiary hearing is not necessarily the best way to determine scientific principles."

62. *E.g.*, Zwerdling, *A Plea for Clemency for Cross-Examination*, 57 A.B.A.J. 45, 46-47 (1971):

Expert witnesses, like other human beings, vary in temperament, style and approach. Their prepared written testimony sometimes includes a great deal of puffing and salesmanship, and frequently cross-examination alone makes it possible to separate the puffing from the hard bedrock of firmly grounded expert opinion. Similarly, cross-examination alone will sometimes bring out into the open the qualifying "ifs" and "buts" that are inherent in the expert's opinion.

There is also the taciturn expert witness whose prepared written testimony is marked by super economy . . . This testimony sometimes provides a useful road map, but little underlying rationale. The warm and intimate atmosphere of face-to-face cross-examination is sometimes needed to flush out the real grounds on which a witness's position is based—whether those grounds be meager or solid.

63. Robinson, *supra* note 8, at 522. Cf. Ross, *The Big Administrative Proceeding: A Response to Mr. Westwood*, 51 A.B.A.J. 239 (1965).

A similar rationale is that the prospect of cross-examination will have an important disciplinary effect on experts during the earlier stages of the decision-making process.⁶⁴

It also appears that cross-examination can be used for purposes beyond its traditional role of exposing witnesses' bias or error. Parties and intervenors may employ cross-examination as a substitute for discovery when other procedural devices do not provide adequate access to the reasons and information underlying the agency's position or another party's contentions.⁶⁵ Even when sufficient discovery is available, however, the cost of assembling and presenting an affirmative case may be prohibitive, particularly to a public-interest intervenor with limited resources. In this situation, lack of financial support for full litigation may dictate a strategy of exposing fallacies in another party's position through vigorous cross-examination. A similar problem is that in some polycentric issues there may be an absolute limit on needed expertise. Illustratively, for a particular environmental issue there may be only one or two government scientists who have made an on-site study of ecological impact, and insufficient time to conduct further studies in preparation for the hearing. To an opposing party in this situation, cross-examination may be the only possible method of building a record. Finally, some practitioners suggest that cross-examination may be the only effective check on administrative arbitrariness. According to this theory, judicial review will not probe the agency's action with sufficient particularity to uncover errors or misconceptions; cross-examination, on the other hand, gives the opponent an opportunity to force the agency to justify its action in detail and in public.⁶⁶

In contrast to the problems discussed above, party participation in adjudication, through briefing and oral argument, has been much less controversial. This may be due to the fact that argument is a less substantial drain on agency resources than trial; it may also result from prevailing doctrines that hold that briefing and argument are appropriate in both adjudication and rule-making,⁶⁷ and that consequently there is—and should be—much less likelihood that a party's attempts to participate in this manner will be rebuffed. In polycentric controversies, the process of briefing and argument can be expected to assume greater importance than in

64. Robinson, *supra* note 8, at 519-20.

65. See, e.g., Ross, *supra* note 63, at 240-41.

66. See note 5 *supra*.

67. See K. DAVIS TREATISE, *supra* note 14, § 7.07.

normal litigation because the tribunal's latitude to make policy is, on the whole, greater than in bipolar controversies and because the issues in these proceedings do not become sharply drawn until relatively late stages of the decision-making process.

3. *Decisional Rights*

Fuller's two primary criteria of adjudication, rationality and party participation, dictate several features of the end-product of the adjudicative process—the decision. Rationality requires that the decision contain a logical explanation for the result reached, or that it at least be consistent with accepted principles, since “[a] decision which is the product of reasoned argument must be prepared to meet itself the test of reason.”⁶⁸ This argument may seem circular on its face; if so, a more detailed and satisfactory explication of the role that reasoned decision plays in the adjudicative process may be found in Hart and Sacks' description of the tribunal's duties of fact-finding, law declaration, and law application.⁶⁹ In their view, the law-application function grows in importance as the standard of decision becomes less precise:

To the extent that the law formulated by the judge in general terms leaves open other questions than the identification, simply, of what happened in the particular situation presented, the application of law will necessarily involve judgment. Obviously, the more imprecise the general formulation, the more uncontrolled the judgment will be.⁷⁰

Since polycentric issues arise under broad “public interest” standards and are resolved by a process of balancing conflicting and

68. Fuller on Adjudication, *supra* note 23, at 13.

69. H. HART & A. SACKS, *THE LEGAL PROCESS: BASIC PROBLEMS IN THE MAKING AND APPLICATION OF LAW* 374-75, 379 (tentative ed. 1958) (emphasis original):

First, but not necessarily first in order of time, the judge must make a formulation *in general terms* of the relevant law to be applied. This may conveniently be called the function of *law declaration*.

.....
A second function may be called the function of *fact identification*—that is, the determination and statement of the relevant characteristics of the particular matter before the judge. . . .

.....
In applying a standard, a careful law-applier decides first of all what happened in the particular case, without yet trying to characterize the happenings in the way the standard calls for. . . . He next makes a generalized judgment, analytically a judgment on a matter of law, about the kind and quality of conduct which ought generally to be observed in like situations. . . . With this measure in mind he looks again at the conduct in the particular case to characterize it and see if, so characterized, it meets the general standard.

See also Weiner, *The Civil Nonjury Trial and the Law-Fact Distinction*, 55 CALIF. L. REV. 1020 (1967).

70. H. HART & A. SACKS, *supra* note 69, at 375.

interrelating interests, the agency's judgment will be largely "uncontrolled"; in addition, *stare decisis*, which has a limited role in administrative proceedings in any event, will have an almost negligible impact in polycentric controversies since the overall balance of factors will tend to be unique to the particular case.⁷¹ Consequently, the adjudicator will be relatively free of "the discipline and restraint of an obligation to build upon the prior law in a fashion which can withstand the test of professional criticism,"⁷² and the value of precedent in providing a guide to the structuring of private activity will be diminished.

There is some corroboration for these theories in the commentaries on administrative adjudication. For example, in the typical polycentric interest-balancing adjudication,

the evidence adduced in hearings for purposes of proof cannot fully cover the discretionary issues to be determined; the agency must add something more in the end. . . . Expert or opinion testimony may be introduced at the hearing with relation to the discretionary issues, but be later rejected by reason of agency views, even when there is no conflict in the testimony. The question then arises whether the decision really results from the hearing; and the affected private interests may be disquieted by the belief that it does not.⁷³

Attorneys practicing before the agencies have also reported difficulties in preparing for a case involving polycentric issues because of the realization that the matter "is not susceptible to judge-like decision"; the result of this perception is a temptation either to inflate the record with proof on every factor that might possibly be relevant to the decision, or to resort to improper *ex parte* attempts to influence the decision maker.⁷⁴ Similarly, Louis Hector has argued, from the perspective of an agency adjudicator, that the common practice of deciding on an outcome and then assigning the matter to a professional opinion writer to supply justifications "merely serves

71. However, official notice could still be used in some situations to assure the consistency, rationality, and economy of decision. See Berg, Boyer & Johnston, *supra* note 4, at 19-20.

72. H. HART & A. SACKS, *supra* note 69, at 588.

73. Fuchs, *supra* note 49, at 8-9.

74. Westwood, *The Influence of Washington Lawyering*, 38 GEO. WASH. L. REV. 607 (1970). See Ross, *supra* note 63, at 240; Reich, *supra* note 25, at 1241:

Naturally, almost anything is or may be relevant when the subject is planning. In an FCC, CAB, or FPC case, many different criteria are utilized by the agency in reaching a decision. The parties have no way of knowing in advance which criteria will be stressed in a given case and for all that the parties know, new criteria may be introduced. Accordingly, the prudent lawyer must seek to introduce evidence bearing on every imaginable issue that the agency might consider. . . . It is the limitless and unfenced range of the agency's probable basis of decision that lies at the root of the procedure problem.

to confirm the nonjudicial nature of the so-called 'adjudicatory' processes of the regulatory agencies as they are conducted today."⁷⁵

4. *Judicial Review*

The provision of judicial review for administrative action can be considered the final assurance that adjudicatory decisions will be rational and based upon party participation. Broadly speaking, review of questions of law implements the former criterion, while review of agency procedure goes to the latter point, and the substantial-evidence test affects both criteria. Since resolution of polycentric controversies involves interest-balancing that is heavily predominated by unique factual elements, the result may be a lessening in the effectiveness of judicial review.⁷⁶ Courts can respond to this situation and try to restrict administrative divergences from the adjudicative model by viewing agency procedures with increased skepticism when the merits of the decision seem suspect.⁷⁷ Occasionally, the courts will confront the problems more directly by conducting a detailed inquiry to discover whether an agency has adequately considered all factors properly bearing on its decision and has adequately stated its rationale.⁷⁸ From this approach, it is

75. Hector, *Problems of the CAB and the Independent Regulatory Commissions*, 69 *YALE L.J.* 931, 948 (1960). It might be thought that the professional opinion writers described by Hector are not different in principle from a judge's law clerk. However, the law clerk has a more personal relationship with the judge and therefore will be more careful to reflect the judge's views. Moreover, it is clear from Hector's description that the agency opinion writer operates under much less direction and supervision than the typical law clerk.

76. See note 5 *supra*.

77. Cf. Shapiro, *Some Thoughts on Intervention Before Courts, Agencies, and Arbitrators*, 81 *HARV. L. REV.* 721, 722-23 (1968):

[A]t times one is convinced that, whatever the articulated reason, there lies at the heart of the [reviewing court's] decision a dissatisfaction with the agency's judgment on the merits, a sense of frustration at being unable to reverse that judgment directly, and a resulting desire to compel the agency to observe the highest standards of fair procedure—including for all interested persons a full chance to be heard.

78. *E.g.*, *Environmental Defense Fund, Inc. v. Ruckelshaus*, 439 F.2d 584, 597-98 (D.C. Cir. 1971):

For many years, courts have treated administrative policy decisions with great deference, confining judicial attention primarily to matters of procedure. On matters of substance, the courts regularly upheld agency action, with a nod in the direction of the "substantial evidence" test, and bow to the mysteries of administrative expertise. Courts occasionally asserted, but less often exercised, the power to set aside agency action on the ground that an impermissible factor had entered into the decision, or a crucial factor had not been considered. Gradually, however, that power has come into more frequent use, and with it, the requirement that administrators articulate the factors on which they base their decisions.

. . . . Judicial review must operate to ensure that the administrative process itself will confine and control the exercise of discretion. Courts should require administrative officers to articulate the standards and principles that govern their discretionary decisions in as much detail as possible Discretionary decisions should more often be supported with findings of fact and reasoned opinions.

only a short step to asserting that the courts should be empowered to re-examine the agencies' interest-balancing *de novo*, unrestricted by deference to agency expertise or discretion; it is this position which some environmental groups are presently advancing in state legislatures and the Congress.⁷⁹

Thus, at the same time that traditional adjudicatory proceedings are being severely criticized as outmoded and inefficient means of deciding polycentric controversies, there appears to be an equally strong impetus toward greater use of adjudicative techniques, even to the point of moving the primary decision-making responsibility from the agencies back into the courts. In light of this observation, it may be useful to examine the forces that first led the agencies to judicialize their proceedings.

D. *Historical Aspects of Administrative Adjudications*

A brief look at the historical development of administrative procedure in this country could easily lead to the conclusion that the adoption of trial techniques in agency proceedings was more a matter of historical accident than of rational choice.⁸⁰ When administrative regulation came of age in this country at the end of the nineteenth century, the government had witnessed a shift in the locus of power to control economic development from the legislatures to the courts;⁸¹ when this power began to move into newly created bodies which lacked the strong traditions of the courts,⁸²

See also District of Columbia Fedn. of Civic Assns. v. Volpe, 29 Ad. L.2d 473 (D.C. Cir. 1971); Murphy, *supra* note 4, at 20-23.

79. *See generally* Sax & Conner, *supra* note 26.

80. *E.g.*, Donahue, *supra* note 29, at 216: "Legal dominance of the regulated industries field is largely the product of historical accident."

81. *See* M. BERNSTEIN, REGULATING BUSINESS BY INDEPENDENT COMMISSION 26 (1955): During the nineteenth century the character of economic regulation shifted gradually. At first it was essentially legislative. . . . [Later on, however,] for the enforcement of railroad laws, individuals and the government relied upon the judicial process. As the courts proved their inability to deal with complex economic relationships in railroad management, attention was centered on the possibility of devising an administrative mechanism which would be more flexible than the legislature and more competent than the judiciary in dealing with complicated economic matters.

Of course, these developments did not occur in the clearcut linear fashion that this passage might suggest; the distribution of regulatory power over the railroads was complex and rapidly changing throughout the latter half of the nineteenth century. For a more detailed history of regulation during this period, see R. CUSHMAN, THE INDEPENDENT REGULATORY COMMISSIONS 19-50 (1941).

82. Cushman reports that temporary state commissions responsible primarily for reporting to the legislatures on specific problems were often created during the 1850's and 1860's. These bodies performed a variety of other duties, including supervision of charter provisions, safety inspections, arbitration of disputes involving railroads, and prevention of discrimination in rates and services. Between 1869 and 1887, permanent state railroad commissions began to emerge. In effectiveness, they ranged from the

it was natural for the newcomers to adopt the handy model of judicial procedures in doing their work. Undoubtedly, too, the fact that the first chairman of the grandfather of federal agencies, the Interstate Commerce Commission, was an eminent judge helped to facilitate the wholesale adoption of judicial techniques in the administrative context.⁸³ Perhaps the most important factor in the judicialization of agency procedure, however, was the prevailing judicial hostility to early regulatory commissions, which was manifested in holdings that rate-making was "eminently a question for judicial investigation, requiring due process of law for its determination,"⁸⁴ as well as in the courts' "steady and increasing disposition to do over again the [ICC's] job of finding facts, thereby undermining the prestige of the commission and the effectiveness of its orders."⁸⁵ To the extent that the Commission could make its practices conform to those of the judiciary, it would gain some security against reversal on review.⁸⁶ In time, the judicial model became entrenched in the lore of administrative law so that, as Congress reacted in an ad hoc fashion to subsequent demands for federal regulation, the trial-type hearing was incorporated almost as a matter of course.⁸⁷ By the time that the Administrative Procedure Act imposed uniform procedures on administrative functions for which a trial was required by law, it was assumed without question that formal agency action would inherently be cast in the form of either adjudication or quasi-legislative rule-making.⁸⁸

This historical characterization may contain a fair amount of truth, but clearly there were more substantial interests behind the movement to impose trial-type procedures on the administrative agencies. Among the business community, there must have been many who shared the sentiments expressed in Richard Olney's often-quoted dismissal of the Interstate Commerce Commission:

The Commission, as its functions have now been limited by the courts, is, or can be made of great use to the railroads. It satisfies the popular clamor for a government supervision of railroads, at

"strong" commissions, which had the power to set judicially enforceable rates, to the "weak" commissions, which had only investigatory duties. R. CUSHMAN, *supra* note 81, at 21-27. Thus, it seems fair to infer that the concept of the regulatory commission was a rather amorphous one at the time that the federal government entered the field of administrative regulation.

83. *Id.* at 65; M. BERNSTEIN, *supra* note 81, at 29.

84. *Chicago, M. & St. P. Ry. v. Minnesota*, 134 U.S. 418, 458 (1890).

85. R. CUSHMAN, *supra* note 81, at 66.

86. *Cf.* M. BERNSTEIN, *supra* note 81, at 29.

87. *See* Reich, *supra* note 25, at 1231-33.

88. *See* note 11 *supra* and accompanying text.

the same time that the supervision is almost entirely nominal. . . . It thus becomes a sort of barrier between the railroad corporations and the people⁸⁹

Business had used the courts successfully to forestall effective economic regulation in the late nineteenth and early twentieth century, and so it might be expected that business interests would seek to maintain the comfortable status quo.⁹⁰ Similarly, much of the impetus toward passage of the Administrative Procedure Act in 1946 came from business interests that were chafing under the extensive economic controls imposed during the Second World War.⁹¹

It also seems evident that there were more idealistic reasons underlying the judicialization of administrative procedure. In the early debates over impermissible delegation of powers, and more recently, in those debates over the Administrative Procedure Act,⁹² there is frequently expressed a very real concern that the power conferred upon administrative decision makers would be abused, and that some form of accountability for the agencies, in addition to the constraints imposed by limited judicial review, should be provided. Thus, in 1945 the retiring President of the American Bar Association voiced his support for the APA in the following terms:

89. Quoted in R. FELLMETH, *supra* note 1, at xv.

90. Cf. 51 CONG. REC. 13,121 (1914) (remarks of Senator Reed during floor debates on the Federal Trade Commission Act): "I think it is true . . . that for a number of years the tendency of the Federal courts was too much in favor of great property interests. Why was that? It was, at least in part, because great interests had been able to control to some extent the appointment of Federal judges."

Ironically, there are now many public interest groups, particularly in the environmental field, who seek to preserve the status quo and prevent new business endeavors; as might be expected, environmentalists often seek the imposition of trial-type procedures, and a greater role for the courts. See text accompanying note 79 *supra*.

91. For example, the National Association of Manufacturers issued a pamphlet in 1945 entitled *What Bureaucracy Means to You* which urged support for administrative reform bills that would, *inter alia*:

8. Restate the Principle which administrative agencies have seemed to forget, that a man is deemed innocent until he has been proven guilty; compel agencies to give him due notice of action; and force them to allow him full opportunity to be heard in his own behalf before he is judged.

Then the individual citizen will be safe against "star chamber" proceedings.

9. Compel agencies to base their decisions on evidence, not on surmise or conjecture, and to issue their decisions only after unbiased appraisal of all the evidence.

One may, of course, question the depth and sincerity of NAM's interest in procedural rights for the "individual citizen"; it is clear, however, that the Association believed people were worried about bureaucratic power. This pamphlet was directed at the general public, urging citizens to write their congressmen in support of administrative reform.

92. See generally LEGISLATIVE REFERENCE SERVICE, LIBRARY OF CONGRESS, SEPARATION OF POWERS AND THE INDEPENDENT AGENCIES: CASES AND SELECTED READINGS, S. DOC. NO. 49, 91st Cong., 1st Sess. (1969).

At some time this nation will surely stand at a crossroads which point one way to freedom and order, and the other way to bondage and chaos. Many people cite good reasons for saying that the day of choice is at hand. If we pass blindly on, we may find ourselves so used to bargaining rather than adjudication, and so accustomed to politics rather than legal administration, that we will neither recognize nor appreciate a government according to law.⁹³

Even discounting the excesses of rhetoric, it is obvious that this kind of sentiment has been—and continues to be—a primary force behind the “judicializing” of administrative procedure.⁹⁴ In essence, it reflects a concern that administrative power cannot be readily fitted into the checks and balances inherent in a threefold division of government—a concern which was given classic expression by Justice Jackson in his dissenting opinion in *FTC v. Ruberoid Co.*:⁹⁵

The rise of administrative bodies probably has been the most significant legal trend of the last century and perhaps more values today are affected by their decisions than by those of all the courts, review of administrative decisions apart. They also have begun to have important consequences on personal rights They have become a veritable fourth branch of the Government, which has de-ranked our three-branch legal theories much as the concept of a fourth dimension unsettles our three-dimensional thinking.

Courts have differed in assigning a place to these seemingly necessary bodies in our constitutional system. Administrative agencies have been called quasi-legislative, quasi-executive or quasi-judicial, as the occasion required, in order to validate their functions within the separation-of-powers scheme of the Constitution. The mere retreat to the qualifying “quasi” is implicit with confession that all recognized classifications have broken down, and “quasi” is a smooth cover which we draw over our confusion as we might use a counterpane to conceal a disordered bed.⁹⁶

93. Address by David A. Simmons, Dec. 17, 1945, in ABA Administrative Law Committee, *Government According to Law: Shall We Have It?* (pamphlet, 1945).

94. Occasionally, arguments are still made about the impermissible delegation of power to agencies, but the tone has become rather despairing. *See, e.g.*, Keynote Address by R. Schotland before the Federal Trial Examiners' Conference, March 20-21, 1972, *After 25 Years: We Come To Praise the APA and Not To Bury It*, at 3-4:

However courts may treat delegation when the validity of a statute is attacked . . . [the issue] remains a live problem in statutory drafting and also for the delegates themselves. For at bottom the question of delegation is the question of assuring democratic participation in, and controls over, the exercise of administrative power. . . .

Most recently, only Lloyd Cutler . . . has spoken out against the invalid delegation in the wage-price freeze We should ponder the silence with which we have accepted a delegation not only lacking in procedural safeguards, but conferring immense powers on private persons who continue their private conflicting associations

95. *FTC v. Ruberoid Co.*, 343 U.S. 470, 480 (1952).

96. 343 U.S. at 487-88.

Granting the legitimacy of fears about bureaucratic power, however, why should trial-type procedures be used as a method of limiting and controlling this power? One possible explanation can be found in Lon Fuller's notion that within particular societies, possible forms of social ordering are limited: if the society is confronted with a difficult or novel problem, it may not have available an appropriately sophisticated ordering mechanism to deal adequately with the interests that are at stake, and thus it will have to make do with existing systems.⁹⁷ Consequently, forcing the task of administrative regulation into the ill-fitting mold of judicial procedure may be simply a stop-gap measure, symptomatic of a need to develop new and better decision-making methods. Several alternative models have been suggested in the literature recently; but before turning to them, we should attempt a formulation of the criteria that can be used to compare and evaluate different procedural systems.

III. CRITERIA FOR EVALUATING PROCEDURAL SYSTEMS

Undoubtedly, there are numerous criteria that could be employed to evaluate the merit of a particular procedural system and to compare the features of alternative systems.⁹⁸ At the broadest level of generalization, however, most of the tests or factors seem to fit within three categories: accuracy, efficiency, and acceptability.⁹⁹

A. *Accuracy of Decisions*

That accuracy of decisions is a system goal seems self-evident, but this concept has implicit within it a number of complex problems. Empirical research such as the New Jersey study of pretrial conferences¹⁰⁰ indicates that procedural devices can have a marked

97. The concept is developed in detail in Fuller, *Irrigation and Tyranny*, 17 *STAN. L. REV.* 1021 (1965). In analyzing the fact that ancient societies which built large-scale irrigation works usually had a despotic form of government, Fuller points out that most of these early societies lacked ordering alternatives such as contract, licensing, or a developed market economy that could have performed the function of allocating rights and obligations in the construction and use of irrigation systems. In light of prevailing social concepts, tyranny was a "logical" response to the problems created by the new technology.

98. See, e.g., Rosenberg, *Devising Procedures That Are Civil To Promote Justice That Is Civilized*, 69 *MICH. L. REV.* 797, 802-03 (1971).

99. Cf. Cramton, *Administration Procedure Reform: The Effects of S. 1663 on the Conduct of Federal Rate Proceedings*, 16 *AD. L. REV.* 108, 111-13 (1964).

100. M. ROSENBERG, *THE PRETRIAL CONFERENCE AND EFFECTIVE JUSTICE* (1964). The New Jersey experiment involved an effort to determine whether mandatory pretrial conferences in negligence cases would achieve greater efficiency at trial. The mandatory conferences failed to speed the disposition of cases as the experimenters had hoped; however, they did increase the amount of plaintiffs' recovery in comparison to the control

effect upon the outcome of a proceeding even when there is no apparent logical reason for the change in results; thus the question whether a certain type of procedure is conducive to accuracy should be answered by reference to the substantive regulatory policies that are being implemented.¹⁰¹ For example, trial procedures with their heavy emphasis on intensive and searching cross-examination as a method of finding truth may be more effective in exposing the negative features of a proposed action than in illuminating its positive virtues. If so, it would be possible to say that trial procedures are more "accurate" when implementing a policy that large-scale development projects should be restrained in the face of uncertain environmental consequences, than they would be in implementing a policy that economic growth should go forward despite uncertainty.

Another set of accuracy problems may be inherent in the incentives and pressures felt by regulators. A number of behavioral scientists who have studied organizational decision-making conclude that the administrator or executive who is confronted with a complex problem tends to engage in a practice called "satisficing," or finding a solution that is "good enough" to satisfy his aspiration levels, despite the fact that he is supposed to be seeking an optimal trade-off among conflicting values.¹⁰² The recent *Calvert Cliffs'* case¹⁰³ seems to illustrate this tendency quite clearly. In implementing its new responsibilities under the National Environmental Policy Act, the Atomic Energy Commission promulgated rules which provided that the Commission would accept evidence of a license applicant's compliance with state water quality standards as satisfying the demands of environmental protection. The reviewing court, however, concluded that NEPA required a different kind of decision-making. It stressed that the Act's goal is

to ensure that each agency decision maker has before him and takes into proper account all possible approaches to a particular project . . . which would alter the environmental impact and the cost-benefit balance. Only in this fashion is it likely that the most intelligent, optimally beneficial decision will ultimately be made.¹⁰⁴

group of cases in which no conference was held. *Id.* at 28-29. See also Rosenberg, *supra* note 98, at 804-08.

101. See Cramton, *supra* note 99, at 113:

Existing substantive policies under each regulatory statute should not be inadvertently or intentionally distorted by procedural changes. Opponents of an agency's substantive policies . . . may sometimes seek to cripple the effective performance of regulation through the imposition of procedural restrictions. The purpose of procedural reform should be to improve the effectiveness of regulation, not to hobble it.

102. See text accompanying notes 106-09 *infra*.

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

104. 449 F.2d at 1114.

Thus, even when a proposed nuclear power plant met the relevant state water quality standard, it was possible that the over-all balance of economic and noneconomic factors would dictate a higher degree of environmental protection. This requirement of an optimizing approach has caused considerable dismay among concerned observers, and has led to claims that the court is demanding that the AEC accomplish the impossible.¹⁰⁵ The behavioral scientists' analyses of "satisficing" and "optimizing" models tend to support this contention.

On a theoretical level, it has been asserted that a true optimizing model requires a "single set of values against which possible future outcomes can be matched in order to establish the order of their desirability."¹⁰⁶ However, environmental factors such as scenic, ecological, or historic values resist reduction to some common denominator such as dollars. Moreover, even when a commonly accepted yardstick is available, such as profit in business decision, behavioral observations suggest that the decision maker still tends not to seek the optimal solution:

First, he eliminates the scaling problem . . . by reformulating multi-valued goals into single-valued constraints. Instead of trying to maximize profit, the businessman chooses the first project he finds [that] will satisfy his profit requirement Second, he vastly simplifies the range of choice he faces by ignoring all relationships but the most evident. The result is that the constraints upon his choices are few and clear cut. He is able to routinize the choice activity and express general solutions to recurring categories of problems as "rules of thumb."¹⁰⁷

This tendency is generally attributed not so much to defects in the decision-making process as to limitations in human intellectual capacity and available information;¹⁰⁸ however, it could be argued

105. See note 4 *supra* and accompanying text.

106. Bauer, *The Study of Policy Formation: An Introduction*, in R. BAUER & K. GERGEN, *THE STUDY OF POLICY FORMATION* 1, 12 (1968) [hereinafter *POLICY FORMATION*].

107. Bower, *Descriptive Decision Theory from the "Administrative" Viewpoint*, in *POLICY FORMATION*, *supra* note 106, at 103, 116.

108. See, e.g., Lindblom, *supra* note 31, at 155.

It should be noted that the behavioral scientists differ considerably in their analyses of the extent to which an optimizing model is in fact attainable. Lindblom asserts that "[n]othing would be more paralyzing to an administrator than to take seriously the prescription . . . that he make no decision until he canvas all possible alternative ways of reaching well formulated goals, making sure that he has investigated every possible major consequence of each possible alternative." Lindblom, *Contexts for Change and Strategy: A Reply*, in *READINGS*, *supra* note 31, at 171, 172.

On the other hand, other observers argue that decision makers do use an optimizing approach for complex problems, albeit in simplified form, see F. KAST & J. ROSENZWEIG, *ORGANIZATION AND MANAGEMENT: A SYSTEMS APPROACH* 407 (1970), or take the position that, although true optimization is largely unattainable, the use of an optimizing model improves the quality of decision by forcing decision makers to think seriously

that adjudication, which is suited to resolving controversies by applying general "rules of thumb" to particular facts, would enhance the natural tendency toward satisficing rather than optimizing. Thus, adjudicative procedures may decrease accuracy when the agency decision should approach the optimizing model.¹⁰⁹

A related phenomenon that may impair the accuracy of decision in polycentric controversies has been picturesquely described by commentators as "the dwarfing of soft variables."¹¹⁰ That is, in broad cost-benefit analyses, certain factors are likely to have readily quantifiable values, such as a market price, while other factors such as ecological considerations will not. The existence of sophisticated mathematical models capable of manipulating the quantifiable variables may tempt the decision maker either to use the model beyond the bounds of its reliability by assigning arbitrary values to unquantifiable items,¹¹¹ or to ignore "soft data" altogether:

Equipped with a mathematically powerful intellectual machine, even the most sophisticated user is subject to an overwhelming temptation to feed his pet the food it can most comfortably digest. Readily quantifiable factors are easier to process—and hence more likely to be recognized and then reflected in the outcome—than are factors that resist ready quantification. The result, despite what turns out to be a spurious appearance of accuracy and completeness, is likely to be significantly warped and hence highly suspect.¹¹²

It seems open to question whether adjudicative procedures would enhance or inhibit this type of tendency toward inaccuracy. On the one hand, the tradition of putting the expert in the role of witness rather than decision maker and exposing him to searching, often hostile, cross-examination may help expose inaccuracies resulting

about novel approaches to complex problems; Dror, *Muddling Through—"Science" or Inertia?*, in READINGS, *supra*, at 166.

109. Of course, this argument depends on the questionable assumption that optimizing approaches can produce better decisions than satisficing models. See note 108 *supra*. If one takes the position that optimizing is an unrealizable and inherently inaccurate decision-making approach, then presumably nothing is lost—and perhaps something may be gained—by using a decision-making procedure that is incompatible with optimizing.

110. Tribe, *supra* note 49, at 1361-62.

111. Cf. R. DOREMAN, MEASURING BENEFITS OF GOVERNMENT INVESTMENTS 8 (1965):

Quite clearly, the precise formula used for consolidating and expressing the results of the [benefit-cost] analysis is a relatively superficial matter: properly interpreted all the formulas lead to the same conclusions. The heart of the matter lies in deciding what benefits should be included and how they should be valued. The debate about benefit-cost analysis centers on the question of whether the social value of benefits can be estimated reliably enough to justify the trouble and effort involved in a benefit-cost computation.

112. Tribe, *supra* note 49, at 1361-62.

from the improper use of analytical models. At the same time, however, the use of a generalist decision maker and the pressure to formulate clearcut standards of decision may result in attributing a more conclusive effect to the expert's analytical model than is justified by the state of his knowledge.¹¹³

Another accuracy-impairing phenomenon which is more familiar, at least to Washington lawyers, has been called "the insider perspective."¹¹⁴ Government regulators know, or soon discover, that their decisions are monitored by a variety of affected constituencies, the most prominent of which include certain members of Congress, the executive branch, and the industry regulated by the agency. Agencies cannot risk offending or alienating their constituencies too deeply, for members of the constituencies can, at the least, make life very difficult for the agency. As a result, even the most conscientious regulators know that they cannot afford to "go to the mat" on every issue; rather, they must give ground on issues they feel to be of secondary importance to preserve their clout for what they regard as the crucial problems.¹¹⁵ In short, the incentive structure surrounding the agencies may support a tendency to favor the regulated in many instances by rewarding ineffective regulation and penalizing the agency for decisions that are based on pure accuracy considerations.¹¹⁶ The use of an adjudicatory model might be expected to lessen the force of these pressures through the shielding effect of

113. Cf. Korn, *supra* note 50, at 1092:

Limitations within the state of knowledge of the expert's own discipline are an obvious source of error. There are wide variations both in the general level of certainty of the various sciences called upon in lawsuits and between the axiomatic and frontier areas of a given discipline. . . .

The problem is aggravated by the need to apply the scientist's generalized knowledge to the multifarious, haphazard and often unique facts of particular cases. This process may involve such close questions of judgment that highly competent and unbiased experts differ even if they have full and equal access to all available data. . . .

114. The term is borrowed from J. SAX, *DEFENDING THE ENVIRONMENT* (1971), where the problem is analyzed in detail.

115. Cf. *id.* at 53: "From the inside perspective of a government agency, hard choices must be made. An agency has its own priorities and legislative program; it has conflicting constituencies among which it must mediate, and in whose eyes it must—for its own good—appear to have a balanced position; it has a budget to consider and thereby a need for friends in the legislature."

116. R. NOLL, *supra* note 46, at 40-45:

To a regulatory authority, one success indicator is a negative one—the failure of the courts or the Congress to override a decision by the regulators. A second success indicator is continued operation of the regulated sector. Widespread service failure is likely to be blamed on the regulatory agency, and is therefore to be avoided, even if the cost exceeds the costs of the service failure. . . .

. . . [B]y giving regulated firms a little more than they deserve, the agencies make certain that the most threatening group has something that could be lost in an appeal. In disputes between well-represented interests, the agency will, for the same reason, seek a compromise that gives something to all disputants, whether economic efficiency or the public interest would favor such a compromise.

relatively precise standards of decision and through the impetus toward consistency inherent in principles of *stare decisis*. However, as noted above, the importance of these countervailing factors is minimized by the interest-balancing approach used in adjudicating polycentric controversies.¹¹⁷ Nevertheless, adjudication still retains the insulating effect of having controversies decided on the record and of focusing on the facts of the particular case so that non-parties will not perceive the decision as a direct threat to their interests.¹¹⁸ Thus, even in polycentric controversies, adjudicative procedure contains significant safeguards against undue political influence, and may accordingly protect the accuracy of agency decision-making.

Another threat to accuracy in administrative proceedings appears in the tendency for decision makers to inflate the past and devalue the future. It has been observed that agency projects gather momentum as time, effort, and capital are invested in increasing quantities. Indeed, this phenomenon seems to appear even when the only investment has been analytical time.¹¹⁹ If substantially greater "sunk costs" are accumulated for one possible activity than for other

117. Cf. Dixon, *The Social Security Disability Program: A System in Crisis*, Oct. 27, 1971, at 16 (report to the Committee on Grant and Benefit Programs, ACUS):

To be sure, nonadministrable standards are not new to government, and in some areas may be unavoidable, e.g., the "public interest" standard for grant of radio and television licenses. But in such areas the Congress is really merely transferring the *political* process to administrative hands. Because relatively small numbers of decisions are to be made, and individualized interests are not at stake, we expect no higher order of consistency than we ever expect from the political process. That expectation is pretty low—and should be—because in the political process we do not deal with questions of right and wrong.

118. One commentator has suggested that these protective features are the major reasons for the NLRB's use of adjudication rather than rule-making:

While other agencies have received some attention and criticism from Congress and the bar, the NLRB has been a whipping boy without rival, since it constantly decides the controversies of powerful groups with talented counsel, expert publicists, and important political allies. One may surmise that the Board has reacted by adopting the mechanism least subject to attack—the decision of individual cases on the narrowest possible ground, riveted to the factual peculiarities of the particular proceeding On the other hand, the Board is afraid that rule making decisions would be rendered without elaborate fact-finding, and would focus explicitly on policy, thus bringing excessive attention from Congress, the most dangerous branch to bureaucrats.

Bernstein, *supra* note 12, at 597-98.

119. E.g., Bower, *supra* note 107, at 124:

Analytical time almost always is the resource of a corporation that is subject to rationing. Furthermore, given common—as opposed to rational—thinking concerning sunk costs, it becomes increasingly hard to reject a proposal as it absorbs analytical hours. The net result is that the capital-investment decision is effectively made by that middle manager who authorizes the study and writing needed for a project proposal.

Cf. Noll, *The Economics and Politics of Regulation*, 57 VA. L. REV. 1016, 1022 (1971): "Regulatory agencies abhor abandoning a capital investment . . . as long as it is in good working order and has not been fully depreciated by the owner."

alternatives within the initial range of acceptable choice, there is strong pressure to persist with the plan originally found superior even if it later becomes apparent that a different plan would have been initially preferable.¹²⁰ Trial-type proceedings seem to provide little help in overcoming this kind of inertia, particularly when the evidentiary hearing is not held until a particular plan is substantially underway. In AEC nuclear reactor licensing, for example, differences among the staff, the applicant, and the Advisory Committee on Reactor Safeguards concerning safety features are worked out in an extended prehearing process that has been described as "bargaining."¹²¹ By the time that a trial-type hearing is held on the issuance of a construction permit and public intervenors are allowed to participate, the parties to the negotiation are not likely to embrace alternatives that would require substantial revision of the plans they have worked so long to perfect. In this situation, it is not surprising to learn that intervenors often view the hearing as a "stacked deck" and resort to "no win" delaying tactics rather than trying to make useful contributions to the plan in question.¹²²

The corollary of this tendency to inflate the past is the administrative failure to assign sufficient weight to the future effects of proposed action. This result may be caused in part by a propensity among organizations to avoid conditions of uncertainty by trying to

120. If substantial sunk costs have been accumulated for the first project by the time that the advantages of an alternative plan are discovered, however, it may be economically more rational to go forward with the partially implemented plan instead of scrapping it and beginning anew. An analogous problem has arisen in the environmental field because the National Environmental Policy Act does not contain any provision describing what should be done with respect to projects which were underway, but had not yet completed their progress through the agency decision-making process, on the Act's effective date. One approach has been to acknowledge that agencies can take account of resources already committed in weighing the alternatives then available. See, e.g., *Calvert Cliffs' Coordinating Comm. v. AEC*, 449 F.2d 1109, 1121 n. 28:

A total reversal of the basic decision to construct a particular facility or take a particular action may then be difficult, since substantial resources may already have been committed to the project. Since NEPA must apply to the project in some fashion, however, it is essential that it apply as effectively as possible—requiring alterations in parts of the project to which resources have not yet been inalterably committed at great expense.

121. Ellis & Johnston, *Licensing of Nuclear Power Plants by the Atomic Energy Commission*, April 1971, at 13-14 (report to the Chairman, ACUS). Similar phenomena have been reported in Bureau of Reclamation decision-making on irrigation projects and in FDA food standards proceedings. See Smith, *Environmental Decision Making at the Bureau of Reclamation*, July 14, 1971, at 12-13 (report to the Executive Secretary, ACUS); Hamilton, *supra* note 5, at 45-46, 95-96. Cf. J. SAX, *supra* note 114, at 102: "[T]he agencies' self-interest encourages them to confront the public with a *fait accompli*. Both public and private agencies are well aware of the benefits of surprise and of the weight that tends to be given the argument that much time, effort and money [have] *already* been invested in a proposal." (Emphasis original.)

122. Ellis & Johnston, *supra* note 121, at 40-42.

“operate so as to provide short-run feedback rather than face the uncertainty of long-range planning.”¹²³ Undoubtedly, it is also due to the fact that the short-run consequences will be most important to the powerful constituencies that shape an agency’s activity. However, it also seems true that trial-type procedures can contribute to the agencies’ relative indifference to long-range future effects of their decisions, since adjudication casts the decision maker into a passive “umpire” role, and makes it likely that the immediate, highly vocal claims of the regulated industry will prevail over the diffuse, long-range and unrepresented interests of affected segments of the public.¹²⁴

A final facet of the administrative use of trial-type hearings suggests that adjudication can be viewed as making an important contribution to the accuracy of decisions reached at later stages of the proceeding or in the larger arena of general legislative policy formulation, even though the immediate result of the hearing may not be particularly valuable. For example, the 1957 licensing amendments to the Atomic Energy Act¹²⁵ required hearings regardless of whether any parties or intervenors were opposing issuance of the license, and, despite the persuasive objection that a trial-type hearing in the absence of disputed facts or issues is a doctrinal and logical absurdity,¹²⁶ there was some substance to the belief that these hearings could improve the quality of the ultimate decision:

In part it seems to have been felt that, given the newness of the [atomic] power program, members of the public might be insufficiently aware of their interest to respond to a notice of intention to license, so that a hearing was necessary to make them aware that their interests were affected. The dominant objective seems to have been to ensure that important AEC decisions would be made publicly.¹²⁷

123. Bower, *supra* note 107, at 132-33. See also Noll, *supra* note 119, at 1022: “The second factor behind the general attitude of regulatory agencies towards technological change is the belief that regulators should reduce as much as possible the uncertainty faced by regulated firms.” Perhaps this notion of feedback and uncertainty helps to explain why the agencies continue to rely heavily on adjudication, despite the commentators’ frequent exhortations that they use rule-making.

124. See, e.g., R. NOLL, *supra* note 46, at 80:

[A]s regulation has developed, regulatory agencies have behaved more like neutral, passive judges of the conflict of interests among firms in, or touched by, regulated industry. . . . The procedural safeguards for the regulated firms affect the flow of information to the passive judgmental body, giving that body an impression of the regulatory environment that is overly favorable to regulated interests.

125. Pub. L. 85-256 § 7, 71 Stat. 579, amending 42 U.S.C. § 2239(a) (1970).

126. See Davis, *Nuclear Facilities Licensing: Another View*, 110 U. PA. L. REV. 371 (1962).

127. Murphy, *Atomic Safety and Licensing Boards: An Experiment in Administrative Decision Making on Safety Questions*, 33 LAW & CONTEMP. PROB. 556, 574 (1968).

A similar rationale for the use of adjudicative procedures is found in Joseph Sax's belief that judicial review is particularly valuable for polycentric environmental issues because it provides time for environmentalists to seek an ultimate resolution through the political process and offers a means of focusing legislative attention on the problem.¹²⁸ If this is a valid proposition for judicial review, it should also be true, although to a lesser extent, with respect to administrative trial-type hearings. In other words, the existence of a trial-type proceeding may contribute to a more accurate political resolution of the problem by forcing affected interests to ponder the issues and articulate their preferences.

In short, then, accuracy is a subtle problem that can be approached from many perspectives, and analytic results will depend largely upon how one characterizes the objective of the proceedings. Moreover, barring the rare situations in which testing, experiment, or other scientific techniques can provide an irrefutable answer, accuracy is a relative goal. The question is not whether administrative trial-type hearings are an accurate form of decision-making, but, rather, whether they are more or less accurate than some other procedural form.

B. *Efficiency in Decision-Making*

The criterion of efficiency reflects the general proposition that decision-making objectives should be attained at the least possible cost to avoid waste of scarce social resources. Initially, efficiency dictates a careful assessment of how much accuracy is needed for a particular type of decision, for the cost of deciding may increase sharply as accuracy requirements are raised. For example, in resolving scientific or technical issues, it is possible that the cost of decision-making will double if it is necessary to go from an eighty per cent to a ninety per cent certainty that a particular event will or will not occur. Once the threshold question of level of accuracy is resolved and it is determined which procedural features are necessary to assure that the decisional process will be acceptable to affected constituencies, the efficiency criterion dictates that continuing efforts be made to find quicker and cheaper ways to satisfying these objectives.

Trial procedures are undeniably an expensive means of deciding

128. J. SAX, *supra* note 114, at xviii:

Courts are not to be used as substitutes for the legislative process—to usurp policies made by elected representatives—but as a means of providing realistic access to legislatures so that the theoretical processes of democracy can be made to work more effectively in practice. Citizen initiatives in the courts can be used to bring important matters to legislative attention, to force them upon the agendas of reluctant and busy representatives.

polycentric issues. Even proponents of adversary processes point out that litigation "is relatively extravagant in the time it is willing to invest in letting interested persons state, be tested on, and restate their positions."¹²⁹ Whether adjudication is also inefficient is, of course, a different question. Many commentators, including former regulatory commissioners,¹³⁰ have criticized various inefficiencies of the adjudicative hearing. More recently, their complaints have been adopted by members of regulated industries who have found that trial procedures can be used by public intervenors to increase enormously the cost and complexity of proceedings.¹³¹ On the other hand, many experienced practitioners and agency personnel believe that the properly conducted trial-type hearing, with its direct, immediate confrontation of opposing interests and its ability to focus precisely and in depth on the "gut issues" of a controversy, is often the quickest and easiest route to a good solution.¹³² Unfortunately, there has been little attempt to discuss the admittedly difficult problems of whether various proposed reforms in decision-making would really improve efficiency substantially, and whether they might impair either the accuracy or acceptability of the system. Further understanding in these areas probably will have to await the application of sophisticated statistical techniques.¹³³

C. *Acceptability of Procedures*

An important, yet relatively amorphous, aspect of any decision-making process is that it must be acceptable—that is, perceived as legitimate—both to those who are directly affected by agency deci-

129. *Id.* at 221.

130. *E.g.*, Elman, *supra* note 48, at 653-54; Hector, *supra* note 75.

131. *See, e.g.*, Address by William F. Kennedy, Associate General Counsel, General Electric Co., before the ABA-ALI Program on Atomic Energy Regulation, Nov. 13, 1971, *Nuclear Electric Power and the Environment—New Regulatory Structures and Procedures*, at 11:

The number of issues now available for contest under NEPA and the Atomic Energy Act is nearly endless; between them, the Atomic Energy Act and the Administrative Procedure Act contemplate that many of these issues will be litigated in a trial-type proceeding with a whole apparatus of devices which can be manipulated to produce years-long delay—prolonged discovery, prehearing conferences, numerous pre-trial motions, appeals from decisions on motions, objections to evidence, rulings on evidence, extended cross-examination, briefs, intermediate decisions, exceptions to intermediate decisions, briefs on appeal, etc., etc. This is not all; some issues can now be litigated before one tribunal and relitigated before another, and the same issue can be tested over and over again plant-by-plant-by-plant.

132. *See, e.g.*, Zwerdling, *supra* note 62.

133. The Administrative Conference currently is considering a proposed statistical project, which would attempt to measure administrative delay and performance, in an effort to establish correlations between particular procedural devices and undue delay. *See generally* Nagel, *Measuring Unnecessary Delay in Administrative Proceedings: The Actual Versus the Predicted*, POLICY SCIENCES, March 1972, at 81.

sions and to the general public as well.¹³⁴ In part, acceptability may correspond to the other criteria since, on the whole, people want the government to make decisions efficiently and accurately. Beyond this, however, considerations of acceptability raise complex questions of political theory regarding the exercise of governmental power that are the subject of both scholarly and political debate.¹³⁵ Therefore, only a few general observations concerning the acceptability of adjudicative procedures will be made here.

As noted above, the use of adjudicative procedures can be viewed as an important method of limiting bureaucratic power. First, many of the important stages of adjudicative procedures take place on the public record and are thus open to public scrutiny. At the same time, there is institutional pressure to base the decision solely on record material that is presented to a passive decision maker who has little direct control over the content of the evidence he receives.¹³⁶ There is also the pressure toward consistency that results from the need to build upon prior case law and the deterrent implicit in the possibility of having the administrative decision reversed by a court or legislature. Finally, there is—at least in theory—a check upon the tribunal's policy-making power because the agency is required to

134. Cf. Bauer, *supra* note 106, at 13: "Even a dictator can only, at best, defer negotiation. It is true that he may be able to impose his will for a long time, perhaps even for the duration of his life. But to the extent that his policies do not build him a base of support, he will have to spend organizational resources to maintain his position."

135. For example, an interesting theoretical approach is Robert Dahl's development of the "criterion of personal choice." Dahl posits that the most acceptable type of decision is personal choice; however, since it is clearly impossible to realize personal choice in many situations arising in a mass society, the best alternative is a democratic system that assures some participation in the decisional process, either directly or through representatives. At the same time, however, there are many situations in which a rational person will prefer that important decisions affecting his interests be made by a person or group possessing a particular skill or special competence. The administrative decision evidences a tension between these objectives:

[I]n order to be effective representative bodies need to delegate authority still further to administrative bodies. . . . When members of a democratic body delegate some of its authority in order to effectuate their purposes, they will want to insure that the authority is employed for the purposes they have in mind. Delegated authority is subordinate authority. In this sense, delegated authority entails hierarchy. And the more dangerous the authority, or the more open it is to abuse, the stronger we may want the controls within the hierarchy to be.

R. DAHL, *AFTER THE REVOLUTION?* 94 (1970). See also *id.* at 8-10.

136. Cf. *Cinderella Career & Finishing Schools, Inc. v. FTC*, 425 F.2d 583, 588-89 (D.C. Cir. 1970):

[W]hen a proceeding which involves sixteen days, 1,810 pages of testimony, fifty-two witnesses, and 247 exhibits, has been established, the Commissioners are not free to boil over in aggression and completely dismiss those proceedings [on appeal] either because they are dissatisfied with the outcome, or for any other reason. . . . The result, legally, is a ragged and confusing mosaic defying the very archetype of due process, abandoning the merit in hearings of the power of persuasion for the persuasion of power

implement the policies established by the legislature. Because polycentric issues place strains on the adjudicative process, they may also defeat the purpose of these checks. This phenomenon is not readily apparent, and so there may be no impairment of acceptability; however, critics are beginning to suggest that the appearance of objectivity and fairness that results from use of trial procedures is a dangerous fiction that obscures the essentially political nature of much regulatory activity and therefore dilutes any efforts to exercise more effective oversight through the political process.¹³⁷

Another value that can be perceived in the trial process arises from the pervasive American belief that individuals and organizations have a fundamental right to participate in the decision of issues that affect their well-being. Adjudication guarantees this right to participate at all important stages of the decisional process; moreover, because adjudicative decision-making takes place on the public record and employs a reasoning process of applying principles to facts, the parties have assurance that their participation will be meaningful. Finally, there seem to be other intangible values inherent in trial procedures: private litigants may gain satisfaction from having the right to force agencies to come forward and formally justify their positions,¹³⁸ and there may even be psychological benefits in the "battle atmosphere" of adversary litigation.¹³⁹ However, to

137. *E.g.*, Reich, *supra* note 25, at 1237-38:

When it is used in areas of policy making, [judicialized] procedure serves primarily to preserve the mythology about how government operates. It prevents us from seeing resource allocation as a process by which some are punished and others rewarded for reasons which have no relation to objective merits but have relation only to government policy. It preserves the appearance of the rule of law, making it seem that the immensely important allocation and planning process is being carried out at all times subject to fair and equitable guiding principles.

Cf. R. NOLL, *supra* note 46, at 33: "[M]ost analysts believe that the independent regulatory agency was the creature of several pervasive and rather naive political attitudes running deep in American society. First is the general distrust of the political system coupled with a faith in nonpolitical expert judgments."

138. *Cf.* J. SAX, *supra* note 114, at 57:

[T]he availability of a judicial forum is a measure of the willingness of government to subject itself to challenge on the merits of decisions made by public officials; to accept the possibility that the ordinary citizen may have useful ideas to contribute to the effectuation of the public interest; and to submit to them if—in the rigorous process of fact gathering—those ideas are shown to have substantial merit. . . . [Litigation] is in many circumstances the only tool for genuine citizen participation in the operative process of government.

See also note 5 *supra*.

139. *Cf.* J. FRANK, *COURTS ON TRIAL* 376 (1949):

Goitein suggests that the ceremonial of the court-room contest, with its vestiges of the ancient ordeal, have immense emotional value for litigants. . . . The formal court process we now employ does sometimes yield emotional satisfaction to a litigant which he would not receive from a decision based on a less formal determination of the facts. . . . [P]erhaps, also, [the public] emotionally craves a decisional process which includes some ceremonial rites.

the extent the critics are correct in asserting that trial procedures are simply inappropriate for the resolution of polycentric issues, adjudicative hearings can become what Jerome Frank has called "verbal legal magic," which is used like magic in primitive communities "to end the uneasiness which a man would experience in the presence of disconcerting phenomena, to supply him with grounds for expecting victories over the causes of his fright."¹⁴⁰ In other words, resort to the familiar and comforting rituals of trial proceedings may reflect a transformation of the wish that adjudication would accomplish a number of diverse and conflicting social objectives into the belief that it actually does so.¹⁴¹ A comparison may be made to the use of trials in the middle ages for relief against pestilence, rats, toads, witches, and bad neighbors.¹⁴²

Thus, while in some respects trial-type hearings appear to be a desirable form of social ordering for polycentric controversies, it is obvious that they are not generally accepted as ideal. The time is ripe for investigation and experimentation designed to determine whether there are alternative forms of decision-making which would preserve many of the virtues of administrative adjudication, while avoiding its more serious vices. In recent years, a formidable amount of nonlegal literature has developed on the theory and practice of

In spite of all the foregoing, I surmise that, by and large, most litigants do want the courts to discover the true facts in their cases.

A number of interesting questions and problems for the social scientists can be imagined. For example, is this kind of catharsis a greater factor when the opposing party is some impersonal institution like "the government" or "the bureaucracy"? Is cross-examination of expert witnesses more satisfying because people tend to distrust expertise and dislike being in the control of one with specialized knowledge? Is the battle atmosphere of trial proceedings truly cathartic, in the sense of relieving tensions and aggressions that would otherwise find more destructive outlets, or does it instill an aggressive approach to problems that is incompatible with the need to compromise and cooperate in the vast majority of interpersonal contacts?

140. *Id.* at 62.

141. *See id.*:

I trust the reader will understand what I mean by designating as "magical" the statements of the legal thinkers I have been quoting. The statements are not based upon actual observation. And yet they are not deliberate falsifications. These assertions concerning the efficacy of the legal rules are reached by the wish-route; they derive not from experience but from wishes. . . .

. . . They want to believe that their desires are realized. Instead of saying, "This is what I *wish would happen* in court," they say, "This is what usually *does happen* in court." They run away from a close inspection of the actual legal world, because such inspection would compel them to confess to themselves that that world does not meet their desires.

142. F. HEER, *THE MEDIEVAL WORLD* 38 (1962). However, Warner Gardner has pointed out in commenting on an earlier draft of this paper that in our society witches and toads have ceased to be a social problem, and the ravages of rats and pestilence are generally held in check today; bad neighbors apparently constitute a more intractable problem, since people still resort to the courts for relief. Perhaps, in the long run, administrative trial-type hearings will compile an equally impressive record.

organizational decision-making, literature which often contains exotic nomenclature describing decision-making mechanisms such as "the Delphi techniques," "the cross-impact matrix technique," and "the iteration-through-synopsis scenario."¹⁴³ Many lawyers, and even a few practitioners of the arts that generate this kind of terminology,¹⁴⁴ tend to dismiss such phrases as annoying jargon at best, and dishonest salesmanship at worst. Nonetheless, there are several basic concepts in the behavioral sciences which are deserving of lawyers' attention.

IV. ALTERNATIVES TO TRIAL-TYPE PROCEDURES

Possible alternatives to agency adjudication seem to fall into two classes: "management models" and "consensual models."¹⁴⁵ The management approach relies upon the value of expertise and informal methods in decision-making rather than fostering public participation; consensual methods, on the other hand, depend upon heavy involvement of affected constituencies and tend to emphasize the social policy aspects of decision-making rather than the technical complexities of a problem.

A. *The Management Model*

Managerial decision-making is often proposed as a model for the agencies, but seldom explored in sufficient detail to warrant much confidence that the business world has a readily available answer to administrative malaise. Probably the best description of how management methods could be adapted to agency handling of polycentric problems has been provided by Louis Hector:

A well-run Government agency or military command or business would handle a project like [the CAB's *Seven States* route investigation] by first blocking out the boundaries of the problem, making a few broad policy decisions at the top level, and then designating a

143. H. LANFORD, *TECHNOLOGICAL FORECASTING METHODOLOGIES* 20, 22, 24 (1972).

144. See, e.g., C. PETERS & T. BRANCH, *BLOWING THE WHISTLE* 129 (1972), where a consultant in "the urban problems industry" describes the terminology used by the professional seeker of government grants:

[P]roposal writers have developed an amazingly useless vocabulary. Etymologically, its roots trace to early McNamaram and to the nonsense words of virtually every discipline. Such terms as "delivery systems," "interface," "stochastic," "meaningful analysis," "empirical," "heuristic," "feasibility," "time frames," "indicators," "decisionflows," and "alternative system models" roll on through the proposals.

145. Cf. Bauer, *supra* note 106, at 13:

In the absence of any method of determining a "best" public policy (even in principle), there are but two alternatives for selection of policies. The first is the delegation to or usurpation of this task by some small group of persons. The other possibility is negotiation among interested parties to arrive at some policy sufficiently satisfactory to enough of them so that they can or will impose it on the others.

project director or chief of staff in charge of planning. The director would assemble the necessary personnel, divide up the research, set up a system of supervision, provide for necessary coordination, and within a few months have all the basic data in hand. This would be processed and systematized by a planning group which would pull together the outlines of a program in conformity with general policies already established. If more facts were needed, they would be secured. As problems arose they would go to the project director who would refer on to the top policy group any new major policy issues By the time the plan was finished, the staff, the project director and the policy makers would all be in substantial agreement, and final approval would follow swiftly.¹⁴⁶

The first thing that should be noted about this discussion is that it is glibly vague with respect to some of the most important problems of agency decision-making. What kind of "broad policy decisions at the top level" should be made preliminarily? How are the needed facts to be secured? Who makes the decisions regarding which problems are to be "bucked" up the hierarchy to the "project director" or the "top policy group"? Moreover, the description is completely silent on the question whether the model contemplates the possibility that affected interest groups or members of the general public are to have any direct input into either the fact-securing or policy-deciding functions.

Beyond these criticisms, it is clear that the management model loses a great deal when it is transplanted wholesale from the business world to the sphere of public regulation. In the business world, if the market is functioning properly, there is a built-in check against bad decisions: a company that is either wrong or inefficient a disproportionate number of times will lose out in the competitive race, and either shape up or go under. There is little evidence that the pressure of congressional, executive, and public scrutiny has a comparable impact in forcing agencies either to make drastic reforms or to close up shop when they err or waste public resources too frequently. Moreover, the competitive market's check on business error or inefficiency is premised on the belief—at least in theory—that poor decisions and failures of individual firms are socially tolerable. A similar approach would lead to absurd results in many areas of agency decision-making. Illustratively, one could scarcely defend the proposition that the Atomic Energy Commission should be left alone to do whatever it sees fit with respect to the safety of nuclear reactors because a few nuclear disasters would in all likelihood lead to a dismantling of the AEC.

146. Hector, *supra* note 75, at 932-33.

A distinction between the business decision and the agency determination also exists in regard to matters internal to the organization. In the corporation, the individual is highly motivated to assure that he and his subordinates are both accurate and efficient in resolving problems within their jurisdiction: if they are not, he will quite likely be summarily demoted or dismissed. This approach, of course, is hardly practicable or desirable for the great majority of civil service employees. Moreover, the profit motive provides a business organization with a definite and agreed-upon goal against which to measure the relative desirability of alternative courses of action.¹⁴⁷ In administrative policy-making, conflicting and elusive goals must be balanced in the decision-making process, and the trade-offs among different plans are consequently far more problematical. Even when the agency is able to derive some general figure reflecting the net benefit of a proposed action, it still must take account of considerations of equity and distributive justice—factors which the business decision maker is free to ignore.¹⁴⁸ Also, the business world has available a number of readily quantified market, economic, and accounting indicators that can be used in setting goals and evaluating performance. Polycentric issues arising in the administrative context are hardly susceptible to this kind of easy monitoring, since many of the factors that must enter the decision are essentially unquantifiable.

It is interesting to note that, despite these distinguishing features, the management model already has a fairly close government ana-

147. See Zeckhauser & Schaefer, *Public Policy and Normative Economic Theory*, in *POLICY FORMATION*, *supra* note 106, at 27, 46:

The primary value of the price system is that it summarizes information in a form which can be readily conveyed to decision-makers throughout the economy. . . .

In the absence of a price system we find it difficult to establish consistency between different decisions. Yet policy decisions must continually be made that involve items that are not traded on any economic market, or for which explicit prices do not exist. If there is a divergence between the implicit valuations different decision-makers place on these items, we are in a sub-optimal position; it would be possible to carry out changes that satisfy the Pareto criterion.

148. Cf. G. BLACK, *THE APPLICATION OF SYSTEMS ANALYSIS TO GOVERNMENT OPERATIONS* 67 (1968):

From the point of view of national welfare . . . costs that are merely shifted are not avoided. This points to a fundamental difference between costing in support of private and public systems analysis. Comparisons of costs in systems analysis which seek to identify a socially optimum system should take as costs the value of all resources used to achieve an output, regardless of where the burden of those costs should fall. To be sure, rates of taxation, fees, and subsidies should be designed . . . so that the sum of direct private costs plus these transfer charges equals social cost and in seeking private profit, the maximum social benefit is also obtained. Not infrequently, there is technically no way to achieve this result, and even where there is, there may be political and social objections. A compromise with the desire to optimize may be necessary, in the interests of equity—a less than optimum system may be considered a *fairer* system.

(Emphasis original.)

logue in the Army Corps of Engineers' water resources projects.¹⁴⁹ "[T]he boundaries of the problem" have been "blocked out" by the congressional directive that sets forth the cost-benefit analysis that must be applied to a proposed project.¹⁵⁰ The first "broad policy decision at the top" is the Congressional Public Works Committees' authorization for a survey of the proposed project, which is generally made in the committees' executive session. The project then becomes the responsibility of a district engineer, who fills the role described by Hector as "project director." Once funding is obtained, the district engineer undertakes a survey of the project site to get "all the basic data in hand"; however, this project takes, not a "few months" as Hector projected for large-scale CAB route investigations, but an average of four and a half years. During this survey period, the district engineer performs the functions of "supervision" and "necessary coordination" primarily through a series of "check-point conferences" at which "staff assess their information on a particular subject and make choices."

The next step in Hector's model is that the basic data are "processed and systematized by a planning group which would pull together the outlines of a program in conformity with general policies already established." The Corps of Engineers approximates this function through a sequential and hierarchical scheme rather than the "horizontal" group apparently contemplated by Hector. The district engineer prepares a draft solution and impact statement, which is circulated to interested governmental bodies and then reviewed by the division engineer, the Board of Rivers and Harbors, the Office of the Chief of Engineers, the Office of the Secretary of the Army, and the Office of Management and Budget. This ladder of review could also be considered as fulfilling the function described in Hector's model of funneling unforeseen major questions up the hierarchy to the policy makers. "Final approval," or congressional authorization for construction, does "follow swiftly" in the majority of cases, and apparently continues with minimal questioning throughout the subsequent funding stages.

Is this analogue to the management model an efficient, accurate system? At last count, "[t]he average Corps project consumes nearly 18 years from inception to completion."¹⁵¹ Moreover, the seemingly

149. The description in text of Corps procedure is taken from a tentative staff memorandum prepared for the Administrative Conference during the summer of 1971, on file with the *Michigan Law Review*.

150. S. Doc. No. 97, 87th Cong., 2d Sess. (1962).

151. Memorandum, *supra* note 149, at 5.

businesslike cost-benefit ratio employed in decision-making has been criticized as "invalid and misleading,"¹⁵² based on erroneous economic theory,¹⁵³ and dominated in its formulation by those who stand to gain more from a larger project.¹⁵⁴ And, if economic criticism of the Corps' decision-making has been sharp, the environmentalists' accusations have been truly vitriolic.¹⁵⁵ Even the behavioral scientists have attacked the type of cost-benefit decision-making employed by the Corps as being ill conceived.¹⁵⁶

While it would be unfair to conclude that all of these problems result from inherent defects in managerial decision-making, it nevertheless seems clear that government use of management models can

152. O. ECKSTEIN, *WATER RESOURCE DEVELOPMENT, THE ECONOMICS OF PROJECT EVALUATION* 41, 48 (1958):

When a dam creates a lake, agencies look to the total expenditures which people make on fishing and swimming. But these expenditures are for travel, equipment, lodging, and so forth, and are not expenditures for the lake. A proper measure of benefit would be to indicate how much managers of the lake could collect in the form of user charges; since there are no charges for use of reservoirs or comparable bodies of water elsewhere, appropriate prices cannot be found.

... Measuring all benefits and costs "to whomsoever they may accrue" is not only beyond the present ability of economic science, but presents conceptual difficulties which by their very nature can never be overcome except by making very specific assumptions on matters about which the [Flood Control Act of 1936, §3 U.S.C. §§ 701a-f, 701h (1970)] does not prescribe.

See also Zeckhauser & Schaefer, *supra* note 147, at 69.

It should also be noted that some commentators have concluded that cost-benefit analysis is likely to be *more* accurate in evaluating water resource projects than in other areas of governmental decision-making. See R. DORFMAN, *supra* note 111, at 8.

153. Fox & Herfindahl, *supra* note 44, at 201:

It is the expressed policy of the federal water resources agencies to undertake only those activities and increments thereof for which the incremental benefits exceed the incremental costs. That is, the benefit-cost ratio, assuming proper measurement of alternative costs, must be over one for the whole project and for each of its subprojects. . . .

A proper application of the marginal principle requires something more, however: marginal net benefits must be zero. This means that it must not be possible to increase total net benefits by making the size of the project larger or smaller.

154. *Id.* at 200:

It is abundantly clear that those who benefit from federal water resources projects dominate the investment decision. The primary restraint is the professional integrity of the agency personnel who plan the project. . . . It is quite possible that the major departure from efficiency in federal water resources programs stems from optimistic estimates of benefits and the neglect of cheaper alternatives by conscientious federal employees who unfortunately function in a system in which most of the pressures are in one direction.

155. See, e.g., G. MARINE, *AMERICA THE RAPED: THE ENGINEERING MENTALITY AND THE DEVASTATION OF A CONTINENT* (1969).

156. Bauer, *supra* note 106, at 9:

[F]or complex problems involving large numbers of interested parties the concept of a single best solution is misleading. Quantitative techniques of decision making are of great value in solving many problems; however, they offer little prospect of serving as an impartial, irrefutable arbiter of the conflicts of interest involved in large policy problems.

See also text accompanying notes 106-09 *supra*.

be criticized as not meeting the criteria of accuracy, efficiency, and, most particularly, acceptability. The problems of checks, safeguards, and effective oversight to control bureaucratic power have not been effectively answered in the past by proponents of managerial decision-making, and seem more pressing today in light of recent controversies surrounding government procurement and failures of large corporations subject to governmental supervision. However, even if general reliance on business decision-making methods would create problems for federal agencies, there still may be more limited managerial practices and concepts that could usefully be employed in a wider range of administrative decisions.

One proven technique that may have great potential for improving the accuracy of administrative decisions is the use of spot checks as a quality-control device. The obvious areas for a spot-check approach are programs with a high volume of relatively uncomplicated individual cases, such as income tax returns or claims of entitlement to welfare benefits, but it seems likely that this technique also could be used to single out certain areas of complex polycentric problems for intensive examination. One commentator has noted that the Atomic Energy Commission's licensing boards use a similar approach in uncontested cases to assess the safety of atomic reactors, with apparently good results:

The work [of the boards] is designed, essentially, to spot-check the work of the applicant and the staff. The areas checked tend to vary with the type of reactor and the interest of the particular board members. Where the reactor involves a departure from previous practice . . . questions are apt to relate to the new feature. Otherwise they are apt to relate to areas within the special competence of the Board members, which are thought to pose safety problems [T]he objective is generally . . . to test the applicant's and the staff's understanding of and handling of specific problems

. . . . [This approach] reflects the feeling that—apart from its public information function—about all the hearing can accomplish is to make the staff and the applicant do their homework.¹⁵⁷

A similar suggestion is that the Army Corps of Engineers' managerial

157. Murphy, *supra* note 127, at 582-83. See also Davis, *supra* note 126, at 374-75: If extra care and thoroughness, further checking, additional reviewing, or special supervision of staff is required because of the importance of the safety problems to the public . . . then I would have management engineers, not lawyers, help the Commission work out the procedures. . . . [T]he safeguards will not be cross-examination and rebuttal evidence—they are more likely to be checks, double checks, checklists, supervision methods, written records of each step taken or not taken, and the like.

decision-making could be improved by providing an independent "auditing unit" that would periodically monitor planning activities by examining in detail the estimates and data employed.¹⁵⁸

However, there are risks of inaccuracy in any spot-check approach, and these risks may be more substantial when spot-checking is applied to polycentric controversies. A valid spot-check or quality-control system must be designed so that those who are being monitored will not be able to "beat the system" by anticipating which actions will be checked. For example, if it were generally known that the Internal Revenue Service would audit only those tax returns filed by individuals whose social security numbers ended in three even numbers, the utility of the auditing device would be greatly diminished, to say the least. When there are many small, basically similar actions to be taken, as in the tax return or welfare benefit situation, it is relatively easy to provide sufficient randomness in the spot-checking operation; in the polycentric controversy, on the other hand, it may not be possible to divide complex problems into discrete, fungible subunits. Moreover, it has been noted that any spot-check or quality-control system must take account of the natural tendency to focus evaluation on those output factors that are easily quantified, and this in turn distorts organizational aims toward output of the measurable factors.¹⁵⁹ The "soft variables" in a polycentric issue may receive insufficient weight under a spot-check approach.

A related body of knowledge that attempts to apply managerial techniques to governmental decision-making is the recent literature on "technology assessment." The basic goal of technology assessment is to provide early warning of the kinds of social, economic, and physical changes that can be caused by the introduction of new technologies, together with a decision-making apparatus that will enable government to structure and direct those changes from the earliest possible time. In essence, technology assessment seeks to deal with cases of extreme polycentricity—situations in which neither the details of a new technology, nor the range of its probable applica-

158. Fox & Herfindahl, *supra* note 44, at 206.

159. *E.g.*, A. ETZIONI, MODERN ORGANIZATIONS 9-10 (1964):

Frequent measuring can distort the organizational efforts because, as a rule, some aspects of its output are more measurable than the others. Frequent measuring tends to encourage over-production of highly measurable items and neglect of the less measurable areas

The distortion consequences of overmeasuring are larger when it is impossible or impractical to quantify the more central, substantive output of an organization

See also text accompanying notes 110-13 *supra*.

tion, nor the identity of potentially affected interests can be determined with any significant degree of certainty.¹⁶⁰

Technology assessment literature parallels the commentaries on cost-benefit analysis in counseling increased skepticism and caution as one moves farther away from situations in which market indicators such as price, output, and demand are available.¹⁶¹ While efforts have been made to develop "market surrogates" which would provide plausible quantification where none now exists, these analytical models are not yet considered sufficiently reliable to warrant extensive use.¹⁶² As a result, commentators in the field of technology assessment have usually resorted to formulating guides for making decisions in areas of extreme uncertainty.

A common tenet of technology assessment is that, when confronted with uncertainty, the decision maker should attempt to preserve his options; in effect, the historical practice of imposing the "burden of uncertainty" on those who oppose the introduction of a new technology is reversed.¹⁶³ The goal of preserving options dic-

160. See Katz, *Decision-Making in the Production of Power*, SCIENTIFIC AMERICAN, Sept. 1971, at 191, 192:

Technology assessment seeks to take advantage of the variety of options to increase benefits and reduce costs. It has two main components. The first is a systematic comparative appraisal of the first-order effects of technology (electric power [for example] . . .) in relation to the visible, discoverable and foreseeable side effects (air pollution, heating of streams or lakes and possible radioactive hazards in the present context). The second component is a search through the full range of technological possibilities for the one best designed to achieve the desired first-order effect while eliminating or minimizing the undesirable side effects.

See also HOUSE COMM. ON SCIENCE AND ASTRONAUTICS, 91st CONG., 1st SESS., REPORT OF THE NATIONAL ACADEMY OF SCIENCES; TECHNOLOGY: PROCESSES OF ASSESSMENT AND CHOICE 20 (Comm. Print 1969) [hereinafter ASSESSMENT AND CHOICE].

161. See, e.g., ASSESSMENT AND CHOICE, *supra* note 160, at 31:

The fact is that, with respect to major technological applications, we lack criteria to guide the choice between efficient resource allocation, ordinarily achieved best through some form of market mechanism (improved as necessary to compensate for external costs and benefits), and other objectives, usually achievable only through non-market mechanisms for expressing value preferences. Because we have a great many values other than economic efficiency, and no transactions in them that confront buyers and sellers, the idea of attempting to compute "net social benefits and costs" makes sense only as a very rough first approach.

162. E.g., *id.*; E. MURPHY, *supra* note 32, at 255:

It may be that the welfare economists are right in claiming that government can develop some sort of analog to the market which, through bargaining among representatives of contending interests, would allow an outcome which satisfies all interests. Even if the analog gave no more than a rough notion of the priorities attached to values and of the variety to be structured into decision-making, the help from welfare economics would be great. Unfortunately, the better argument may lie with those economists who say that such analogs are not possible.

163. ASSESSMENT AND CHOICE, *supra* note 160, at 32-33. The National Environmental Policy Act endorses this concept in part by requiring agencies to consider "any irreversible and irretrievable commitments of resources which would be involved in the proposed action." 42 U.S.C. § 4332(C)(v) (1970).

tates that investigation and evaluation of possible approaches to a problem should take place at the earliest possible stage of the decision-making process. If fundamental choices are delayed too long, they may fall prey to the "tyranny of small decisions," a term which refers to the phenomenon of "incremental choices that, taken by themselves, may seem unworthy of notice but, taken altogether, may create problems of major proportions."¹⁶⁴ The concept of early assessment of alternatives should be coupled with a process of continuous monitoring in order to test the validity of the early analysis and to discover later problems as they emerge.¹⁶⁵

While the terminology of technology assessment may be novel, however, these basic concepts have often been acknowledged—perhaps with insufficient emphasis—in administrative law. The real problem is determining when they should be applied. For example, it is obvious to most observers and participants in AEC reactor licensing that all parties would benefit from resolution of environmental issues at the earliest possible time; however, there has been considerable dispute over the question of when a nuclear power plant's design is sufficiently complete to support a detailed investigation of its environmental effects.¹⁶⁶ By the same token, a tentative agency approval that would permit subsequent monitoring and alteration of plans¹⁶⁷ may be impossible to distinguish from action that is tentative in form, but in fact creates irreversible momentum that will foreclose alternative approaches.¹⁶⁸ Finally, the principle advocated by some commentators on technology assessment—that the basic questions are political rather than technical or legal¹⁶⁹—provides

164. ASSESSMENT AND CHOICE, *supra* note 160, at 10, 69-70.

165. *See id.* at 51:

It seems clear that our theoretical understanding will never be so complete as to obviate the need to install and maintain comprehensive and sensitive monitoring systems . . . to detect low-level perturbations and thereby make possible reliable early warnings of potentially deleterious trends . . . which our basic research did not enable us to anticipate.

166. *See generally* Berg, Boyer & Johnston, *supra* note 4, at 20-32.

167. *See, e.g.*, National Air Carrier Assn. v. CAB, 436 F.2d 185, 192-93 (D.C. Cir. 1970); American Airlines, Inc. v. CAB, 359 F.2d 624, 633 (D.C. Cir.), *cert. denied*, 385 U.S. 843 (1966).

168. *See* Pennsylvania Gas & Water Co. v. FPC, 427 F.2d 568, 574-76 (D.C. Cir. 1970).

169. *E.g.*, Address by Professor Harold P. Green before the Technology Assessment Seminar Series, George Washington University, March 19, 1969, *The Adversary Process in Technology Assessment*, at 3:

Since the issue is one of benefits to the public versus costs (including risks) to the public, the focus of technology assessment should be to arrive at a conclusion as to what costs (including risks) the public is prepared to assume in exchange for what benefits. In our democracy, such decisions cannot appropriately be made by an elite body of specialists and generalists (who are specialists in technology assessment). They should be made by the public itself expressing its views through its elected representatives in Congress who are accountable to their constituents. This

little guidance for the agency that has been given the duty of resolving polycentric controversies.¹⁷⁰

Another discipline that seems at first impression likely to provide useful insights into the possible adaptation of modern management techniques for resolving polycentric controversies is decision theory, which has been described as a body of knowledge dealing with "the proper course of action to be taken by a decision maker who may gain or lose by taking action upon uncertain data that inconclusively support or discredit differing hypotheses about the state of the real but nonetheless unknowable world."¹⁷¹ In other words, it seeks to provide scientific methods for dealing with uncertainty. It builds upon the "subjective theory" of probability, which seeks to analyze the degrees of belief that a rational, coherent decision maker would possess in varying factual circumstances,¹⁷² including a situation in which probabilities are continuously re-evaluated as new data become available.¹⁷³

In addition to analyzing the decider's belief in the probability of specified occurrences or propositions, decision theory also attempts to account for the manner in which he perceives the utilities of various possible decisions that are available to him.¹⁷⁴ The probability and utility of each possible outcome combine to create a preference value for that outcome, and these preferences can be compared to assess the relative desirability of different decisions.¹⁷⁵ For example, in a murder trial the fact finder may have four possible choices (first or second degree murder, manslaughter, and innocence), each of which may or may not correspond to factual reality, making a total of sixteen possible combinations of verdict and fact. Obviously, the possible decisions with the least "utility" will be those in which an innocent man is found guilty, and the more serious the verdict is in each of these cases, the less utility there is in that particular decision. Thus, it logically should require a higher degree of belief in

requires that the entire assessment process take place in the open with full articulation in language the public can understand of the benefits and costs (including risks).

See also ASSESSMENT AND CHOICE, *supra* note 160, at 81-82.

170. See generally Murphy, *supra* note 4.

171. Kaplan, *supra* note 49, at 1065.

172. Cullison, *Probability Analysis of Judicial Fact-Finding: A Preliminary Outline of the Subjective Approach*, 1969 TOLEDO L. REV. 538, 551-54.

173. *Id.* at 556.

174. *Id.* at 557-58.

175. Kaplan, *supra* note 49, at 1079.

probable guilt to convict a possibly innocent man of first degree murder than to convict him of manslaughter.¹⁷⁶

The usefulness of trying to apply this kind of analysis to polycentric problems seems doubtful. Even the preceding discussion, which was greatly oversimplified and dealt with a comparatively simple problem, suggests that the calculus can quickly become so complicated that it can be made workable only by distorting or misstating the problem to reduce the number of variables involved.¹⁷⁷ There is also likely to be a serious problem of ignoring or improperly accounting for "soft variables,"¹⁷⁸ and in many polycentric issues there is likely to be sharp disagreement even among experts over both probabilities and utilities. Finally, commentators have asserted that decision theory works best when it is used as a means of attaining "some external set of agreed-upon ends,"¹⁷⁹ rather than in making a trade-off among conflicting and disputed goals. For the most part, then, the rigorously quantified techniques of decision theory seem more likely to produce error and dissatisfaction in resolving polycentric controversies than traditional cost-benefit analysis.

A final body of management-oriented theory worth investigating is the loose conglomeration of divergent concepts and analytical approaches generally referred to as "systems analysis."¹⁸⁰ While much of systems analysis is concerned with situations in which the desired output and the relevant variables can be specified with precision,¹⁸¹

176. *See id.* at 1078-80.

177. *See* Fuller on Adjudication, *supra* note 23, at 41.

178. *See* text accompanying notes 110-13 *supra*.

179. Tribe, *supra* note 49, at 1391. *Cf.* Cullison, *supra* note 172, at 539:

There are two kinds of problems involved in probabilistic decision-making. *First* is the matter of determining what threshold probability is needed to justify a decision to take action. . . . This phase of decision-making involves value as well as probability considerations. . . . *Second* is the matter of assigning probabilities in one way or another to events or propositions upon which a decision is to be predicated.

180. *See generally* F. KAST & J. ROSENZWEIG, *supra* note 108; G. BLACK, *supra* note 148. The basic rationale of systems analysis is concisely stated in E. MURPHY, *supra* note 32, at 231:

Underlying these [systems analysis] models is the notion that there is a need to take into orderly account the important relationships among the individual economic, institutional, or technical elements of processes, structures and problems. The various elements and their relationships compose systems, and the organized methodical study of these holds out promise for more completely based governmental decisions.

181. *E.g.*, G. BLACK, *supra* note 148, at 7:

The first phase of a systems analysis is understanding and translating into analytically meaningful terms the objectives that are sought by some as-yet-undefined complex of equipment and/or activity, taking into account the environment in which it is to operate. . . . [The next stages are]:

1. the creation of an analytically manageable model of the interrelations between major elements of the system and the external world;
2. quantification of functional relationships between rate of system operation and system "outputs";

other aspects seem to have some relevance to polycentric problems. One concept that seems basically analogous to administrative resolution of polycentric controversies is "the heuristic approach to system design," a decision-making method "that uses principles to provide guides for action. Its principles provide action guides even in the face of completely unanticipated situations and in situations for which no formal model or analytic solution is available."¹⁸² This approach obviously has a rough counterpart in the adjudication of polycentric controversies, where there is typically a list of factors that the decision maker must consider, but no fixed formula for reaching a result. As developed in the field of computer programming, heuristic approaches are based on the development of goals and subgoals, paralleling the methods that behavioral studies have found human beings use in seeking solutions to complex problems:

Problem solving proceeds by erecting goals, detecting differences between present situation and goal, finding in memory or by search tools or processes that are relevant to reducing differences of these particular kinds, and applying these tools or processes. Each problem generates subproblems until we find a subproblem we can solve. . . . We proceed until, by successive solution of such subproblems, we eventually achieve our over-all goal—or give up.¹⁸³

Applying this analytical approach to a polycentric problem such as the environmental impact of a proposed power plant produces a basically pyramidal structure topped by the ultimate issue to be decided, which could be summarized as "what is the optimal trade-off between economic benefit and damage to the environment?" At the next level of generality, the problem would divide into environmental factors and economic considerations; and each of these would further subdivide into constituent parts so that, for example, environmental factors could be divided into the characteristics of the plant and the characteristics of the site, and then the latter problem further broken down into ecological, scenic, and historic values, and

3. quantification of functional relationships between rate of system operation and system "inputs";

4. the combination of (2) and (3) into an over-all input-output relationship. . . .

5. the determination from the input-output relationship of optimum system design and rates of inputs and outputs that correspond to an optimum operation of that system.

182. R. BOGUSLAW, *THE NEW UTOPIANS: A STUDY OF SYSTEM DESIGN AND SOCIAL CHANGE* 13 (1965). "Heuristic" approaches are contrasted to "formalist" systems which are useful in "established situations" in which "all action-relevant environmental conditions are specifiable and predictable; all action-relevant states of the system are specifiable and predictable; [and] available research technology or records are adequate to provide statements about the probable consequences of alternative actions." *Id.* at 7. Cf. note 144 *supra*.

183. H. Simon, *The New Science of Management Decision*, quoted in R. BOGUSLAW, *supra* note 182, at 74-75.

so on. The aim would be to generate a number of small, manageable subproblems at the base of the pyramid, each of which could presumably be assigned to different staff units for resolution through whatever type of decision-making process is best suited to the subject matter at hand.

Some agencies are currently exploring similar models of environmental decision-making. The Atomic Energy Commission recently issued draft guides for the preparation of environmental statements which seek to direct license applicants into the detailed analysis of manageable subproblems.¹⁸⁴ Perhaps the most striking feature of these guides is the staggering range of detail and analysis they require. For example, the section on "Ecology," which only occupies about a half page out of nearly forty printed pages comprising the body of the guides, directs the license applicant to provide the following information:

[T]he applicant should identify the important local flora and fauna, their habitats and distribution as well as the relationship between species and their environments. A species, whether animal or plant, is "important" if it is commercially or recreationally valuable, if it is rare or endangered, if it is of specific scientific interest or if it is necessary to the well-being of some significant species (e.g., a food chain component) or to the balance of the ecological system.

In cataloging the local organisms, the applicant should identify and discuss the abundance of the terrestrial vertebrates, provide a map that shows the distribution of the principal plant communities, and describe the plant communities, and animal populations within the aquatic environments. The discussion should include species that migrate through the area or use it for breeding grounds.

The discussion of species-environment relationships should include descriptions of area usage (e.g., habitat, breeding, etc.); it should include life histories of important regional animals, their normal population fluctuations and their habitat requirements (e.g., thermal tolerance ranges); and it should include identification of food chains and other interspecies relationships, particularly when these are contributory to predictions or evaluations of the impact of the nuclear plant on the regional biota.

Identify any definable pre-existing environmental stresses from sources such as pollutants, as well as any ecological conditions suggestive of such stresses. Describe the status of ecological succession. Discuss any important histories of disease occurring in the regional biota as well as vectors or reservoirs of disease, or serious infestation by pest species.

The sources of information should be identified.¹⁸⁵

184. Atomic Energy Commission Directorate of Regulatory Standards, Guide to the Preparation of Environmental Reports for Nuclear Power Plants (issued for comment August 4, 1972).

185. *Id.* at 8-9.

Properly fulfilling these information-gathering duties—for what is only a small part of the environmental report¹⁸⁶—would probably require an investment of several man-years, and it is not entirely clear how this data should be evaluated by either the license applicant or the AEC in reaching a general decision on ecological impact. Most of the factors set forth could be considered adjudicative facts since they relate to particular aspects of the license applicant's activity; moreover, affected interests or members of the general public could have a useful role to play in this type of inquiry by marshaling additional data or exposing erroneous assumptions. Yet, it requires no great imagination to generate a nearly interminable array of questions and issues which a delay-minded opponent could litigate if he were allowed to test the adequacy of the ecological analysis in trial-type hearings, particularly if the inquiry were broadened to encompass possible alternative sites and alternative modes of power generation.¹⁸⁷ Thus, even when polycentric problems are carefully subdivided, there may be no simple or completely satisfactory answer to the procedural questions.

A similar difficulty in the pyramidal, system-analysis approach is caused by the relationships existing among the small "subproblems" at the bottom of the pyramid. A common premise of systems analysis is that the subproblems are discrete questions for which an optimal answer can be found without substantial reference to or impact upon the other subproblems that are being simultaneously resolved.¹⁸⁸ In the kinds of environmental questions discussed above, however, this kind of divisibility may be unattainable. For example, a conclusion that a power plant should be equipped with cooling towers to avoid unacceptable thermal effects on aquatic life would require an extensive re-evaluation of scenic considerations, since cooling towers are unsightly, and of economic factors, since they are expensive. The problem is that many environmental and safety questions seem to involve this kind of indivisible, synergistic relationship among constituent factors which resist division into manageable subproblems.

Thus, systems analysis approaches may be useful not so much in providing a usable design for decision-making procedures as in

186. In AEC practice, the license applicant prepares an "environmental report"; this is submitted to the AEC staff, which drafts and circulates an environmental impact statement. See generally 10 C.F.R. § 50, app. D (1972).

187. See, e.g., Murphy, *supra* note 4, at 13-23.

188. E.g., G. BLACK, *supra* note 148, at 26:

[S]ystems analysis is rooted in an enormous detail of subsystem analysis in which subsystem engineers optimize the portion of a system which is their responsibility, and by having done this, enable a system engineer to optimize, in simpler terms, the system as a whole. For systems analysts to arrive at optimum system specifications, however, the subsystems analysts must have this capability also.

forcing a methodical, logical effort to investigate the possible ways in which complex problems can be broken down into component parts. In many situations, the result of this kind of analysis may be the conclusion that detailed, issue-by-issue analysis is so costly in time and resources that efficiency dictates a more summary—and perhaps less accurate—method of resolving the question.¹⁸⁹

B. *Consensual Models*

In contrast to the managerial methods of decision-making, which rely upon the application of expert judgment, there are numerous procedural forms depending upon decision-by-concord that can be adapted to the administrative context. In extreme form, the consensual approach would result in deregulation so that broad resource-allocation and value trade-off decisions would occur as a product of the myriad of consensual arrangements entered into by private parties. Since administrative regulation has been imposed as a result of perceived failures in the market system, it seems doubtful that the free-market approach can have more than peripheral impact on administrative problems.¹⁹⁰ However, this does not mean that other consensual approaches that provide for decisions based on a system of voting or negotiating cannot be useful in the administrative process.

In rare instances, the consent of affected interests as reflected in a referendum or other direct vote of the people can be given effect in the administrative process, as in *Citizens for Allegan County, Inc. v. FPC*.¹⁹¹ The case arose out of FPC approval of a license transfer and merger resulting from a city's sale of an electric power plant it had owned and operated; the sale had been approved by a city referendum and opponents of the sale thereafter sought to intervene in the FPC proceeding. They were denied opportunity to present evidence and argument by the Commission, a decision which the court affirmed largely because of the "unique feature" of the referendum. However, the court did acknowledge a "difference in focus" between the city and the FPC,¹⁹² and concluded that because the FPC was re-

189. See generally Murphy, *supra* note 4.

190. One area in which the possibility of deregulation is currently receiving serious attention is in economic control of surface transportation. See generally ASH COUNCIL REPORT, *supra* note 1, at 61-85.

191. 414 F.2d 1125 (D.C. Cir. 1969).

192. 414 F.2d at 1130:

The FPC is not interested alone in economic costs. It must consider other elements of the public interest, including specifically, here, the impact on the recreational use of the lake. The City has an even broader outlook. It may properly consider benefit to other public uses having no nexus whatever to the electrical system as such—e.g., the possibility of devoting the proceeds to schools, or hospitals, etc.

quired to consider the impact on nonvoters, it could not accord conclusive effect to the referendum.¹⁹³ The process of weighing the interest of “voters” and “nonvoters” seems a highly subjective undertaking, particularly in the context of a polycentric problem where the impact of a proposed action on a broad range of interests may be quite speculative.

An alternative to the “direct vote” or referendum approach is the practice of providing representation for affected interests within the administrative process. Professor Davis has praised the system of representative industry committees established under the Fair Labor Standards Act of 1938:¹⁹⁴

[T]he Act placed the primary authority in industry committees to be appointed by the Administrator. Each committee was composed of equal numbers of representatives of the public, of employees, and of employers, and a two-thirds vote was required. Altogether, 70 industry committees were appointed. The committees had power only to make recommendations, but the Administrator could approve or reject recommendations only in their entirety and could not revise them. . . .

[T]he experience proves that a successful marriage can be brought about between the democratic methods embodied in the device of the representative committee and the relatively scientific methods supplied by the economists and the statisticians who advise the Administrator. No wage order could be entered under the system without a concurrence of the ideas produced by these two methods. To the extent that members of committees used the procedures of bargaining and mediation within the committees, instead of merely studying the available materials to arrive at a purportedly judicial judgment on the questions at issue, the democratic process operated effectively, and at the same time the Administrator's supervision and final approval of recommendations protected against the excesses and irrationalities of democratic processes and assured a compliance with the basic will of Congress.¹⁹⁵

Even this successful example raises a number of questions, however. As the quotation suggests, there is a threshold question of the degree to which the “excesses and irrationalities” of democratic procedures should be tolerated. A system in which a “rational” agency and a

193. 414 F.2d at 1130:

In this vortex of factors affecting the public interest we think the Commission was entitled, in its determination of public interest, to accord significant weight to the determination made by the city council, and electorate, if carried out with fair procedures. The City's determination was not made decisive, nor could it be. Thus the Commission must take into account the impact of the proposal on consumers who were not voters—here commercial customers.

194. 29 U.S.C. §§ 201-19 (1970).

195. 1 K. DAVIS TREATISE, *supra* note 14, § 6.03, at 368-70.

potentially "irrational" representative body must concur in order to take action essentially means that needed activity can be vetoed on irrational grounds. Other forms of apportioning responsibility confront the *Allegan County* problem: what weight should be accorded a "democratic" decision when it is relevant, but not conclusive?

In addition, there are numerous questions surrounding the nebulous notion of "representativeness." If the committee members are to be appointed rather than elected, should safeguards such as bipartisan political affiliation or professional training or employment affiliations be imposed to ensure against the committee being "stacked" in favor of a particular result?¹⁹⁶ When one moves beyond purely economic regulation to issues such as safety or environmental impact, it makes little sense to use a tripartite committee composed of representatives from labor, management, and the public; the affected interests may well be so indeterminate and shifting that it will prove impossible to discern them in the absence of a particular issue. And within definable categories, such as "labor," there may be conflicting constituencies—for example, organized and unorganized labor, skilled and unskilled workers, and blue- and white-collar groups—who can make inconsistent claims on the right to have their interests represented. Finally, what account should be taken of the intensity of the represented constituencies' concerns? The two-thirds vote requirements in the industry committee system described above implies a belief that minority preferences should not be too easily overridden, but it still leaves open, for example, the possibility that public and labor members could effectively override management in a series of decisions, no matter how serious or valid the latter's apprehensions might be. Obviously, the persistence of this kind of situation could easily undermine the acceptability of the system.

The problem of selecting representatives can be avoided by creating a self-selection process in which those who believe their interests to be affected are provided an opportunity to articulate their concerns and voice their preferences. Notice-and-comment rule-making, which has been described as a "quasi-legislative (hence, political) process [in which] the group's viewpoint becomes a relevant datum simply because the group holds it,"¹⁹⁷ is the paradigm of this

196. Cf. Lehman, *Crime, The Public, and the Crime Commission: A Critical Review of the Challenge of Crime in a Free Society*, 66 MICH. L. REV. 1487, 1499-508 (1968), which provides an interesting discussion of the "art" of selecting a presidential commission so that the members will support a preordained result and win the support of various constituencies.

197. Cramton, *The Why, Where and How of Broadened Public Participation in the Administrative Process*, 60 GEO. L.J. 525, 536 (1972). See also *id.* at 531-32; Gellhorn, *Public Participation in Administrative Proceedings*, 81 YALE L.J. 359, 369 (1972).

type of consensual approach. It differs from the referendum or representative-committee system in not having an identifiable, even quantified, weight assigned to certain affected interests; rather, the task of weighing the expressed views is assigned to the agency, within broad limits of discretion, and thus the consensual attributes of the system can be undermined if the agency does not accurately perceive and weigh the affected interests.¹⁹⁸ The problem is compounded by the fact that the broad public interest standards governing many areas of agency activity, as well as the cases requiring agencies to seek "optimally beneficial" solutions to certain kinds of questions,¹⁹⁹ indicate that the agency decision maker should not rely solely on the views presented to him, but rather must discern and evaluate the concerns of unrepresented, unarticulated interests.

A final distinguishable method of resolving controversies by consent is a true bargaining approach in which affected interests negotiate solutions by compromise or agreement. Bargaining approaches take a variety of forms ranging from the situation in which the agency or some subdivision of it is a party to the bargaining, acting as a surrogate for affected segments of the general public, to the case in which an agency merely serves as a mediator between conflicting claims of private interests. In either type of situation, the process will usually differ from the familiar bargaining model of negotiating a labor contract. In labor bargaining, each side will have economic weapons to which it can resort in the event the other side fails to make good faith efforts, and there is some inherent pressure toward compromise implicit in the fact that the parties must maintain an ongoing relationship after the bargaining has concluded.²⁰⁰ The absence of these incentives to agree means that an alternative, nonconsensual form of decision-making must be available, and the form that this coercive process takes can have a great impact on the structure and content of the bargaining.²⁰¹ More-

198. Cf. Bernstein, *supra* note 12, at 593:

Most of the comparative advantages of rule making rather than adjudication as a means of policy making assume that the Board will utilize the rule making procedure effectively. If the Board holds a rule making hearing, for example, but does not carefully study the views of those who contribute them, the advantage of a variety of viewpoints is nullified.

199. See text accompanying notes 103-09 *supra*.

200. See generally Fuller, *supra* note 37.

201. Cf. Berg, Boyer & Johnston, *supra* note 4, at 22.

[T]he fact that active participation [in AEC reactor licensing hearings] by objecting parties can lengthen the hearing and thus impose increased costs on the applicant gives these parties, in the [applicant] utilities' view, an unfair bargaining advantage. Often the applicants feel that intervenors can use the bargaining leverage conferred by the prospect of protracted hearings to extract agreements to provide additional systems for the plant, such as cooling towers, which would not be cost-justified if the issue were considered on the merits.

over, where the agency bargains as a surrogate for affected segments of the public it may prove an ineffective bargainer,²⁰² or may be perceived by the public as ineffectual, thereby weakening either the accuracy or the acceptability of the decision. The alternatives to requiring the agency to bargain on behalf of unrepresented interests of the general public are either allowing affected interests to bargain on their own behalf, which raises questions of whether multiparty negotiations will be manageable,²⁰³ or acknowledging private groups to appear as representatives of affected interests, which raises problems about the degree to which they truly reflect the interests of affected constituencies.

In general, then, consensual decision-making can take a variety of forms in the administrative context, each with particular advantages and disadvantages. The troublesome problems seem to concern matters of accuracy and acceptability—the difficulties of identifying affected constituencies, discovering their preferences, and in weighing these preferences, both in relation to those of other constituencies and with respect to considerations other than the preferences of those affected.

V. CONCLUSION

That problems and shortcomings can be found in each of the major forms of administrative decision-making is not surprising;

202. The dynamics of the negotiating process, and the incentive structure affecting agency negotiators, can lead to a less than optimal result. See, e.g., Cavers, *Administering That Ounce of Prevention: New Drugs and Nuclear Reactors II*, 68 W. VA. L. REV. 233, 241-42 (1966):

The official, though low in the agency's hierarchy, has the power to hold up the approval or the permit. His view may not ultimately prevail but, by sticking to it, he can at least protract the proceedings. . . .

Perhaps the applicant's most important lever is a shared purpose: presumably in most cases both parties will want to see the application go through. . . . Hence, the applicant's experts and counsel may seek subtly to make the staff experts feel like obstructionists, magnifying difficulties that more practical men consider well within a reasonable zone of tolerance. . . . [If] he holds his ground, the industry negotiators can regretfully intimate that they will have to go higher up, perhaps, if the case is serious, beyond the walls of the agency itself. . . .

. . . [T]he choice will rarely be between intransigence and surrender. . . . Compromises . . . are inevitable, and probably are very often in the public interest. Unfortunately, if the staff is weak or its morale low, the staff may yield more than the public interest would allow.

203. Cf. Fuller, *supra* note 37, at 313:

The dyadic [*i.e.*, two-party] relationship is one eminently suited to mediation and often dependent upon it as the only measure capable of solving its internal problems. Indeed, one may ask whether mediation in the strict sense is really possible in ordering the internal affairs of any group larger than two. If *A*, *B* and *C* are all at odds with one another, it is extremely difficult for an outsider, say, *X*, to undertake a mediative role without becoming a participant in the internal maneuvers of the quarreling members. If *X* asks *A*'s acquiescence in a proposed solution, *A* may reply that he will give his assent if *X* will undertake to persuade *B* to withdraw a concession *B* made in favor of *C*. *X* may thus end by becoming a manipulated tool of those he sought to guide. In this predicament he may face the alternative of retaining the empty title of mediator or becoming, in effect, a fourth member of the group and a participant in its internal games.

unfortunately, it is always easier to criticize than to recommend. Perhaps the most difficult underlying problem is that polycentric controversies exhibit a blend of technical, factual, and political attributes that often seem nearly impossible to separate or accommodate within a single procedural framework. Ideally, Congress should speak more clearly and in greater detail to many of the polycentric value conflicts now thrust upon the agencies. Since this seems an unlikely possibility, however, the next best approach may be for the agencies to use mixed procedural forms that encompass both consensual and nonconsensual devices.

If movement in this direction is desirable, the next question is at what level it should be accomplished: either for all agency activity by amendment of the Administrative Procedure Act, or for particular agency functions as in the recent statutes prescribing specialized procedures for particular grants of rule-making authority,²⁰⁴ or through an effort to minimize statutory restraints so that the agencies can impose additional procedural requirements, whether they be managerial models, consensual approaches, or trial-type hearings, as dictated by the nature of a particular proceeding or specific issues. The commentators²⁰⁵ and some judicial decisions²⁰⁶ tend to support the latter approach, which at least seems the preferable course until enough experience is gained to warrant generalization.

This type of procedural flexibility could be substantially achieved under many of the existing statutes if agencies made a conscious and consistent effort to resolve polycentric controversies within the general format of notice-and-comment rule-making, supplementing the minimum rule-making procedures as it appeared desirable to do so. Even when trial-type hearings are required, it may be possible to approximate the same kinds of results by using the pretrial phases to provide appropriate managerial or consensual techniques, requiring high threshold showings before a party is allowed to litigate

204. See, e.g., 30 U.S.C. § 811 (1970) (coal mine health and safety standards); 29 U.S.C. § 655 (1970) (occupational health and safety standards). The objection to proceeding at this level of generality was expressed in the following terms by Dean Carl Auerbach at the Seventh Plenary Session of the Administrative Conference of the United States:

I do not think it would be a good idea to require the Congress, [in drafting] a statute which delegates rulemaking authority to administrative agencies, to determine at that time which one of the rulemaking techniques will serve all the purposes of that particular statute. I think that [the proper procedure] depends not on what is generally within the jurisdiction of the agency delegated to it by the statute, but [on] the nature of the particular rule in question.

Transcript, Seventh Plenary Session, ACUS, June 9, 1972, at 150-51.

205. See, e.g., Murphy, *supra* note 4; Clagett, *supra* note 9.

206. See, e.g., *American Airlines, Inc. v. CAB*, 359 F.2d 624 (D.C. Cir.), *cert. denied*, 382 U.S. 982 (1966). Cf. *Marine Space Enclosures, Inc. v. FMC*, 420 F.2d 577 (D.C. Cir. 1969).

some kinds of issues on the merits, and experimenting with intervention practice to permit a variety of forms of public participation.²⁰⁷ Significant progress in this area would require a willingness on the part of the agencies to take the initiative in devoting thought and effort to refining procedural techniques rather than merely using the minimum procedures mandated by law and responding to demands for procedural rights in an ad hoc fashion. It would also require sensitivity to the needs and interests of affected constituencies in situations where there are few firm benchmarks for the kinds of procedures that are appropriate. In a few areas, such as the FDA drug efficacy studies and environmental decision-making at the AEC, agencies are being forced into procedural reassessment and innovation by the complexity of the issues raised and by the hard-fought contests waged by competing interests. If agencies can respond effectively to these problems and benefit from accumulated experience, the traditional claim that administrative agencies can respond with flexibility and imagination to complex problems may acquire a new substance.

207. For example, some agencies, such as the AEC, provide for "limited appearances" in which intervenors may appear at hearings and either make statements or ask questions about the issues. See 10 C.F.R. § 2.715 (1972).

An imaginative variant of the "limited appearance" technique has been used in some Civil Aeronautics Board proceedings. Letter from Merritt Ruhlen, former CAB hearing examiner, to the author, June 16, 1972:

In 1969 the Board instituted a proceeding, *Part 298 Weight Limitation Investigation, Docket 21761*, to investigate permitting the air taxis greater latitude in providing scheduled services. Although [it was] primarily a rule-making proceeding, the Board, to obtain detailed information concerning the air taxi industry and its problems, set this matter down for formal hearing.

The Bureau of Operating Rights, (Board staff) and I used a questionnaire to get the basic information. [It] was circulated to the more than 1,300 air taxi operators registered with the Federal Aviation Agency. Approximately 425 replied and the Bureau analyzed the first 381 and submitted this analysis to all parties before hearing.

• • • • •
At the close of the hearings the Bureau moved the admission into evidence without cross-examination of all the factual material contained in all the questionnaires and the receipt of the other material as statements of position. Over objection the motion was granted.

An analogous use of opinion-polling techniques occurs in FCC broadcast licensing, where license applicants use sampling and other survey research methods to support the contention that their programming is responsive to local needs. See, e.g., *Citizens Committee v. FCC*, 436 F.2d 263 (D.C. Cir. 1970).