

Procedure: Transnational Perspectives and Preferences*

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In an attempt to identify constitutionally acceptable procedures for governmental decisionmaking, a critical assessment is underway of virtually all procedures for allocating government benefits (or imposing burdens). Initiated by the Supreme Court in noncriminal areas,¹ the undertaking has grown to involve other policymakers² as well as other areas of law.³ In a democracy, acceptable procedures can be identified only after considering the perceptions that participants have of the procedures and the relation of those perceptions to pref-

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1. The Supreme Court's recent focus on procedural due process can be dated from two landmark cases, *Sniadach v. Family Finance Corp.*, 395 U.S. 337 (1969), and *Goldberg v. Kelly*, 397 U.S. 254 (1970). In *Sniadach* the Court held that, absent a showing of special need, the garnishment of wages prior to a hearing was not permitted by the Fourteenth Amendment of the Constitution. In *Goldberg* the Court held that states must afford welfare recipients an evidentiary hearing before terminating benefits. The *Goldberg* opinion is particularly significant because the Court described in considerable detail the characteristics of a decisionmaking process that would satisfy the hearing requirement established in that case. *Id.* at 267-71.

2. For example, the Committee on Informal Action of the Administrative Conference of the United States is at the time of this writing conducting a major study of procedural issues. See, e.g., 40 Fed. Reg. 43944 (1975); 39 Fed. Reg. 9223 (1974). Early in 1976 the National Labor Relations Board created a task force to review and evaluate NLRB procedures and practices. See 40 Fed. Reg. 53441-42 (1975). Related assessments of due process requirements include Boyer, *Alternatives to Administrative Trial-Type Hearings for Resolving Complex Scientific, Economic, and Social Issues*, 71 MICH. L. REV. 111 (1972); Cramton, *A Comment on Trial-Type Hearings in Nuclear Power Plant Siting*, 58 VA. L. REV. 585 (1972); Mashaw, *The Management Side of Due Process: Some Theoretical and Litigation Notes on the Assurance of Accuracy, Fairness, and Timeliness in the Adjudication of Social Welfare Claims*, 59 CORNELL L. REV. 772 (1974); Verkuil, *A Study of Informal Adjudication Procedures*, 43 U. CHI. L. REV. 739 (1976).

3. E.g., *Morrissey v. Brewer*, 408 U.S. 471 (1972) (due process in revocation of parole).

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erences among alternative procedures.⁴ The views of disputing parties should be given most attention because these parties are directly affected by the choice of procedure. Sharper definition of disputants' views can be gained by examining the perceptions and preferences of those taking other roles in the proceeding—such third parties as judges and arbitrators.

Previous empirical investigation has focused on the satisfaction of participants with various procedures.⁵ But in all of those investigations the researchers imposed criteria by constraining the attributes that respondents were asked to use in evaluating procedures.⁶ That research provides important insights into factors affecting acceptability of procedures. It does not, however, allow an understanding of either the criteria that unconstrained individuals use to differentiate among procedures or the relationship of those criteria to individual preferences for procedures. Moreover, there may be an additional problem with previous empirical research if satisfaction is affected by familiarity and cultural acceptance. Although the adversary system of dispute resolution is familiar in the United States, it is not characteristic of all societies. In continental Europe common modes of dispute resolution include inquisitorial or autocratic elements.⁷ The previous efforts to examine the effects of culture have

4. See J. CASPER, *AMERICAN CRIMINAL JUSTICE* 3, 168-74 (1972). Other scholars have suggested acceptability as one criterion for evaluating procedures. See Boyer, *supra* note 2, at 137; Cramton, *supra* note 2, at 591-93; Verkuil, *supra* note 2, at 742-57. The Supreme Court has also recognized the importance of the participants' acceptance of the procedures. *E.g.*, *Morrissey v. Brewer*, 408 U.S. 471, 484 (1972); *In re Gault*, 387 U.S. 1, 26 (1967).

5. J. THIBAUT & L. WALKER, *PROCEDURAL JUSTICE: A PSYCHOLOGICAL ANALYSIS* 67-116 (1975); LaTour, Houlden, Walker & Thibaut, *Some Determinants of Preference for Modes of Conflict Resolution*, 20 *J. CONFLICT RESOLUTION* 319 (1976); Thibaut, Walker, LaTour & Houlden, *Procedural Justice as Fairness*, 26 *STAN. L. REV.* 1271 (1974); Walker, LaTour, Lind & Thibaut, *Reactions of Participants and Observers to Modes of Adjudication*, 4 *J. APPLIED SOC. PSYCH.* 295 (1974); LaTour, *Determinants of Participant and Observer Satisfaction with Adversarial and Inquisitorial Modes of Adjudication* (1974) (unpublished M.A. thesis in University of North Carolina Graduate Library).

6. For example, in LaTour, Houlden, Walker & Thibaut, *supra* note 5, the experimenters chose the eight features (*e.g.*, opportunity for evidence presentation, certainty that a decision would be made) that they thought represented the major dimensions underlying preferences for procedures. Each subject then indicated the extent to which his ideal conflict-resolution procedure would include each of the eight features. The experimenters thus constrained the subjects' evaluation of procedures to the eight procedural attributes.

7. For example, the course of civil litigation in the Federal Republic of Germany is dominated by the judge. The court has responsibility for obtaining service of summonses and pleadings and for taking measures to reduce the conflict to its essential issues before trial. The judge may require clarification of allegations made in writing, and he can require documents or other information from public authorities. The German judge's control is perhaps most apparent where there is an issue of fact to be determined. In a proof-taking session the order of evidence and witness examination is determined solely

been somewhat limited because the procedures evaluated in those studies were restricted to a few examples of familiar models.⁸

This article reports a study intended to resolve those problems. Individuals in both the United States and Germany were asked to judge the similarity of 12 model procedures, to state their preferences for each of those procedures, and to evaluate the characteristics of the 12 models. Our objectives were first, to determine the criteria that unconstrained individuals would adopt to differentiate among procedures, and second, to learn how preferences for particular procedural models were related to those criteria. A third objective was to determine the extent to which role and nationality affect those criteria and preferences. Insofar as transnational preferences are similar, we can assume with greater confidence that perceptions about various procedures do not vary significantly among regions or groups.

I. Background: Prior Research

The present investigation is the culmination of a systematic, long-term effort to use social psychological theory and scientific methods to examine important aspects of the legal process.⁹ Although the present study is more ambitious in its conception and sophisticated in its technique than its predecessors, it was designed and executed in light of research already completed. If the earlier results are corroborated by those presently obtained, confidence in both will be substantially heightened.¹⁰ Therefore, a brief review of prior research is a useful prologue to this article.

The present study is a part of an undertaking that has involved a series of experiments developed to elicit and explore the responses

by the judge. The judge can call for the production of documents by the parties on his own motion. The judge decides whether expert testimony is needed and which expert to call. Expert witnesses are chosen by the judge from an official list and are completely identified with the court. The majority of questions to witnesses are posed by the judge, and in most instances the record is a dictated narration of the evidence as formulated by the court. The judge is affirmatively required to investigate all aspects of a case for the purpose of ascertaining objective truth. See generally 2 E. COHN, *MANUAL OF GERMAN LAW* (2d ed. 1971); Kaplan, von Mehren & Schaefer, *Phases of German Civil Procedure* (pts. 1-2), 71 *HARV. L. REV.* 1193, 1443 (1958).

As in a civil case, the stages of a criminal case, including the interrogation of witnesses, is mainly controlled and carried out by a judge. German Code of Criminal Procedure § 244. In addition, § 261 requires the court to evaluate the evidence freely, without regard to highly developed rules.

8. See p. 263 *infra*.

9. The origin of the project and the results of earlier investigations are discussed in J. THIBAUT & L. WALKER, *supra* note 5, at 1-5, 117-24.

10. See Campbell & Fiske, *Convergent and Discriminant Validation by the Multitrait-Multimethod Matrix*, 56 *PSYCHOLOGICAL BULL.* 81, 100-04 (1959).

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of individuals to various modes of dispute resolution. The initial studies examined how different procedures actually work. Topics included, for example, the effect of different model procedures on the discovery and transmission of evidence,¹¹ the relative capacity of the models to combat bias in decisionmakers,¹² and the capacity of alternative models to deal with internal bias resulting from the order in which evidence is presented.¹³ Later, the research focus shifted to the perception and evaluation of various procedures. The present investigation is intended to extend this second line of inquiry.

The earlier research provided a foundation for the present study by suggesting certain predictions about the criteria (or "dimensions") that unconstrained individuals use to differentiate among procedures and about the preferences that such individuals consequently exhibit. Specifically, a number of earlier studies suggested two salient criteria in evaluating different procedures for resolving conflicts between two parties: (i) the degree of third-party control over the decision, and (ii) the degree of disputant control over the process of evidence presentation. The former criterion was included expressly in previous investigations and was identified consistently by respondents as a prominent and preferred procedural characteristic.¹⁴ The latter criterion was inferred from prior experiments in which the degree of *opportunity* for evidence presentation by disputants was highly correlated with those procedures preferred by respondents.¹⁵ We hypothesized that this response reflected a preference for procedures that gave disputants control over the *process* of dispute resolution, comparable to the expressed preference for procedures that gave third parties control over the final *decision* that resolved the dispute.¹⁶ Therefore, we introduced into the present study a new set of criteria concerning control over the process of evidence presentation in ad-

11. See Lind, Thibaut & Walker, *Discovery and Presentation of Evidence in Adversary and Nonadversary Proceedings*, 71 MICH. L. REV. 1129 (1973).

12. See Thibaut, Walker & Lind, *Adversary Presentation and Bias in Legal Decision-making*, 86 HARV. L. REV. 386 (1972).

13. See Walker, Thibaut & Andreoli, *Order of Presentation at Trial*, 82 YALE L.J. 216 (1972).

14. See Houlden, LaTour, Walker & Thibaut, *Preferences for Modes of Dispute Resolution as a Function of Process and Decision Control*, 13 J. EXPERIMENTAL SOC. PSYCH. (1977; forthcoming); LaTour, Houlden, Walker & Thibaut, *supra* note 5, at 351; Thibaut, Walker, LaTour & Houlden, *supra* note 5, at 1282-88.

15. LaTour, Houlden, Walker & Thibaut, *supra* note 5, at 331-34; Thibaut, Walker, LaTour & Houlden, *supra* note 5, at 1283-84, 1288; Walker, LaTour, Lind & Thibaut, *supra* note 5, at 303; LaTour, *supra* note 5, at 73-75.

16. This hypothesis was supported by research indicating that control over the process of evidence presentation and control over the final decision exerted independent effects on preferences for procedures. Houlden, LaTour, Walker & Thibaut, *supra* note 14.

dition to the previously tested set of criteria concerning opportunity for evidence presentation. We expected that the more a procedure afforded disputants control over the process of evidence presentation and third parties control over the decision, the more it would be preferred.

Previous research also suggested that giving respondents different roles in the present experiment would lay the foundation for fruitful comparison of their distinct perspectives. For example, the procedural preferences of third parties seem to differ somewhat from those of disputants.¹⁷ It appears that third parties are more concerned than litigants with exercising control over the decision but are less concerned than litigants with exercising control over the process of evidence presentation.¹⁸ Thus, the dimension of third-party decision control should be more important in determining third-party preferences, while the dimension of control over the process of evidence presentation should be more important in determining disputant preferences.

Furthermore, prior research indicated that disputants themselves have different preferences depending on their particular role in a conflict.¹⁹ Disputants may, in particular, find themselves either advantaged or disadvantaged by the readily discoverable evidence.²⁰ In a previous investigation, each individual was placed in one of these two situations or in a third situation in which the individual did not know whether he would later be advantaged or disadvantaged.²¹ Although the results showed remarkable similarity in preference among the three roles, individuals advantaged by the evidence exhibited greater preference than the disadvantaged individuals for procedures that maximized third-party control over evidence presentation and decisionmaking. In contrast, individuals disadvantaged by the evidence preferred procedures that minimized third-party control over

17. *Id.*

18. *Id.*

19. *Id.*

20. As discussed in J. RAWLS, A THEORY OF JUSTICE (1971), a disputant may be relatively advantaged or disadvantaged in a number of ways: for example, by social class, his natural assets and abilities, the society in which he lives, or the generation to which he belongs. *Id.* at 137. The characteristics specified by Rawls may often result in concrete differences in the amount of evidence available to a disputant. Since the distribution of available evidence is easily varied for experimental purposes, we incorporated relative advantage into our studies by favoring one disputant with the weight of available evidence.

21. See Thibaut, Walker, LaTour & Houlden, *supra* note 5, at 1275-76. The third situation was suggested in J. RAWLS, *supra* note 20, at 137.

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these procedural elements.²² Individuals who did not know their evidentiary status preferred, and judged to be fair, procedures they believed favored the disadvantaged but afforded both sides access to channels of communication and to mechanisms of control.²³

The present study was shaped not only by the insights of prior investigations but also by their limitations. One previous experiment, for example, showed few transnational differences in preference, but only four familiar procedural alternatives were evaluated.²⁴ They were intended to represent "inquisitorial," "single investigator," "double investigator," and "adversary" models, which were viewed as distinct points along a spectrum of relative adversariness. Subsequent analysis of the experimental results, however, suggested that the distribution of control between decisionmaker and disputants is a more realistic and far more comprehensive dimension than relative adversariness.²⁵ For the present study, therefore, the procedural choices were conceived as ranging from models in which the decisionmaker has total control to those in which the disputants have total control.

Twelve fundamental models were constructed by systematically altering the roles of the disputants and the presence and roles of other participants. The precise description of these basic models, as it was provided to the respondents in the study, is reproduced in the Appendix to this article.²⁶ The 12 procedural models were:

- (i) single court investigator with the judge role active;
- (ii) single court investigator with the judge role passive;
- (iii) double investigator;
- (iv) autocratic;

22. See Thibaut, Walker, LaTour & Houlden, *supra* note 5, at 1283-84. The experiment studied preferences for five dispute-resolution procedures: inquisitorial, single investigator, double investigator, adversary, and bargaining. These procedures, described in *id.* at 1273-75, differ somewhat from the similarly named ones used in the present study. The previous study found that regardless of role, respondents most preferred the adversary procedure, followed in order by the double investigator, inquisitorial, single investigator, and bargaining procedures. Advantaged parties, however, preferred inquisitorial and single investigator procedures more than did parties disadvantaged by the evidence, while disadvantaged parties preferred adversary and bargaining procedures more than did advantaged parties.

23. *Id.* at 1288-89.

24. See Lind, Erickson, Friedland & Dickenberger, A Cross-national Study of Reactions to Adjudicative Procedural Models (undated) (on file with *Yale Law Journal*). The research on which this paper is based was completed prior to 1975 and is summarized in J. THIBAUT & L. WALKER, *supra* note 5, at 78-80.

25. See J. THIBAUT & L. WALKER, *supra* note 5, at 117-22.

26. The procedures are given descriptive names in the Appendix to facilitate understanding of the comparative models and to relate them to material in the text of the article. In the investigation the models were given randomly selected alphabetical denominations.

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- (v) arbitration;
- (vi) adversary;
- (vii) mediation;
- (viii) moot with a representative for each disputant;
- (ix) mediation with a representative for each disputant;
- (x) moot;
- (xi) bargaining with a representative for each disputant;
- (xii) bargaining.

This is believed to be the largest set of discrete procedural alternatives ever assembled for comparative study.

II. The Method of the Present Study

A. *Multidimensional Scaling*

Until recently, no precise method existed for determining the basic criteria by which unconstrained individuals differentiate among procedures or how those basic criteria are related to preferences. Within the last decade, however, psychologists have developed and refined a technique known as multidimensional scaling, which allows the researcher to present a number of stimuli (objects, attributes, or ideas) to unconstrained individuals in a way that can reveal the essential dimensions these individuals employ in discriminating among the stimuli.²⁷ Significantly, the researcher need not give the stimuli names or characteristics that otherwise might bias the respondents' perceptions of them. An associated technique allows the researcher *separately* to label the dimensions and to determine how preference is related to the basic dimensions discerned by the respondents.²⁸

27. See generally P. GREEN & F. CARMONE, *MULTIDIMENSIONAL SCALING AND RELATED TECHNIQUES IN MARKETING ANALYSIS* (1970); I. *MULTIDIMENSIONAL SCALING: THEORY AND APPLICATIONS IN THE BEHAVIORAL SCIENCES* (R. Shepard, A. Romney & S. Nerlove eds. 1972).

28. The employment of multidimensional scaling required subjects to make responses in a fashion rather different from subjects in previous investigations. Individuals were presented with a variety of dispute-resolution procedures and asked to make judgments about the degree of similarity between each procedure and every other procedure in turn. Mathematical calculations transformed these similarity judgments so as to array the procedures on the smallest possible number of uncorrelated dimensions necessary to account for the individuals' similarity judgments. In essence the process was intended to reveal the independent criteria that seem most closely associated with the actual judgments about similarity and hence to lay the basis for determining what criteria may have been salient or significant to the subjects in making those judgments.

The labeling of the dimensions generated by multidimensional scaling can be facilitated in a number of ways, *e.g.*, by asking individuals to evaluate with respect to a number of characteristics or attributes the same procedures for which similarity judgments

B. *The Experiment*

The participants in the investigation were 128 student volunteers at each site. At the University of North Carolina at Chapel Hill there were 96 undergraduates and 32 law students; in Hamburg, Germany there were also 96 undergraduates (including some high school students) and 32 law students.²⁹ Essentially the same procedure was used at both sites.³⁰

The participants reported to the study in groups of eight. The undergraduate participants were told that they were going to assume the role of disputants and participate in the resolution of a conflict. The law students were told that they were going to assume the role of decisionmakers or third parties and possibly aid in the resolution of a dispute. Law students were asked to act as decisionmakers because we thought that the choice to attend law school was an act of self-selection that indicated their attitudes would more closely resemble those of actual decisionmakers than would the attitudes of other students. Furthermore, we felt that the law students' legal training made them more suitable for and comfortable in this role than undergraduates.

All participants at both sites were told that the conflict involved a dispute in which Zemp (the Plaintiff) had charged Adams (the

ments were made. (This is the point in the multidimensional scaling process at which the experimenter's bias can have an effect. If the attributes that the experimenter chooses for the subjects are limited, a complete labeling of all dimensions may not be possible. Such an occurrence would alert an investigator to the possibility that there were important attributes that had not been considered.) Correlational techniques are then used to determine which attributes are most closely associated with each dimension and thus may be taken to provide the best labeling for that dimension. Finally, preference judgments are similarly correlated with the basic dimensions to determine the extent to which each of the dimensions is associated with procedural preferences. Thus, the process is essentially one of labeling each dimension by identifying those attributes that best characterize it and then similarly identifying the procedural preferences that best fit each dimension.

29. The student participants in Germany and the United States were approximately the same age and had attained approximately the same level of education.

No effort was made, however, to obtain a random sample for all populations to which the results of this study might be applied. The purpose of this research is to test and develop a theoretical conception of the factors affecting perceptions of and preferences for various types of procedures. Hence we seek to discover functional relationships between theoretically defined variables rather than, as in survey research, to discover the incidence or the magnitude of any phenomenon in the population. Research aimed at developing theory and testing functional relationships is not critically dependent on random sampling. See Kruglanski & Kroy, *Outcome Validity In Experimental Research: A Re-Conceptualization*, 7 REPRESENTATIVE RESEARCH SOC. PSYCH. (1976; forthcoming). In any case, given mass access to undergraduate education in both the United States and Germany, the participants represent important segments of the public in both countries.

30. Translation of the Hamburg materials was done by a native German speaker, Professor Günter Roth of the University of Hamburg.

Defendant) with assault. Participants were told that they would be given a summary of the case and a collection of facts containing bits of evidence about the incident. It was explained that these materials would be used in ultimately resolving the dispute and that the party favored by the final decision would receive a five-dollar prize.³¹ All of the participants were told they would be allowed to choose the procedure that they wished to use in settling the conflict, and they were advised to be very careful about their choice because the outcome of the dispute could well vary as a function of the hearing procedure. A brief summary of the case was then distributed along with a simple rule of law relating to self-defense. Both the brief statement of the case and the rule of law given to the respondents are found in the Appendix to this article.

At this point in the experiment, two-thirds (64) of the undergraduate subjects were assigned by a flip of a coin to assume the role of either the advantaged or the disadvantaged party.³² Separate sessions were held for the one-third (32) of the undergraduate subjects who were to remain uncertain of their ultimate role. These subjects were told that their roles would be assigned after they had chosen a hearing procedure. The 32 law students also participated separately. Their roles, and hence their instructions, were different from those of all undergraduates. In all, there were four roles: advantaged disputant, disadvantaged disputant, uncertain disputant, and third party. Each of these roles was played by 32 subjects at each site.

Next, all subjects received the items of evidence. There were 10 statements favorable to Zemp and four statements favorable to Adams. These statements had been used in previous research and were selected so that Zemp would be clearly advantaged both by the number of items of evidence and by their degree of favorability.³³ Each participant was then given 12 cards, each of which contained a description of a particular hearing procedure.³⁴

The multidimensional scaling method required that ratings of the degree of similarity of every possible pair of procedural models be obtained. The scaling method also required that expressions of pref-

31. An approximately equivalent sum in deutschmarks was used in the German sessions.

32. The subjects in each group of eight were randomly assigned odd or even numbers. It was then announced that if heads turned up odd numbers would take the role of Adams and even numbers Zemp, and vice versa if tails turned up.

33. See Thibaut, Walker, LaTour & Houlden, *supra* note 5, at 1276.

34. After the experiment these procedures were given names, which are listed at pp. 263-64 *supra*. The descriptions printed on the cards given the respondents are reproduced in the Appendix.

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erence for each of the 12 procedures be obtained and that each procedure be judged on the extent to which it embodied certain attributes or characteristics. This requirement for extensive responses by participants necessitated dividing the investigation into two parts, so that half (16) of the participants in each of the four roles at each site performed certain tasks and the other half other tasks. In all, 64 subjects at each site completed a similarity rating questionnaire that required them to consider every possible pair of the 12 procedures and thereby to judge how similar each procedure was to each of the others.³⁵ These subjects also completed a preference rating questionnaire with respect to each of the 12 procedures.³⁶ The other 64 subjects at each site were asked to complete an attribute rating questionnaire.³⁷ They judged the extent to which 15 attributes characterized each of the 12 procedures.³⁸ The attributes were:

- (i) opportunity for presentation of evidence by the advantaged party;
- (ii) opportunity for presentation of evidence by the disadvantaged party;
- (iii) third-party control over the process of evidence presentation;³⁹

35. Judgments were made on a nine-point scale on which 1 represented "very dissimilar," 5 represented "neither similar nor dissimilar," and 9 represented "very similar."

36. Judgments were made on a 31-point scale on which -15 represented "strongly prefer not to use" and +15 "strongly prefer to use."

37. The particular division of tasks was intended to equalize the time and effort required of the participants. Also, the particular arrangement was adopted so that those subjects who made similarity ratings did so *before* expressing preferences, thereby avoiding bias that might result from making preference judgments first. Similarly, those subjects who made attribute judgments did so without having expressed any preferences. The data from two Hamburg subjects were eliminated because they failed to answer all the attribute ratings questions. These subjects were both in the condition (or "cell") where they were uncertain of their relative evidentiary advantage. Thus, only 14 Hamburg subjects remained in that condition. Though both subjects who failed to complete their tasks were in the same condition, there is no evidence that the features of that condition were responsible for their failure.

This incident occasions comment on whether the number of subjects in the present study was sufficient to yield statistically reliable results. The decision concerning the number of subjects to study was based largely on the desired "power" of the statistical tests to be employed. "Power" refers to the ability to detect true differences among the experimental conditions. The greater the number of subjects, the greater the power of the statistical test. Fourteen to sixteen subjects per condition is a sufficiently large number to ensure the detection of meaningful differences but not so large a number as to detect statistically significant differences that are of very small magnitude. For a discussion of size and power, see B. WINER, *STATISTICAL PRINCIPLES IN EXPERIMENTAL DESIGN* 220-28 (2d ed. 1971).

38. Judgments were made on a 31-point scale on which -15 represented "very clearly not a feature" and +15 "very clearly a feature."

39. We intended that the attribute of control over the process of evidence presentation mean control over the quantity and quality of information reaching the decisionmaker. Hence, the intended meaning was very similar to that of the attribute of opportunity for presentation of evidence. See pp. 280-81 *infra*.

- (iv) third-party control over the final determination of who wins and who loses the dispute;
- (v) the advantaged party's control over the process of evidence presentation;
- (vi) the disadvantaged party's control over the process of evidence presentation;
- (vii) the advantaged party's control over the final determination of who wins and who loses the dispute;
- (viii) the disadvantaged party's control over the final determination of who wins and who loses the dispute;
- (ix) the likelihood that the method will result in pleasantness;
- (x) fairness in deciding the conflict;
- (xi) the amount of time required;
- (xii) probability of resulting in the best possible decision (closest to the truth);
- (xiii) certainty that a decision will be made one way or the other;
- (xiv) favors the advantaged party;
- (xv) favors the disadvantaged party.

For the most part, the characteristics included in the questionnaire were modifications of attribute measures used in prior studies.⁴⁰ The attributes relating explicitly to control were developed after studying earlier results and hence were used for the first time in this investigation.⁴¹

Finally, all subjects answered a question intended to show whether they correctly perceived that the evidence favored Zemp more than Adams.⁴² This completed the experiment.⁴³

III. Results

As a preliminary matter it is important to be assured that the participants perceived Zemp to be advantaged by the evidence. The mean response of all subjects on the question concerning evidentiary advantage reliably indicated that subjects indeed believed that Zemp

40. See Lind, Erickson, Friedland & Dickenberger, *supra* note 24, at 8; Thibaut, Walker, LaTour & Houlden, *supra* note 5, at 1278.

41. See J. THIBAUT & L. WALKER, *supra* note 5, at 117-22.

42. Judgments were made on a nine-point scale on which 1 represented "the evidence favors Adams," 5 represented "the evidence favors neither Adams nor Zemp," and 9 represented "the evidence favors Zemp."

43. At the close of each research session, the participants were given an explanation of the study, paid for their participation, and asked not to discuss the investigation with others.

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was in an advantaged position and that Adams was in a disadvantaged position.⁴⁴

A. *Analysis of the Similarity Judgments*

Judgments about the similarities and dissimilarities among the procedures were processed by a multidimensional-scaling computer program that constructs a map, or plot, of the way in which procedures are perceived.⁴⁵ It also allows the researcher to determine what differences, if any, exist in the perception of the procedures as a function of role or site. The results of the computer analysis indicated that three dimensions were necessary to account for the differences that the subjects perceived among the procedures.⁴⁶ The analysis revealed only minor differences in the perception of the procedures as a function of the four roles and two sites in the study. Apparently there was a common perception of the similarities and differences among procedures.

The subjects' placement of the 12 procedures in the common three-dimensional space is presented in Table 1, which shows the coordinates of each of the procedures. The table shows for each dimension how much the key attribute of that dimension—whatever it may be—is embodied in each of the 12 procedures. Large positive numbers indicate that the attribute is present in the procedure to a high degree; large negative numbers indicate that the attribute is hardly or not at all present in the procedure. Positive and negative numbers result from an arbitrary division of the scale.

Before attempting to label the three dimensions formally, it may be helpful to consider the reported perceptions intuitively. A careful examination of the coordinates indicates that all procedures with positive values on dimension one (*e.g.*, single investigator (active judge), double investigator, arbitration) give the third party control over the decision, while all procedures with negative values on dimension one

44. See note 42 *supra*. The mean response of all subjects was 6.644. This was above the neutral point 5 by a statistically significant margin. For a discussion of the meaning of statistical significance, see note 57 *infra*.

45. The computer program used was ALSCAL. See generally Takane, Young & de Leeuw, *Nonmetric Individual Differences—Multidimensional Scaling: An Alternating Least Square Method with Optimal Scaling Features*, 42 *PSYCHOMETRIKA* (1977; forthcoming).

46. The dimensions are uncorrelated in the sense that the location of a stimulus (procedure) on one dimension is unrelated to its location on another dimension. Three dimensions were chosen because they were sufficient to explain the distances (differences) among the procedures that were derived from the similarity data. Addition of a fourth dimension did not appreciably increase the extent to which the distances among procedures could be explained.

TABLE I

Coordinates of Procedures on Each of the Three Dimensions
Averaged Across Hamburg and Chapel Hill Subjects in All Roles*

<i>Procedure</i>	<i>Dimension 1 Coordinate</i>	<i>Dimension 2 Coordinate</i>	<i>Dimension 3 Coordinate</i>
Single Investigator (Active Judge)	1.26	.54	-1.24
Single Investigator (Passive Judge)	1.21	.65	-.74
Double Investigator	1.01	1.11	.44
Autocratic	.96	-1.28	-.69
Arbitration	.73	-1.34	.79
Adversary	.65	.85	1.30
Mediation	-.67	-1.20	.20
Moot with Representatives	-.72	.96	1.11
Mediation with Representatives	-.87	.86	.78
Moot	-.91	-1.11	.87
Bargaining with Representatives	-1.28	.86	-1.00
Bargaining	-1.37	-.89	-1.82

* The larger the number the greater the extent to which a procedure is characterized by a given dimension.

(*e.g.*, bargaining, moot, mediation with representatives) reserve control over the decision to the disputants. Thus, we can informally label this dichotomous first dimension as third-party decision control (or lack of disputant decision control).⁴⁷ As this dimension accounts for the greatest proportion of the differences perceived to exist among procedures, it may be said that third-party decision control is the most salient dimension for distinguishing among the procedures.

The second dimension also appears to involve a rather dichotomous categorization of the procedures—the presence or absence of representatives or investigators. Procedures with positive values on this dimension (*e.g.*, double investigator, moot with representatives, adversary) involve representatives or investigators, while those with negative values (*e.g.*, arbitration, autocratic, mediation) do not involve such persons.

The arrangement of procedures on the third dimension is not dichotomous. The procedures are arrayed along the dimension in a more continuous manner. Those with positive values are adversary, moot

47. There is always the possibility that any correlational technique may produce spurious relationships. Where, as here, the results largely confirm predictions based on theoretical considerations and prior research, the possibility of spurious relationships is minimal.

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with representatives, moot, arbitration, mediation with representatives, double investigator, and mediation, while those with negative values are bargaining, single investigator (active judge), bargaining with representatives, single investigator (passive judge), and autocratic. Previous research suggests that some of the procedures given negative values (*e.g.*, autocratic, single investigator) are perceived as unfair and as providing too little opportunity for evidence presentation, while some of the procedures rated positively on this dimension (*e.g.*, adversary, arbitration, mediation) have been rated highly in these respects.⁴⁸ Bargaining, however, which was given a negative value on dimension three, was previously rated moderately high on opportunity for evidence presentation and low on fairness.⁴⁹ Therefore, it is difficult informally to discern a precise relationship between these previously identified criteria and dimension three.

B. *Formal Labeling of the Dimensions*

A correlational mapping technique was employed to achieve a more precise labeling of the basic dimensions by which the respondents discriminated among procedures. The technique allows one to map attribute judgments into the perceptual space as vectors.⁵⁰ The position of a procedure along a vector reflects the extent to which respondents perceive the procedure as possessing the particular attribute. The best label for a given dimension is an attribute vector that is maximally correlated (or coincident) with that dimension and minimally correlated with other dimensions.

A preliminary mapping of the 15 attributes used in the study, done separately for each combination of role and site, revealed no major differences in the labeling implicitly provided by the subjects. This, together with the fact that the subjects' perceptions of the similarity of the procedures did not differ as a function of role or site, enabled us to obtain a common labeling of the dimensions.⁵¹

48. Houlden, LaTour, Walker & Thibaut, *supra* note 14; LaTour, Houlden, Walker & Thibaut, *supra* note 5, at 331-34; Walker, LaTour, Lind & Thibaut, *supra* note 5, at 303; LaTour, *supra* note 5, at 73-75.

49. LaTour, Houlden, Walker & Thibaut, *supra* note 5, at 334.

50. Attribute vectors in two-dimensional space are like lines on a graph. They pass through the origin or midpoint of the axes, but usually lie at an angle to the axes. In this study, the vectors were plotted in three-dimensional space, because three dimensions were needed to account for the procedural differences perceived by the subjects. *See* note 46 *supra*. The plotting technique involved use of a computer program called PREF-MAP. *See* P. GREEN & F. CARMONE, *supra* note 27, at 78-81.

51. Labeling of dimensions one and two was remarkably similar for Hamburg and Chapel Hill subjects. Hamburg subjects' labeling of dimension three was essentially the same as that of Chapel Hill subjects, but the Hamburg subjects were not as definite in their labeling of this dimension.

Table 2 presents the direction cosines of each attribute vector for each of the three dimensions.⁵² The direction cosines indicate the extent to which each attribute vector is correlated with each dimension. The larger the direction cosine, whether positive or negative, the greater is the correlation between an attribute and a dimension and, therefore, the better the attribute labels the dimension. A positive direction cosine indicates a positive correlation between the dimension and the attribute: the attribute is increasingly characteristic of procedures increasingly valued along the dimension. For example, third-party control over the final decision, which has a .952 direction cosine for dimension one, increases from procedures with low values on dimension one (*e.g.*, adversary) to procedures with high values on dimension one (*e.g.*, single investigator with active judge). Conversely, a negative direction cosine indicates a negative correlation between the dimension and the attribute: the attribute is decreasingly characteristic of procedures increasingly valued along the dimension. For example, Adams's control over the final decision, which has a $-.978$ direction cosine for dimension one, decreases from procedures with low values on dimension one to procedures with high values on dimension one. Thus, either large positive direction cosines or large negative ones suggest a label for the dimension. Several highly correlated attributes suggest alternative labels.

In this light, there appear to be several attributes that could appropriately label dimension one. Highly positively correlated with that dimension are the certainty that a decision will be reached, the extent to which the advantaged party (Zemp) is favored, third-party control over the decision, and third-party control over the process of evidence presentation. Highly negatively correlated with dimension one are the extent to which the disadvantaged party (Adams) is favored, disputants' control over the decision, the amount of time taken, and disputants' control over the process of evidence presentation.

In contrast to the great number of attributes that are highly correlated with dimension one, only a single attribute closely coincides with dimension two: pleasantness. Dimension three appears to be related to the opportunity of the advantaged party (Zemp) to present evidence and to the likelihood that the best possible decision will be reached. Opportunity of the disadvantaged party (Adams) to present

52. A direction cosine indicates the angle between a vector and an axis. The larger the absolute value of the cosine, the smaller is the angle between a vector and an axis and the more closely related they are.

TABLE 2

Direction Cosines of Attribute Vectors
Averaged Across Hamburg and Chapel Hill Subjects in All Roles*

<i>Procedural Attributes</i>	<i>Direction Cosines for Dimension 1</i>	<i>Direction Cosines for Dimension 2</i>	<i>Direction Cosines for Dimension 3</i>
Adams's opportunity for evidence presentation	-.668	-.035	.744
Zemp's opportunity for evidence presentation	-.370	-.075	.926
Third-party control over process of evidence presentation	.936	-.222	.274
Third-party control over the final decision	.952	-.138	.273
Adams's control over process of evidence presentation	-.818	-.491	.300
Adams's control over the final decision	-.978	-.208	-.001
Zemp's control over process of evidence presentation	-.806	-.490	.331
Zemp's control over the final decision	-.977	-.206	.057
Pleasantness	.275	.937	.215
Fairness	-.716	.179	.674
Time the method will take	-.836	.446	.319
Likelihood the method will result in the best possible decision	-.350	.291	.890
Certainty that a decision will be made one way or the other	.996	.045	.078
Favors Adams	-.990	-.074	.121
Favors Zemp	.973	-.022	.229

* The larger the number (regardless of sign) the greater the correlation between an attribute and a dimension and the better the attribute indicates a label for the dimension. Positive numbers indicate positive correlation. Negative numbers indicate negative correlation.

evidence and fairness of the procedure are also highly positively correlated with dimension three, but they are to a high degree negatively correlated with dimension one and hence are not suitable labels for either dimension.

Given the correspondence of various attribute vectors with the three dimensions, what are the appropriate labels for the dimensions? There appear to be two levels of perception involved. For instance, the first dimension can be considered operationally as the presence or absence of third-party decision control, or it can be understood in terms of

the more abstract concepts of the amount of time taken, the certainty that a decision will be reached, and the extent to which each party will be favored. The second dimension, which we informally labeled the presence or absence of representatives or investigators, is also related to a more abstract concept—pleasantness. Perhaps individuals believe that representatives or investigators act as a buffer against severe interpersonal conflict because they eliminate the need for direct interaction between the disputants.⁵³ The third dimension can be considered operationally as the opportunity for advantaged parties to present evidence either by themselves or through a representative of their own choosing.⁵⁴ The dimension is also related to a more abstract concept, the likelihood that a procedure will result in the best possible decision (the decision closest to the truth). The respondents seemed to associate this dimension with procedures involving third parties, albeit not as controllers of the presentation of evidence.⁵⁵ Perhaps the respondents believed that if litigants simply present their cases to each other (as in bargaining), they may choose to ignore each other or may prevent each other from making a complete presentation of the evidence.

Thus, in selecting labels for each of the three dimensions there seems to be a choice between certain operational features and the abstract characteristics associated with these features. We decided to

53. Representatives or investigators might also be perceived to give a more expert and persuasive presentation of the case, but this attribute was not assessed.

54. Although acceptable, it would not be strictly correct to label this a dimension of opportunity for evidence presentation by *both* advantaged and disadvantaged parties, because opportunity for evidence presentation by the disadvantaged party is also related to the first dimension. See Table 2, p. 273 *supra*.

In our judgment, the labeling of the third dimension was decisively influenced by the facts of the test case, in which one party had an extremely weak defense. Subjects may have perceived that control over evidence presentation (formal process control) would affect the arguments of the disadvantaged party more than those of the advantaged party. The advantaged party would have a preponderance of favorable evidence to influence the third party regardless of the manner in which the facts were presented. If the disadvantaged disputant were to sway the decisionmaker, in contrast, he would need the opportunity to organize the facts in the most persuasive manner and supplement them with whatever arguments could be devised. Consequently, subjects may have considered the disadvantaged side of the case to be more susceptible to the possible arbitrariness of third-party formal process control; hence its opportunity for evidence presentation may have been perceived to be more closely related to the first dimension than was the evidentiary opportunity of an advantaged party. In sum, we believe that had subjects been asked to assume their roles as disputants or third parties without consideration of the particular test case, the third dimension would probably have been labeled opportunity for evidence presentation by *both* advantaged and disadvantaged parties.

55. For instance, adversary and moot with representatives models had high positive coordinates on dimension three, while single investigator (active judge) had a high negative coordinate. See Table 1, p. 270 *supra*.

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adopt operational labels because they can easily be discerned and described in systems of procedure. The operational labels, being more concrete, are of greater usefulness to policymakers, because they can be affected directly by procedural modification. Hence, the three dimensions were labeled third-party decision control, presence or absence of representatives or investigators, and opportunity for the advantaged party to present evidence.

C. *Preferences for the Procedures*

After exploring the way in which the respondents perceived the various procedures, the next task was to analyze the basis for their preferences. As a preliminary step, a statistical analysis was conducted to determine how procedural preferences differed as a function of site and role.⁵⁶ Figure 1 presents mean preferences for each site, averaging across all roles.

The analysis revealed significant differences in preference as a function of site, averaging across roles.⁵⁷ Chapel Hill subjects preferred the adversary, double investigator, arbitration, autocratic, single investigator (passive judge), and single investigator (active judge) procedures more than did Hamburg subjects.⁵⁸ Hamburg subjects preferred mediation with representatives, moot with representatives, moot, mediation, bargaining with representatives, and bargaining more than did Chapel Hill subjects.⁵⁹ Note that Chapel Hill subjects least preferred bargaining and most preferred the adversary procedure, while Hamburg subjects least preferred the single investigator (active judge) procedure and most preferred mediation with representatives. Analysis did not detect any differences in preference as a function of role, but role and site interacted to affect significantly preferences for three

56. A multivariate analysis of variance was performed. This is a statistical procedure that indicates the likelihood that observed differences in preference were the product of chance rather than the product of the site and role variables in the experiment. See D. MORRISON, *MULTIVARIATE STATISTICAL METHODS* 159-206 (1967).

The tests were based on Rao's approximation of Wilk's lambda criterion. Because of unequal cell frequencies, probability values for the "eliminating tests" are reported. See Appelbaum & Cramer, *Some Problems in the Nonorthogonal Analysis of Variance*, 81 *PSYCHOLOGICAL BULL.* 335, 338-41 (1974).

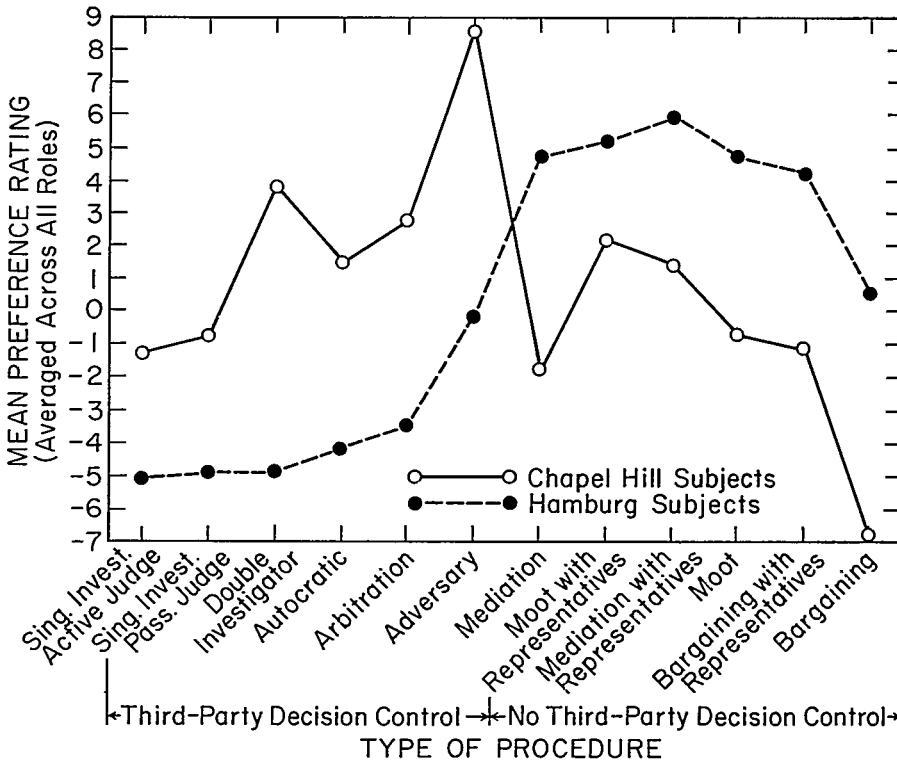
A multivariate test involves analysis of more than one dependent measure. If the results of the multivariate test are significant, univariate analysis may be used as an aid to clarify the results of the multivariate tests by focusing on the relationship between the independent measure and each dependent one in turn.

57. Multivariate $p < .001$. A difference is statistically defined to be significant when statistical analysis yields an index of a size that would occur by chance less than 5 times in 100 instances, written as $p < .05$. Smaller "p" values provide greater assurance that the difference was not the result of chance.

58. All univariate tests $p < .05$.

59. All univariate tests $p < .05$.

Figure 1. Mean Preference Rating for Procedures by Hamburg and Chapel Hill Subjects Averaged Across All Roles.



Note: Procedures ordered as perceived by the subjects along a dimension of decreasing third-party control.

of the procedures.⁶⁰ The Hamburg disadvantaged disputant preferred the double investigator, single investigator (active judge), and single investigator (passive judge) procedures more than did the other Hamburg roles, but the Chapel Hill disadvantaged disputant preferred those procedures less than did the other Chapel Hill roles. In addition, the Chapel Hill disputant most preferring the two single investigator procedures was the party uncertain of his or her relative evidentiary advantage.⁶¹

D. Dimensional Determinants of Procedural Preference

It is possible to map into the three-dimensional perceptual space vectors that represent the respondents' preferences for procedures.

60. Multivariate $p < .001$.

61. All univariate tests $p < .05$.

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This technique illuminates the relationship between the dimensions of perception and respondents' procedural preferences. Table 3 displays the transformed direction cosines of the average preference vector for each of the eight combinations of role and site.⁶² The larger the transformed direction cosine, whether positive or negative, the greater is the correlation or association between the subject's preference and the given dimension. Positive cosines indicate that procedures that are increasingly valued along the given dimension are increasingly preferred by the subject. Negative cosines indicate that procedures that are increasingly valued along the given dimension are increasingly

TABLE 3

Transformed Direction Cosines of the Average Preference Vector for Hamburg and Chapel Hill Subjects in All Roles*

<i>Site - Role Combination</i>	<i>Transformed Direction Cosines for Dimension 1</i>	<i>Transformed Direction Cosines for Dimension 2</i>	<i>Transformed Direction Cosines for Dimension 3</i>
A. Hamburg Subjects			
Uncertain of Relative Advantage	-1.27	-.05	.36
Advantaged Disputant (Zemp)	-.82	.10	.28
Disadvantaged Disputant (Adams)	-.76	.34	.02
Third Party	-1.50	-.02	.57
B. Chapel Hill Subjects			
Uncertain of Relative Advantage	.61	.46	.40
Advantaged Disputant (Zemp)	.28	-.10	.51
Disadvantaged Disputant (Adams)	-.08	-.06	.53
Third Party	.85	.14	.43

* The larger the number (regardless of sign) the more preference is associated with that dimension. Positive numbers indicate positive correlation. Negative numbers indicate negative correlation.

62. In order to facilitate analysis of variance it was necessary to normalize the distribution of differences between direction cosines. The original distribution was highly skewed, a normal property of cosines. Direction cosines were transformed according to the following formula:

$$\text{transformed cosine} = \frac{1}{2} \log_x \left(\frac{1 + \cos}{1 - \cos} \right).$$

The following table equates some values of transformed cosines with their original values:

<i>cosine</i>	<i>transformed cosine</i>	<i>cosine</i>	<i>transformed cosine</i>
.00	.000	.60	.693
.10	.100	.70	.867
.20	.203	.80	1.099
.30	.310	.90	1.472
.40	.424	.99	2.647
.50	.549		

disfavored by the subject. Cosines close to zero, whether negative or positive, indicate that the given dimension is not an important determinant of the subject's preference.

An informal examination of Table 3 reveals that a major difference in preference exists between the Hamburg and the Chapel Hill subjects with respect to the first dimension.⁶³ Regardless of role, the Hamburg subjects' preference vectors are negatively correlated with the first dimension, indicating that they preferred procedures with low third-party decision control.⁶⁴ Chapel Hill subjects' preferences, in contrast, are (with only one exception) positively correlated with the first dimension, indicating that they preferred procedures involving high third-party decision control.⁶⁵

A joint effect of role and site demonstrates that these general statements need to be qualified.⁶⁶ For Chapel Hill subjects, advantaged and disadvantaged parties' preferences are not significantly related to the dimension of third-party decision control, while the preferences of third parties and disputants uncertain of their relative evidentiary advantage are significantly related to that dimension. For Hamburg subjects, advantaged and disadvantaged parties' preferences are related negatively to third-party decision control, but the significant negative relationship is not as strong as it is for third parties and disputants uncertain of their relative advantage.

The small absolute values of the transformed direction cosines for dimension two indicate that the presence or absence of investigators or representatives has no appreciable relationship with preference, although averaging across all conditions indicates a slight preference for the participation of such persons. Neither role nor site exerted significant effects upon the extent to which dimension two affected preferences. There was, however, a small interactive effect of role and site, such that disadvantaged Hamburg disputants and Chapel Hill disputants uncertain of their relative evidentiary advantage most preferred procedures with representatives or investigators.⁶⁷

The third dimension was an important determinant of preference, with both Hamburg and Chapel Hill subjects preferring procedures that maximized the advantaged party's opportunity for evidence presentation.⁶⁸ Several other findings are also worthy of consideration.

63. Multivariate $p < .001$; univariate $p < .001$.

64. Average direction cosine is significantly different from zero, $p < .001$.

65. Average direction cosine is significantly different from zero, $p < .012$.

66. Multivariate $p < .020$; univariate $p < .023$.

67. Univariate $p < .04$.

68. Univariate $p < .001$.

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For all Hamburg roles, third-party decision control is a more important determinant of preference than is the advantaged party's opportunity for evidence presentation. For Chapel Hill subjects, however, this is true only for third parties and for disputants uncertain of their relative evidentiary advantage. For Chapel Hill disputants who knew their relative advantage, the advantaged party's opportunity for evidence presentation is more highly related to preference than is third-party decision control.

These differences in dimensional determinants of preference enable us to explain observed differences in expressed preferences. The major difference in preference between the Hamburg and Chapel Hill subjects occurs because Hamburg subjects prefer procedures that lack third-party decision control, while Chapel Hill subjects generally prefer procedures that incorporate third-party decision control. A glance at Figure 1 confirms this. There is, however, a striking similarity between the two sites. The preference ordering *within* procedures classified as high or low in third-party decision control is roughly the same for both Chapel Hill and Hamburg subjects, as can be seen by viewing Figure 1 as divided in half by a line parallel to the "Mean Preference Rating" axis and by comparing, within each half, the preference rankings of the subjects at the two sites. This similarity is a consequence of the preference of subjects at both sites for procedures that enhance the opportunity for the advantaged party to present evidence.⁶⁹

IV. Discussion

The results of this study provide unique insights into individuals' perceptions of and preferences for procedures to resolve conflicts.⁷⁰

69. The differences in dimensional determinants of preference also help to explain the joint effect of role and site upon preference for the single investigator (active judge), single investigator (passive judge), and double investigator procedures. Disadvantaged litigants at Hamburg preferred these procedures more than did other Hamburg roles because of a greater preference for the presence of investigators or representatives. Chapel Hill disadvantaged litigants preferred these procedures less than other Chapel Hill roles because of a slight preference for a lack of investigators or representatives and a slight preference for a lack of third-party decision control. Chapel Hill subjects uncertain of their relative evidentiary advantage preferred the two single investigator procedures more than the other roles because of their apparent preference for procedures that employ representatives or investigators.

70. These insights, of course, are derived from a particular investigation and, hence, may not be applicable in other situations. But doubts about the generalization of research findings are nearly always present; they can never be fully resolved. Since these insights are the fruit of a number of studies, the results of which have been largely consistent, *see pp. 280-82 infra*, there are reasonable grounds for confidence in the conclusions we reach.

With respect to perceptions, the major conclusion is that three operational criteria are basic to individuals' conceptualization of procedures: degree of third-party decision control, presence or absence of representatives or investigators, and degree of opportunity for evidence presentation by the advantaged party. One can think of these three criteria as defining a three-dimensional space. Every procedure can be located somewhere in the space; its precise location depends on the procedure's location on each of the three dimensions. In the same way that points on the earth's surface are located in terms of latitude, longitude, and elevation, so procedures can be described in relation to one another in terms of third-party decision control, presence or absence of investigators or representatives, and opportunity for evidence presentation by the advantaged party. This conclusion appears to be true regardless of cultural familiarity and regardless of the role that an individual assumes.

We have stressed the importance of determining the degree to which the results of this investigation of the unconstrained perception and differentiation of procedures correspond to the results of previous research. On the basis of previous research it was predicted that two dimensions that subjects would use to differentiate among procedures would be third-party decision control and control over the process of evidence presentation. One of the three dimensions was indeed third-party decision control. In fact, third-party decision control was the most salient dimension that subjects perceived in differentiating among procedures. Contrary to expectation, however, control over the process of evidence presentation was not perceived as a dimension distinct from third-party decision control.

In our judgment, this apparent inconsistency with our prediction resulted from a confusion in terminology. Asking subjects to evaluate the attribute of "control over the process of evidence presentation" may have suggested to them that they were to rate control over the formal aspects of evidence presentation rather than control over the actual evidence presented. Had the subjects been asked to evaluate "control over the presentation of evidence," it is possible that this attribute would have provided a label for the third dimension. This suggestion is supported by the observation that the very similar attribute of *opportunity* for evidence presentation is highly correlated with the third dimension and very nearly provides a proper label for that dimension.⁷¹ Hence, there is reason to believe that if the "process

71. See note 54 *supra*.

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control" attribute had been stated slightly differently our prediction that one dimension would be control over evidence presentation would have been correct.

Thus, our results in large part support the predictions, derived from previous empirical research, that two basic dimensions that subjects use to discriminate among procedures are third-party control over the final decision and disputant control over the process by which evidence is presented. The existence of a third dimension (the second most salient) was not predicted. Although the presence or absence of representatives or investigators was not important in previous studies, it now appears that individuals involved in conflicts are aware that different methods of dispute resolution may be differentially successful in mitigating the intensity of their disagreements and that in judging among procedures they pay attention to this aspect of settlement.⁷² Ultimately, though, this dimension has only a negligible effect on preferences.

The multidimensional scaling technique allows us to do more than simply understand the framework by which individuals conceptualize procedures. It also helps us to determine the relation between individuals' perceptions of procedures and their preferences for them. Within the three-dimensional perceptual space it is possible to draw a preference vector that runs between the least and the most preferred procedures. The relation of the preference vector to the three dimensions indicates what combination of the three dimensions individuals would prefer. The results of the present study show that the two most important determinants of procedural preferences are third-party decision control and opportunity for the advantaged party to present evidence. Both Hamburg and Chapel Hill subjects, regardless of role, exhibited greater preference for procedures allowing full opportunity for evidence presentation. A divergence occurred, however, with respect to the dimension of third-party decision control. Participants in Chapel Hill preferred third-party decision control, but those in Hamburg were averse to it. Even Hamburg subjects who role-played third parties did not desire responsibility for the final decision.⁷³ Those in

72. The conclusion that individuals perceive representatives or investigators largely as buffers between disputants is inferred from the high positive correlation between dimension two and the attribute of pleasantness. See Table 2, p. 273 *supra*.

73. Inquiry was made in Germany, but no studies were located to assist in interpreting this finding. There do appear to be some reasonable speculations. Perhaps in reaction to Germany's pre-1945 experience with highly centralized, autocratic government, young adults in Hamburg distrust authoritarian systems and disfavor authoritarian intervention. Or, it may be that young German adults reject third-party decision control because they feel that there is sufficient solidarity or common interest among them to achieve

Hamburg did appreciate, however, having a third party to listen to the disputants, help them explore the issues, and make some suggestions for resolution. As a consequence, Hamburg subjects most preferred mediation and moot procedures.

Nonetheless, because both Hamburg and Chapel Hill subjects prefer greater opportunity for evidence presentation regardless of third-party decision control, their procedural preferences are essentially the same for a given level of such control. Hence, within the range of procedures traditionally found in the formal legal process, which typically involve third-party decisionmaking, preference is not affected by the differences in legal culture represented in the present study. Where third-party decision control is mandated, participants in both Hamburg and Chapel Hill prefer to use an adversary procedure. Given third-party decision control, an adversary model maximizes the opportunity for evidence presentation. Also, though the presence or absence of representatives had only a slight positive effect on preferences in Hamburg and Chapel Hill, it should be noted that the adversary system typically provides for the participation of representatives who serve as buffers against direct confrontation.

Thus, despite some differences created by nationality and role,⁷⁴ individuals in both Chapel Hill and Hamburg seem not only to share the same basic perception of procedural systems but also to share the same basic preferences with respect to procedures commonly employed in formal legal decisionmaking. This conclusion is consistent with the results of earlier research⁷⁵ and is particularly significant because it is based on the reaction of unconstrained subjects.

the resolution of disputes without vesting decisionmaking control in a third party. Chapel Hill subjects, in contrast, may believe that their conflict is so severe that settlement can only be attained through the decisionmaking of an uninvolved third party.

74. Apart from the impact of site on preference, it was predicted that the preferences of individuals involved in a dispute would be affected by their role in its resolution. In particular, it was hypothesized that third-party preferences would be affected more by a dimension of third-party decision control than by a dimension of control over the process of evidence presentation. This was confirmed by the present study (although, as indicated, Hamburg third-party preferences were affected negatively).

It was also expected that disputant preferences would be affected more by control over the process of evidence presentation than by third-party decision control. This was not borne out for Hamburg disputants because of extreme aversion to third-party decision control. It was confirmed for Chapel Hill disputants informed of their relative evidentiary advantage but not for those uncertain of the role to which they would later be assigned. Indeed, those uncertain of their position seemed very similar to third parties—they were somewhat more concerned with third-party decision control than they were with control over the process of evidence presentation. Perhaps for Chapel Hill subjects, being uncertain about one's relative advantage led to an objectivity of perspective similar to that of uninvolved third parties and thereby to similar procedural preferences.

75. See J. THIBAUT & L. WALKER, *supra* note 5, at 118.

V. Implications for Legal Policy

In the continuing assessment of procedures for governmental decisionmaking, a major element in determining which procedures are acceptable is the perception of the participants in the process. Our research suggests that the participants prefer to control the process of evidence presentation themselves while a third party controls the result. Yet recent decisions of the Supreme Court appear to reflect a movement toward autocratic procedures and away from the preferred procedures. In *Arnett v. Kennedy*⁷⁶ a nonprobationary federal employee in the competitive Civil Service was discharged according to a statutory pretermination procedure that provided: "Examination of witnesses, trial, or hearing is not required but may be provided *in the discretion of the individual directing the removal or suspension without pay.*"⁷⁷ The Court approved the procedure in a plurality opinion that noted that the statute did not accord "a full adversary hearing."⁷⁸ In *Mathews v. Eldridge*⁷⁹ a person whose Social Security disability benefits had been terminated challenged the pretermination procedure. The procedure, which was approved by the Court, did not provide an evidentiary hearing. Instead, the decision to terminate was made largely on the basis of information developed by a state agency, which was also the effective decisionmaker.⁸⁰

Such elements as decision without notice, investigation by the decisionmaker, the absence of representatives, the absence of party confrontation and cross-examination of witnesses, the use of evidence outside the record, and an interested or activist decisionmaker all tend in the autocratic direction and hence would probably diminish satisfaction. Any mechanism or device that tends to increase control of the decisionmaker beyond the responsibility of determining the outcome can be expected to diminish the acceptability of the procedure. Any procedural system that is largely decisionmaker-controlled is likely to receive a low degree of acceptance. It appears that American citizens are most satisfied with procedures that include a decisionmaker but that otherwise grant control to the parties and provide them with representatives. Given the existence of a third-party decisionmaker, this feeling about procedure seems to be free of cultural limits and, hence, probably would not change even if somewhat autocratic pro-

76. 416 U.S. 134 (1974).

77. 5 U.S.C. § 7501(b) (1970) (emphasis added).

78. 416 U.S. at 154.

79. 424 U.S. 319 (1976).

80. The procedure is described in *id.* at 337-39.

cedures were more widely established. In accepting or rejecting a particular procedure a policymaker should assess whether the procedure apportions more control to the decisionmaker than is necessary to determine the outcome. If the procedure does, the policymaker can reasonably estimate that the procedure ranks poorly in terms of participant satisfaction.

It is true that our earlier research suggests "autocratic procedures are likely to be sought by men in hurried pursuit of common goals who agree on a standard (a credo or an ideological canon) that can be quickly applied to resolve differences in belief."⁸¹ Verkuil has elsewhere thoroughly discussed this special type of dispute and the procedures that may be appropriate to resolve it.⁸² But relatively few disputes that require official intervention possess all three characteristics (correspondent interests, existing standards, and time pressure). Most disputes requiring official intervention are conflicts of interest,⁸³ like the present study's test case, where victory for one party means defeat for the other.

Conflicts in which a government agency effectively takes the role of a disputant opposing a private citizen are probably best seen as conflicts of interest. Both *Arnett* and *Mathews* involved conflicts of interest. In part, the government represented interests opposed to the individual disputants: potential federal employees, claimants of government benefits, and, of course, taxpayers. No result in these cases could maximize the interests of all disputants.

It should be clearly recognized that these suggestions about legal policy are made solely with reference to the criterion of satisfaction. Other important criteria might well be considered in determining the constitutionality of procedures. Some of the most difficult questions relate to efficiency, because procedures that apportion control to disputants and adequately ensure the exercise of their control may be more costly than autocratic systems. Yet in a democratic polity legal policymakers should give particular attention to constructing procedures that are likely to be accepted and trusted by the public. Ultimately, those procedures may prove to be the least costly.

81. J. THIBAUT & L. WALKER, *supra* note 5, at 16.

82. Verkuil, *supra* note 2, at 752-56.

83. The term "conflict of interest" is used, as it is in social psychology, to describe a two-party dispute that can be resolved in favor of one party only if the other party loses. See Kelley & Thibaut, *Group Problem Solving*, in IV THE HANDBOOK OF SOCIAL PSYCHOLOGY 1, 12, 33-34 (2d ed. G. Lindzey & E. Aronson 1969). This broad meaning should be distinguished from the term's more technical sense when used to refer to ethical problems such as those governed by the *Code of Professional Responsibility*.

Appendix

A. Test Case Summary

Adams (the defendant) and Zemp (the plaintiff) have been close friends for years. Recently they began to gamble heavily together and, as matters became involved, met at a tavern to discuss their relationship. After a period of conversation Zemp (the plaintiff) knocked Adams (the defendant) to the floor and threw an object in his direction. Adams (the defendant) responded by stabbing Zemp (the plaintiff) in the stomach with a piece of glass.

The law provides that it is unlawful to use more force in repelling an attack than a person believes necessary or than a reasonable person would believe necessary in the same or similar circumstances.

B. Hearing Procedures*

Hearing Procedure A

[Autocratic]

1. Third Party—Under this procedure the hearing will be conducted by a third party appointed by the experimenter from a pool of law students. He will actively seek the facts at the hearing by requesting them from Zemp and Adams. When he has decided that he has all of the facts necessary to reach a decision, he will close the hearing, deliberate and announce his decision.

2. Investigators or Representatives—There will be no investigators or representatives.

3. Disputants—Zemp and Adams will furnish the facts requested to the third party.

Hearing Procedure B

[Adversary]

1. Third Party—Under this procedure a third party will be appointed by the experimenter from a pool of law students. The third party will passively receive the facts of the case from representatives

* In original materials, words in brackets did not appear. Letters were randomly assigned to the procedures, and hence the order of presentation here is also random.

of Zemp and Adams. When the representatives have concluded their presentations, the third party will close the hearing, deliberate, and announce his decision.

2. Investigators or Representatives—Representatives will be chosen by Zemp and Adams from a pool of law students. Each will prepare and present a case based on the evidence for the side he represents. During the hearing the representatives may oppose each other's presentations through questioning and rebuttal.

3. Disputants—Zemp and Adams will meet with their representatives prior to the hearing to turn over and discuss the facts.

Hearing Procedure C

[Mediation]

1. Third Party—Under this procedure a third party will be appointed by the experimenter from a pool of law students. The third party will passively receive the facts of the case from Zemp and Adams. When Zemp and Adams have concluded their presentations, the third party will discuss the evidence with them. He will then deliberate and suggest a resolution of the dispute.

2. Investigators or Representatives—There will be no investigators or representatives.

3. Disputants—Zemp and Adams will present their own cases—cases based on the evidence they have been given. They may oppose each other's presentation through questioning and rebuttal. After the third party has suggested a resolution of the case, Zemp and Adams will have to decide whether they wish to accept this solution. If either does not, they must work out a solution of their own.

Hearing Procedure D

[Bargaining with Representatives]

1. Third Party—There is no third party.

2. Investigators or Representatives—Representatives will be chosen by Zemp and Adams from a pool of law students. The representatives, in consultation with the disputants, will meet together to discuss the facts and decide on a resolution of the dispute.

3. Disputants—Prior to the hearing, Zemp and Adams will meet with their respective representatives to turn over and discuss the facts.

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Disputants will also consult with their respective representatives during the negotiation.

(Remember: Neither in this nor in any other of the twelve procedures may the payment be divided.)

Hearing Procedure E

[Single Investigator (Passive Judge)]

1. Third Party—Under this procedure a third party will be appointed by the experimenter from a pool of law students. He will, however, be assisted by an investigator whom he will appoint from a pool of law students. The third party will passively receive the facts of the case from his investigator. When the investigator has concluded his presentation the third party will close the hearing, deliberate, and announce his decision.

2. Investigators or representatives—An investigator appointed by the third party will actively seek the facts from Zemp and Adams before the hearing. He will then prepare a case, based on the evidence, for each side and present both cases to the third party.

3. Disputants—Prior to the hearing Zemp and Adams will furnish the facts requested by the investigator.

Hearing Procedure F

[Bargaining]

1. Third Party—There is no third party.

2. Investigators or Representatives—There are no investigators or representatives.

3. Disputants—Under this procedure Zemp and Adams will meet together to discuss the facts and decide on a resolution of the dispute.

(Remember: Neither in this nor in any other of the twelve procedures may the payment be divided.)

Hearing Procedure G

[Double Investigator]

1. Third Party—Under this procedure a third party will be appointed by the experimenter from a pool of law students. He will, however,

be assisted by two investigators whom he will appoint from a pool of law students. The third party will passively receive the facts of the case from his two investigators. When the investigators have concluded their presentations, the third party will close the hearing, deliberate, and announce his decision.

2. Investigators or Representatives—Two investigators, appointed by the third party, will actively seek the facts of the case. One investigator will be assigned to each disputant, but the investigators are representatives of the third party and not of either Zemp or Adams. One investigator will obtain the facts from Zemp. The other investigator will obtain the facts from Adams. They will each prepare and present a case based on the evidence for the side to which they are assigned. During the hearing the investigators may ask questions about the facts presented by the other investigator.

3. Disputants—Prior to the hearing Zemp and Adams will furnish the facts requested by the investigator assigned to present their side of the case.

Hearing Procedure H

[Mediation with Representatives]

1. Third Party—Under this procedure a third party will be appointed by the experimenter from a pool of law students. The third party will passively receive the facts from the representatives of Zemp and Adams. When the representatives have concluded their presentations, the third party will discuss the evidence with them. He will then deliberate and suggest a resolution of the dispute.

2. Investigators or Representatives—Representatives will be chosen by Zemp and Adams from a pool of law students. Each will prepare and present a case based on the evidence for the side he represents. They may oppose each other's presentation through questioning and rebuttal. After the third party has suggested a resolution of the dispute, each representative will consult with the party he represents and the parties will decide whether they wish to accept this solution. If not, the representatives, in consultation with the parties they represent, must work out a solution of their own.

3. Disputants—Prior to the hearing Zemp and Adams will meet with their respective representatives to turn over and discuss the facts. After the third party has suggested a resolution of the case, Zemp and Adams in consultation with their representatives will have to decide whether they wish to accept this solution. If either party does not,

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the representatives must work out a solution acceptable to both Adams and Zemp.

Hearing Procedure I

[Moot]

1. Third Party—Under this procedure a third party will be appointed by the experimenter from a pool of law students. The third party will passively receive the facts of the case from Zemp and Adams. When Zemp and Adams have concluded their presentations, Zemp, Adams, and the third party will discuss the evidence. All three (the third party, Adams, and Zemp) will have to agree unanimously upon a resolution of the dispute.

2. Investigators or Representatives—There will be no investigators or representatives.

3. Disputants—Zemp and Adams will present their own cases—cases based on the evidence they have been given. Together with the third party they will discuss the evidence. Both Zemp and Adams and the third party will have to agree upon a resolution of the dispute.

Hearing Procedure J

[Arbitration]

1. Third Party—Under this procedure a third party will be appointed by the experimenter from a pool of law students. The third party will passively receive the facts of the case from Zemp and Adams. When Zemp and Adams have concluded their presentations, the third party will close the hearing, deliberate, and announce his decision.

2. Investigators or Representatives—There will be no investigators or representatives.

3. Disputants—Zemp and Adams will present their own cases—cases based on the evidence they have been given. They may oppose each other's presentations through questioning and rebuttal.

Hearing Procedure K

[Moot with Representatives]

1. Third Party—Under this procedure a third party will be appointed by the experimenter from a pool of law students. The third party

will passively receive the facts of the case from the representatives of Zemp and Adams. When the representatives have concluded their presentations the two representatives and the third party will discuss the evidence. All three (the third party and the two representatives) will have to agree unanimously upon a resolution of the dispute.

2. Investigators or Representatives—Representatives will be chosen by Zemp and Adams from a pool of law students. Each will prepare and present a case based on the evidence for the side he represents. Both of the representatives and the third party will have to agree upon a resolution of the dispute.

3. Disputants—Prior to the hearing Zemp and Adams will meet with their respective representatives to turn over and discuss the facts.

Hearing Procedure L

[Single Investigator (Active Judge)]

1. Third Party—Under this procedure the hearing will be largely conducted by a third party appointed by the experimenter from a pool of law students. He will, however, be assisted by an investigator whom he will appoint from a pool of law students. The third party will actively seek the facts at the hearing by requesting them from his investigator. When he has decided that he has all of the facts necessary to reach a decision, he will close the hearing, deliberate, and announce his decision.

2. Investigators or Representatives—An investigator appointed by the third party will actively seek the facts from Zemp and Adams before the hearing. He will then furnish the facts requested to the third party.

3. Disputants—Prior to the hearing Zemp and Adams will furnish the facts requested by the investigator.

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