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Values as Variables in Judicial Decision-Making: Notes Toward a Theory

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In this article, Professor Danelski presents some notes toward the development of an empirical theory of judicial decision-making in which the concept of values is central. Using Justices Brandeis and Butler as subjects for his discussion, he identifies the values most significant to each Justice by means of content analysis of statements they made before they were appointed to the Supreme Court. He then proposes a multi-dimensional conception of judicial values and explores the utility of cumulative scaling and factor analysis in verifying values in the decisional process. Professor Danelski concludes that value constructs are useful in scientifically understanding the judicial process.

I. Introduction

The scientific study of judicial decision-making began with the pioneer studies of C. Herman Pritchett in the 1940's.[1] For a time his studies stood by themselves; then, in the late 1950's, their methodological thrust was carried forward by a few sociologists and political scientists, principally Glendon Schubert.[2] Schubert's work stimulated a number of studies dealing mostly with methodology and precise description of judicial behavior.[3] The research frontier in this area has

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1. Pritchett, *Division of Opinions Among Justices of the U.S. Supreme Court*, 35 Am. Pol. Sci. Rev. 890-97 (1941); Pritchett, *Ten Years of Supreme Court Voting*, 14 S.W. Soc. Sci. Q. 12-22 (1943); Pritchett, *Dissent on the Supreme Court, 1943-44*, 39 Am. Pol. Sci. Rev. 42-54 (1945); Pritchett, The Roosevelt Court (1948).

2. See, *e.g.*, Bernard, *Dimensions and Axes of Supreme Court Decisions*, 34 Social Forces 19-27 (1955); Schubert, Quantitative Analysis of Judicial Behavior (1959).

3. See Schubert, *Behavorial Research in Public Law*, 57 Am. Pol. Sci. Rev. 433-45 (1963); Judicial Decision-Making (Schubert ed. 1963). For criticisms of some of the judicial-behavior studies, see Becker, Political Behavioralism and Modern Jurisprudence ch. 1 (1965); Becker, *Inquiry into a School of Thought in the Judicial Behavior Movement*, 7 Midwest J. Pol. Sci. 254-66 (1963); Mendelson, *The Neo-Behaviorial Approach to the Judicial Process*, 57 Am. Pol. Sci. Rev. 593-603 (1963).

now shifted to theoretical considerations—precise definition of concepts, formulation and testing of hypotheses, and development of empirically verifiable theory.[4]

The concept of values is central to the explanation of judicial decision-making. Indeed, Clark L. Hull has gone so far as to say that any fairly detailed and sound dynamic theory of behavior must contain an empirical theory of values.[5] Although students of judicial behavior have used values, or some equivalent concept, in their studies, there has been as yet no thorough, systematic exploration of values with a view toward using it as the central concept in building an empirical theory of judicial decision-making.[6] This paper is a modest step in that direction. It is not, however, a presentation of the empirical theory of values to which Hull referred. Rather, it is a presentation of some notes toward such a theory in the hope that they will be useful in the eventual development of a fairly detailed and sound dynamic theory of judicial decision-making.

II. A SCIENTIFIC CONCEPTION OF VALUES

Values are viewed here as constructs anchored in quantifiable human behavior.[7] Such behavior may be either verbal or nonverbal. In ordinary discourse, we move quickly—almost automatically—from the empirical to the abstract in asserting that a man or a judge possesses certain values. This value-labeling process merits close examination so that we might understand more precisely what we mean when we use the term "values." To begin with, value constructs can be anchored only in a certain class of human behavior—behavior that is perceived and labeled as "evaluations" or "value-facts."[8] Evaluations are defined as units of human behavior indicating that an individual regards a thing, condition, property, event, action, or idea as good,

4. See, *e.g.*, SCHUBERT, THE JUDICIAL MIND (1965).

5. Hull, *Value, Valuation, and Natural-Science Methodology*, 11 PHILOSOPHY OF SCIENCE 128 (1944).

6. But see Schubert, *Jackson's Judicial Philosophy*, 59 AM. POL. SCI. REV. 940-63 (1965).

7. See Bergmann, *Theoretical Psychology*, 4 ANNUAL REV. OF PSYCHOLOGY 435-58 (1953); MacCorquodale & Meehl, *On a Distinction Between Hypothetical Constructs and Intervening Variables*, 55 PSYCHOLOGICAL REV. 95-107 (1948); Meissner, *Intervening Constructs—Dimensions of a Controversy*, 67 PSYCHOLOGICAL REV. 51-72 (1960). "Few behavioral scientists," wrote Winfred L. Hill, "would regard values (in the empirical, not the transcendental sense) as fundamentally different from such behavioristic constructs as Hull's habit strength or Tolman's equivalence beliefs." Meissner, *Learning Theory and the Acquisition of Values*, 67 PSYCHOLOGICAL REV. 318-19 (1960). For a review of the studies concerning values in psychology up to 1955, see Dukes, *Psychological Studies of Values*, 52 PSYCHOLOGICAL BULL. 24-50 (1955).

8. BRECHT, POLITICAL THEORY 127 (1959); Dewey, *The Field of "Value,"* in VALUE 64-66 (Lepley ed. 1949).

useful, or desirable, in itself, or for the achievement of some purpose he is actually pursuing or may eventually pursue.[9] After evaluations are designated, they are labeled in terms of specific value constructs such as freedom, equality, and tradition. Finally, in the basis of certain critieria—such as the number of evaluations in a specific value category or indication of preference for one value over another—an inference is made that the individual whose behavior is under inquiry possesses certain values, some of which are more salient than others. Values and their relative saliency, it is stressed, are always postulated. They are constructs, not empirical entities; their scientific status hinges entirely upon whether they are validly anchored in evaluations and whether the evaluations are validly designated.

For purposes of developing a theory of judicial decision-making, values are viewed as being anchored in individual evaluations. Although we sometimes speak of the values of a group—we say, for example, that freedom is an important value of the Supreme Court—we are actually either making a complex statement about the values of individual Court members, or inferring and postulating values from group evaluations (court decisions and opinions), which are the end products of a process we are trying to explain. In either case, we are driven back to the evaluations of individuals. This point has important implications not only in terms of theory building, but also in the selection of data for value analysis.[10]

Evaluations always occur within particular situations—"transactions" —which are circumscribed in time and space.[11] Therefore, any inference leading to the postulation of values must be made in the light of the entire transaction in which evaluations occur. Further, the time-space boundaries of transactions limit generalization of the postulated values to future transactions. If, for example, a judge addresses a group in wartime, a number of evaluations indicating patriotism would be expected; and their presence probably would be relevant in analyzing his judicial behavior at that time. But whether patriotism retained the same high place in his value hierarchy after the war is a matter that would bear inquiry. Other situational considerations must also be taken into account in making inferences from evaluations.

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9. BRECHT, *op. cit. supra* note 8, at 119.

10. See Brodbeck, *Methodological Individualisms*, 25 PHILOSOPHY OF SCIENCE 16-19 (1958); Hobbs, Logical Positivism and the Methodology of Political Science 114-28 (1961) (Ph.D. dissertation, Dep't of Pol. Sci., Northwestern Univ.).

11. See DEWEY & BENTLEY, KNOWING AND THE KNOWN (1949). The concept of transaction is discussed in relation to the study of politics in DANELSKI, A SUPREME COURT JUSTICE IS APPOINTED, ch. 9 (1964).

III. IDENTIFICATION OF VALUES

The conception of values presented above provides a guide for their identification. Evaluations of individual judges constitute the universe of behavior for observation. Once evaluations are designated, specific values can be inferred and postulated. Personal interviews and written questionnaires are possible research techniques in gathering such value data,[12] as well as content analysis of personal documents, speeches, autobiographies, articles, and books. In this regard, the techniques developed by Ralph K. White ("value-analysis") and Charles E. Osgood ("evaluative assertive analysis") are useful.[13]

For purposes of illustration, White's method of value-analysis will be used to identify the top values of Justices Brandeis and Butler. These Justices have been selected as examples because they were known to have had fairly well-defined, stable value systems.[14] In addition, they were perceived by their colleagues as leading proponents of divergent views on the Supreme Court.[15] The basic hypothesis here is that their disagreement was rooted in a fundamental conflict of values—values to which they had been committed long before they came to the Supreme Court.

The universe selected for value-analysis consisted of two addresses by Louis D. Brandeis given in 1915 and 1916 and two addresses given by Pierce Butler in the same years. The 1915 addresses were on essentially the same subject: Brandeis' address, given on the Fourth of July, was entitled "True Americanism"; Butler's address was entitled "Educating for Citizenship: Duties the Citizen Owes the

12. Personal interviews of federal judges were the basis of PELTASON, FIFTY-EIGHT LONELY MEN (1961). Stuart S. Nagel has used written questionnaires for a number of his studies. See, *e.g.*, Nagel, *Off-the-Bench Judicial Attitudes,* JUDICIAL DECISION-MAKING 29-53 (Schubert ed. 1963).

13. WHITE, VALUE-ANALYSIS (1953); Osgood, *The Representational Model and Relevant Research Methods,* in TRENDS IN CONTENT ANALYSIS 23-88 (Pool ed. 1959); Osgood, Saporta & Nunnally, *Evaluative Assertion Analysis,* 3 LITERA 47-102 (1956); White, *Black Boy—A Value Analysis,* 42 J. OF ABNORMAL AND SOCIAL PSYCHIOLOGY 440-61 (1947). See also Holsti, *Evaluative Assertion Aanalysis,* CONTENT ANALYSIS 91-102 (North ed. 1963); Stone, Bales, Namenwirth & Ogilvie, *The General Inquirer,* 7 BEHAVIORAL SCIENCE 484-97 (1962).

14. One of Brandeis' biographers has written: "[Brandeis] . . . knew where he was headed. He did not drift with wind and tide. His actions, his policies, were too sure and definite for sudden impulse or random opportunism." MASON, BRANDEIS 640 (1946). William D. Mitchell, Butler's former law partner, said of him: "He was steadfast, the roots of convietions went deep. They were founded on principles. No one who dealt with him one day was afterwards confounded or non-plussed by any subsequent act or declaration of his on the same subject." PROCEEDINGS OF THE BAR AND OFFICERS OF THE SUPREME COURT OF THE UNITED STATES IN MEMORY OF PIERCE BUTLER 39 (1940).

15. Hughes, *Biographical Notes,* 1930-41, 13-14, Charles Evans Hughes Papers, (Library of Congress).

State."[16] The 1916 addresses were both given to bar associations in the Midwest: Brandeis' address was entitled "The Living Law," and Butler's was entitled "There Is Important Work for Lawyers as Citizens."[17] Brandeis was appointed to the Supreme Court in 1916; Butler was appointed in 1922.

TABLE I
TEN TOP VALUES

Brandeis		Butler	
Value	(N = 208) %	Value	(N = 544) %
Individual Freedom	15	Morality	12
Practicality	7	Patroitism	10
Change	7	Tradition	10
Patriotism	7	Individual Freedom	8
Justice	6	Laissez Faire (+)	8
Laissez Faire (—)	5	Religion	5
Social Justice	5	Law	5
Knowledge	5	Safety	4
Unity	4	Justice	4
Equality	3	Order	3

N cquals number of evaluation units disclosed by the value-analysis of the speeches mentioned in the text.

The results of the value-analysis are reported in Table I. They appear reliable in that they are consistent with independent estimates by contemporaries and scholars. Compare the values indicated in Table I with the following statements from the last chapter of Alpheus T. Mason's *Brandeis: A Free Man's Life:*

1. *Individual Freedom:* "The dominant strain in Brandeis and in his heritage was an urgent zeal for freedom."[18]

2. *Practicality:* "Nor was he carried into ecstacy by any utopia

16. Address by Justice Brandeis, Faneuil Hall, Boston, Mass., July 4, 1915, in BRANDEIS, BUSINESS—A PROFESSION 364-74 (1925); Address by Justice Butler, Catholic Educ. Ass'n, St. Paul, Minn., 1915, in 12 CATHOLIC EDUC. ASS'N BULL. 123-32 (1915).

17. Address by Justice Brandeis, Chicago Bar Ass'n, 1916, in THE CURSE OF BIGNESS 316-26 (Frankel ed. 1934); Address by Justice Butler. Minn. Bar Ass'n, 1916, in PROCEEDINGS, MINN. STATE BAR ASS'N 106-19 (1916). A part of Butler's 1916 address appears to have been taken from his 1915 address.

18. MASON, *op. cit. supra* note 14, at 641.

of what ought to be. His concern was for a society as it is and can be."[19]

3. *Change:* "[H]e knew that social progress, in the very nature of things, demands bold and courageous experimentation, that there must be change. . . . To him, nothing in human affairs is inevitable, save change itself."[20]

4. *Social Justice:* "He was moved by the wrongs of economic privilege, by human suffering and exploitation . . . ."[21]

5. *Knowledge:* "The most significant quality in his career was restless curiosity, thirst for knowledge."[22]

Then compare the values indicated in Table I with the following contemporary perceptions of Butler's values:

1. *Patriotism:* "Mr. Justice Butler brought to the bench . . . a character . . . fortified by an unfaltering patriotism."[23]

2. *Individual Freedom* and *Laissez Faire:* "He felt that the secret of America's success lay in the opportunity afforded the individual, protected by the Constitution, and that individual enterprise, ingenuity and courage would be undermined and weakened, if not destroyed, by paternalistic government as exemplified by the extension of government power and control over the individual, over private enterprise and over purely state and local matters."[24]

3. *Tradition:* "He believed that only in strict adherence to precedent as established in adjudicated cases could orderly government be maintained and individual right be preserved."[25]

4. *Religion* and *Morality:* "His conservatism was rooted in profound religious convictions."[26]

The value of patriotism in Table I merits special comment. In view of the fact that the speeches were given during the World War I period, and that one of them was a Fourth of July speech, patriotism may have been disproportionately emphasized. Therefore, one might

19. *Id.* at 642.
20. *Id.* at 641.
21. *Ibid.*
22. *Ibid.*
23. Leahy in PROCEEDINGS IN MEMORY OF BUTLER BEFORE THE EIGHTH CIRCUIT 34-35 (1940).
24. Dickson, Rumble & Otis in PROCEEDINGS IN MEMORY OF BUTLER BEFORE THE EIGHTH CIRCUIT 8 (1940).
25. *Id.* at 9.
26. Hughes, C.J., *In Memory of Mr. Justice Butler,* 310 U.S. xviii (1939).

suspect that, if a larger universe of evaluations from other time periods were analyzed, the importance of that value would diminish. A cursory check of subsequent public statements by both men indicates that this was the case in regard to Brandeis but not to Butler. Patriotism was a recurrent value in Butler's addresses even after he came to the Supreme Court.[27]

Table I indicates what appears to be a significant conflict between Justices Brandeis and Butler in regard to laissez faire. Proceeding upon the hypothesis that this value conflict was important in Supreme Court decisions while these two Justices were on the bench, an attempt was made to verify the findings by analyzing individual evaluations of each Justice in the judicial process. This was done by examining the lone dissenting votes of Justices Brandeis and Butler during the period they were together on the Court. If the findings in Table I regarding their respective valuings of laissez faire are correct, the following could be expected: (1) Brandeis would never dissent in favor of laissez faire (+), (2) Butler would never dissent in favor of laissez faire (−), (3) a substantial number of Brandeis' lone dissents would indicate the value of laissez faire (−), and (4) the precise opposite would be true of Bulter. That is what Table II shows.[28]

TABLE II
LONE DISSENTS, 1923-1939

Value	Brandeis (N = 15) %	Butler (N = 10) %
Laissez Faire (+)	0	40
Laissez Faire (−)	40	0

N equals the number of cases in which the named Justice was the lone dissenter.

27. See, *e.g.*, Butler, *Some Opportunities and Duties of Lawyers*, 9 A.B.A.J. 585 (1923); Address, *The Eucharist, Sacrament of Peace*, by Justice Butler, International Eucharistic Congress, June 20-26, 1926, in Pierce Butler Papers, Minn. Historical Soc'y.

28. Lone dissenting votes were designated laissez-faire (−) evaluations, and were cast in the following cases: Donham v. West-Nelson Mfg. Co., 273 U.S. 657 (1927); Pub. Util. Comm'n v. Attleboro Steam & Elec. Co., 273 U.S. 83 (1927); Murphy v. Sardell, 269 U.S. 530 (1925); Alpha Portland Cement Co., v. Massachusetts, 268 U.S. 203 (1925); Shafer v. Farmers Grain Co., 268 U.S. 189 (1925); Ozark Pipe Line Corp. v. Monier, 266 U.S. 555 (1925). Lone dissenting votes, designated laissez-faire (+) evaluations, were cast in the following cases: United States v. American

IV. DIMENSIONS OF VALUES

Values are conceptualized as being multidimensional. Although there is no limit to the number of dimensions in which they can be viewed, other than the researcher's verifiable insights, only three dimensions—intensity, congruency, and cognitive completeness—are postulated here for purposes of illustration.[29]

When Mason said that Brandeis had "an urgent zeal for freedom," he was saying that Brandeis held the value of freedom intensely—that is, the Justice had a strong emotional attachment to the value. Implicit in this statement is the notion of a freedom continuum with a zero point at one end and with Brandeis well on the plus side of zero. Likewise, Brandeis was well on the side of the laissez-faire (−) continuum, just as Butler was well on the plus side of the laissez-faire (+) continuum.

The analyses reported in Tables I and II were based, in large part, upon assumptions about the intensity of Justices Brandeis' and Butler's values. The assumption in the value-analysis was that intensely held values are articulated in speech more frequently than values not intensely held. The assumption in the lone-dissent analysis was that generally a justice does not dissent by himself unless he is expressing some intensely held value.

Although intensity appears to be the most significant value dimension, other dimensions could assume an importance rivaling that of intensity. One such dimension appears to be congruency, which refers to the harmony between a specific value and other values held by a judge.[30] If a specific value is reinforced by a number of other values and is not in conflict with any other value, then it is said to possess high congruency. Butler's value of laissez faire (+), for instance, possessed higher congruency than his value of individual freedom, because in the former there was only reinforcement and no conflict with other top values, whereas in certain cases the latter appears to have been in conflict with the value of patriotism. Those situations involved the freedom of speech or conscience of Communists, members of the Industrial Workers of the World (I.W.W.), and aliens who refused to swear unqualified allegiance to the United States. In every such divided case before the Supreme Court from

Sheet & Tin Plate Co., 301 U.S. 402 (1937); Burnett v. Brooks, 288 U.S. 378 (1933); Stephenson v. Binford, 287 U.S. 251 (1932); Samuels v. McCurdy, 267 U.S. 188 (1925).

29. Values were conceptualized in multidimensional terms by William R. Catton, who identified seventeen dimensions. See Catton, Propaganda Effectiveness as a Function of Human Values, 1954 (Ph.D. dissertation, Dep't of Sociology, Univ. of Wash.).

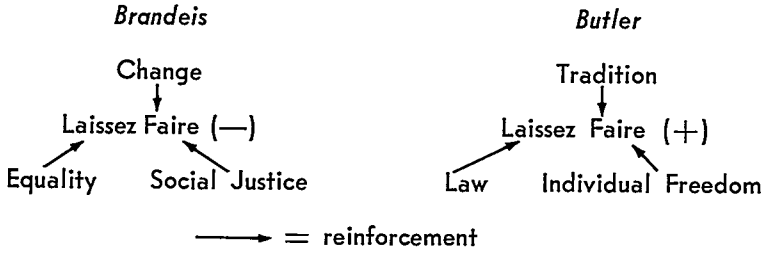
30. Compare Hartman, *Pacificism and Its Opponents in the Light of Value Theory*, 36 J. OF ABNORMAL AND SOCIAL PSYCHOLOGY 165, 167 (1941).

1923 to 1939, Butler's vote was inconsistent with his value of individual freedom but consistent with his value of patriotism.[31] This did not mean, however, that he did not highly value freedom; in criminal cases involving issues of due process, no Justice, not even Brandeis, equalled Butler's libertarian record.[32] This is not surprising when one remembers that Butler was the only conservative Justice to dissent in the wiretapping case of *Olmstead v. United States*[33] and the only Justice to dissent in the double-jeopardy case of *Palko v. Connecticut*.[34]

Laissez faire (—) and laissez faire (+) were highly congruent values for Justices Brandeis and Butler respectively. As Figure 1 shows, both values were highly reinforced and completely absent of conflict. Hence, viewing laissez faire (—) and laissez faire (+) on two continua, each Justice again is positioned well on the plus side of his continuum.

FIGURE 1

ILLUSTRATIONS OF HIGH CONGRUENCY



The dimension of cognitive completeness refers to a judge's readiness to perceive a set of phenomena in terms of a specific value—this readiness being based upon his breadth and depth of experience concerning that value.[35] If, for example, a judge, in his years at the bar, had defended a substantial number of persons accused of crime, his value of due process is apt to be more cognitively complete at the time he ascends the bench than that of a judge who had spent his legal career in corporate practice. The experience that makes for cognitive completeness of a value frequently occurs in the judicial process itself. Thus, as an increasing number of due process cases are argued before the latter judge and decided by him, his value of

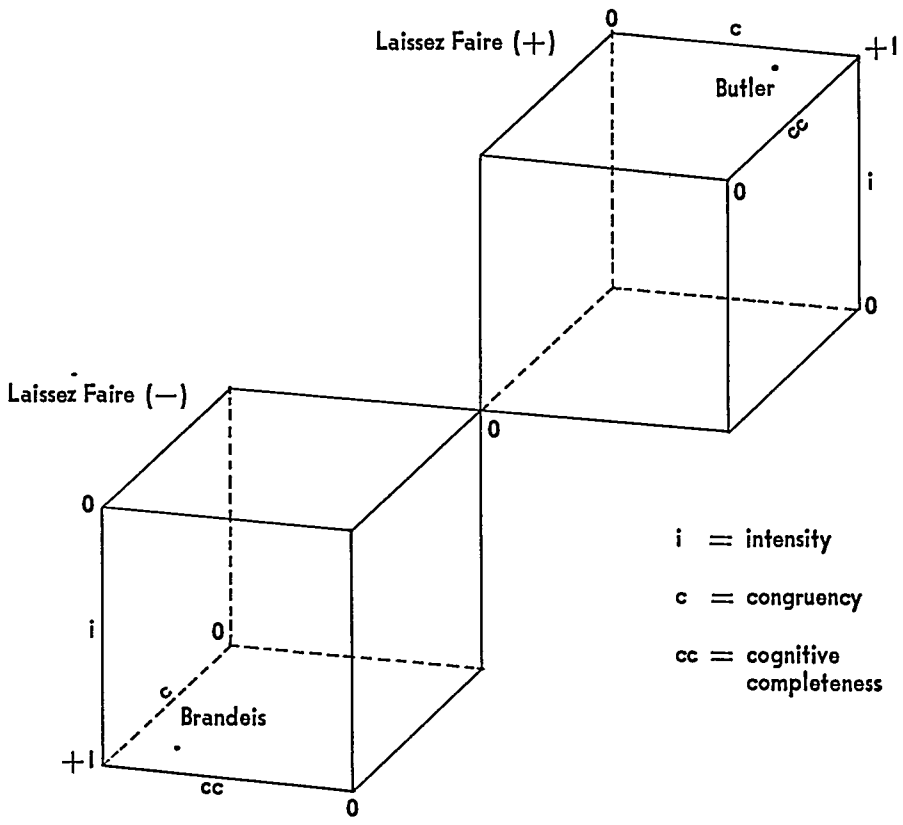
31. See DANELSKI, *op. cit. supra* note 11, at 183-84.
32. *Id.* at 181-82.
33. 277 U.S. 438 (1928).
34. 302 U.S. 319 (1937).
35. Compare Hartman, *supra* note 30, at 165, 167.

due process is apt to become more cogmitively complete. This dimension may provide the basis for explaining why first-term behavior of Supreme Court Justices does not always square with their subsequent judicial behavior.

The cognitive completeness of Justices Brandeis' and Butler's respective values of laissez faire (−) and laissez faire (+) was high. Brandeis had argued the laissez-faire (−) position before the Supreme Court in *Muller v. Oregon*[36] in 1908, and Butler argued what amounted to a laissez-faire (+) position in the *Minnesota Rate Cases*[37] before the same tribunal in 1912. Their value positions on laissez faire were so well known before they came to the Supreme Court

FIGURE 2

AN ILLUSTRATION OF VALUE SPACES



36. 208 U.S. 412 (1908).
37. 230 U.S. 352 (1912).

that their appointments were opposed in part because of them.[38] Moreover, during their tenure on the Court, laissez faire was the dominant issue. From 1923 to 1939, Justices Butler and Brandeis often confronted each other over the conference table in arguments over laissez faire cases. Hence, each of them was well on the plus side of his cognitive-completeness continuum for laissez-faire.

Intensity, congruity, and cognitive completeness are dimensions of "value spaces" corresponding to postulated values. All judges holding a specific value, such as laissez faire (+), have their positions located somewhere in the laissez-faire (+) value space. In Figure 2, Butler's location in laissez-faire (+) space indicates high intensity, congruency, and cognitive completeness. Where two values are opposites, such as laissez faire (−) and laissez faire (+), the positions of judges in both spaces may be compared by inverting one of the spaces and positioning it as the laissez-faire (−) space is positioned in Figure 2. When that is done, judges whose values are most salient in the (+) space are farthest from judges whose values are most salient in the (−) space.

The positions of judges in value spaces are dynamic. Movement within a space may be rapid, or so slow that it is almost imperceptible. The latter seems to have been the case in regard to Justice Brandeis' and Butler's respective values of laissez faire (−) and laissez faire (+). When fairly rapid value movement is suspected, the construction of value spaces representing values at different points in time enables analysis of value positions in terms of direction and velocity of movement. If a court were divided five to four on most freedom issues, movement by one of the judges in a freedom space toward zero point on the intensity continuum would be of interest to a student of politics because it would indicate the likelihood of important policy changes in that area.

V. Value Verification in the Decisional Process

The conception of values of individual judges being located in space is similar to Coombs' conception of individuals' ideal points in his theory of data which Schubert has applied in his factor analytic studies of the Supreme Court.[39] According to Coombs, ideal points can be located in single-stimulus data unidimensionally by scalogram analysis and multidimensionally by factor analysis. Situations yielding single-stimulus data are those in which a number of individuals are confronted with the same stimuli eliciting either a positive or negative

38. See Danelski, *op. cit. supra* note 11; Todd, Justice on Trial (1964).
39. Coombs, A Theory of Data (1964); Schubert, *op. cit. supra* note 4.

response. The decision-making process in collegial courts yields this kind of data. Hence, factor analysis and cumulative scaling appear to be useful techniques for verifying the presence of postulated values.

If the value of laissez faire was ever salient in the Supreme Court, it was during the 1935 and 1936 terms. The proponents of laissez faire had fought a determined rear-guard action during the 1935 term, chalking up such victories as *Morehead v. New York ex rel. Tipaldo*,[40] the New York minimum-wage case. Then in the 1936 term, President Roosevelt announced his "court-packing plan," and the so-called "switch in time" occurred: Justice Roberts defected from the conservative majority in *Morehead* and voted with the liberals to sustain the Washington minimum-wage law in *West Coast Hotel Co. v. Parrish*.[41] If factor analysis and cumulative scaling are useful techniques for value verification, the divided decisions in the 1935 and 1936 terms appear to provide the data for proving it.

Thus the votes of each Justice in the fifty-seven divided cases decided during those two terms were correlated with the votes of every other Justice,[42] and the correlation coefficients obtained were arranged in a nine-by-nine matrix.[43] McQuitty's elementary factor analysis was then used to determine the number of types in the Court and the most representative Justice of each type.[44] This was done because of some comments made by Mr. Chief Justice Charles Evans Hughes in his "Biographical Notes" indicating that he perceived Justices Brandeis and Butler to be the leading proponents of divergent points of view in the Court during that period.[45] It was assumed that these divergent views concerned the value of laissez faire. The first step in the McQuitty analysis revealed the types shown in Figure 3. (See page 733).

The second step of the analysis revealed that Mr. Justice Butler was slightly more representative of Type I than Mr. Justice Sutherland. Mr. Justice Cardozo was clearly the most representative of Type II. Type III, of course, required no further analysis. Using Justices Butler, Cardozo, and Roberts as reference factors, the factor loadings indi-

40. 298 U.S. 587 (1936).

41. 300 U.S. 379 (1937).

42. A case was defined as a perceived decisional unit; that is, if two or more causes were heard together, decided, and reported as a single decision, they were treated as one. In some research situations there are advantages to defining a case as each cause with a separate docket number. This is what Schubert has done.

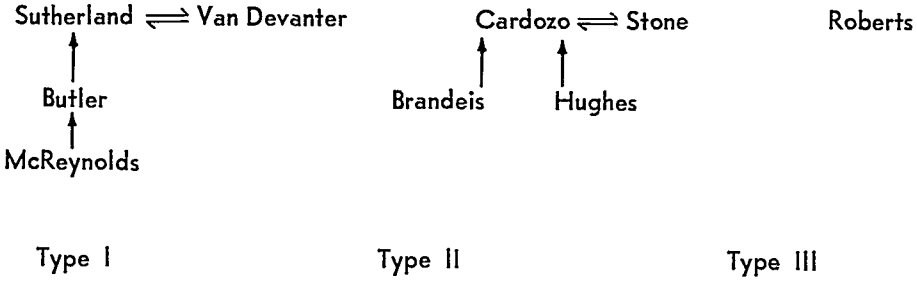
43. For an explanation of correlation coefficients and the correlation matrix, see Schubert, *Judicial Attitudes and Voting Behavior*, 28 LAW & CONTEMP. PROB. 114-18 (1963), in JUDICIAL BEHAVIOR 558-61 (Schubert ed. 1964).

44. McQuitty, *Elementary Factor Analysis*, 9 PSYCHOLOGICAL REPORTS 71-84 (1961). For an example of the use of McQuitty's method in an earlier stage of development, see Ulmer, *The Analysis of Behavior Patterns on the United States Supreme Court*, 22 J. OF POLITICS 629-53 (1960).

45. Hughes Papers, *op. cit. supra* note 15, at 13-14.

FIGURE 3

JUDICIAL TYPES, 1935-1936 TERMS



→ Means Justice at the tail of the arrow is most highly correlated with the Justice at the head, but the one at the head not most highly correlated with the one at the tail.

⇌ Means reciprocal pairs of Justices most highly correlated with each other.

cated in Table III were obtained. Considering the high correlation of Justice Brandeis with Type II, Chief Justice Hughes's perception of the leading proponents of divergent points of view in the Court was fairly accurate.

TABLE III

ELEMENTARY FACTOR LOADINGS, 1935-1936 TERMS

Justices	Factors		
	I	II	III
McReynolds	.72	—.78	—.24
Butler	1.00	—.68	—.09
Sutherland	.75	—.56	—.02
Van Devanter	.69	—.46	—.21
Roberts	—.09	—.20	1.00
Hughes	—.28	.42	—.13
Brandeis	—.63	.85	—.06
Stone	—.65	.92	—.22
Cardozo	—.68	1.00	—.20

The numerical figures indicate the correlations of each Justice with the three Justices who are most representative of their type.

If laissez faire was the dominant issue before the Supreme Court during the 1935 and 1936 terms, an examination of Table III would lead to an inference that Factors I and II were related to it. In an attempt to verify this, all of the cases in the universe under consideration were examined to determine whether they could be perceived in terms of laissez faire. The operational definition of a laissez-faire case was any case that could have been perceived as involving governmental activity in economic matters. The definition was broadly applied; tax cases, for example, were viewed as a part of the laissez-faire universe. A vote against government was construed as a laissez-faire (+) response; a vote for government was construed as a laissez-faire (−) response. To minimize bias, all doubtful cases were categorized as laissez-faire cases. They formed the cumulative scale shown in Figure 4, which seems to verify the presence of the values of laissez faire (+) and laissez faire (−).[46]

FIGURE 4

LAISSEZ FAIRE SCALE, 1935-1936 TERMS

Case Vol./page	*Justices*									*pro-con*
	McR	Bu	Su	VD	Ro	Hu	Br	St	Ca	
300/297			x							1-8
301/532					x					1-8
301/540					x					1-8
297/288	x									1-8
300/216	x									1-8
301/337	x									1-8
301/402	—	x								1-8
296/268	x	x								2-7
300/308	x	x								2-7
300/577	x	x								2-7
301/619	x	x								2-7
297/88	—	x	x		x					3-6
301/412	x	x	x	*			*			3-4
(12 cases)[a]	x	x	x	x						4-5
(6 cases)[b]	x	x	x	x	x					5-4
301/459	x	x	x	x	—	x				5-4

(Table continued on page 735)

46. Cumulative scaling is a precise way of measuring voting behavior in collegial courts. If a scale has a coefficient of reproducibility (R) of .90 or better and a coefficient of scalability (S) of .65 or better, it is supposed to indicate the presence of an attitude or value in terms of which the voting behavior can, at least in part, be explained. See SCHUBERT, *op. cit. supra* notes 2 & 4; TORGERSON, THEORY AND METHOD OF SCALING (1958); Ulmer, *Scaling Judicial Cases*, 4 AM. BEHAVIORAL SCIENTIST 31-34 (1961). In regard to some of the problems involved in using this method to analyze judicial behavior, see pp. 737-39 *infra*.

	McR	Bu	Su	VD	Ro	Hu	Br	St	Ca		
(10 cases)[c]	x	x	x	x	x	x					6-3
298/393	x	x	x	x	x	x		*			6-2
299/32	x	x	x	x	x	x		*			6-2
299/280	x	x	x	x	x	x		*			6-2
298/441	x	x	x	x	x	x	x				7-2
300/352	x	x	x	x	—	x	—	x	x		7-2
301/655	x	x	x	x	x	x	x	—	—		7-2
Totals	43-5	42-6	38-10	35-12	24-24	16-32	2-46	1-43	1-47	202-225	203-224 427
Scale positions	45	42	37	35½	23	17	3	2	2		
Scale scores	.88	.75	.54	.48	—.04	—.29	—.88	—.92	—.92		

$$R = 1 - \frac{7}{364} = .980 \qquad S = 1 - \frac{11}{75} = .853$$

R = coefficient of reproducibility S = coefficient of scalibility

[a] *4-5 cases:* 296/85, 297/251, 300/324, 300/608, 300/379, 301/1, 301/49, 301/58, 301/103, 301/468, 301/495, 301/548.

[b] *5-4 cases:* 296/39, 296/48, 298/238, 298/513, 298/587, 300/154.

[c] *6-3 cases:* 296/102, 296/299, 296/287, 296/113, 296/404, 297/1, 297/135, 297/266, 298/1, 298/492.

x = vote against government
— = vote for government inconsistent with scale pattern
blank = vote for government consistent with scale pattern
* = nonparticipation

In a further effort to verify the presence of the laissez-faire values, the entire universe from which the cases in the above scale were drawn was factor analyzed by means of the principal-factor method.[47] It was expected that a high loading would be obtained on the first factor and that each Justice would be correlated with that factor in the same order as on the laissez-faire scale. That factor, of course, would be identified as the laissez-faire value. The results of the factor analysis are indicated in Table IV. Factor I appears to be the expected value of laissez faire. Varimax rotation provided a solution that is consistent with the initial interpretation.[48]

47. See HARMON, MODERN FACTOR ANALYSIS, ch. 9 (1960).

48. See Kaiser, *The Varimax Criterion for Analytic Rotation in Factor Analysis*, 22 PSYCHOMETRIKA 187-200 (1958).

TABLE IV

PRINCIPAL-FACTOR LOADINGS, 1935-1936 TERMS

Justices	Factors					
	I	II	III	I*	II*	III*
McReynolds	.86	.17	.30	.75	.32	.33
Butler	.86	.20	—.12	.48	.52	.07
Sutherland	.78	.29	—.43	.30	.86	—.03
Van Devanter	.73	.47	—.31	.27	.91	.17
Roberts	.003	—.82	—.55	.09	—.09	.98
Hughes	—.45	.36	—.35	—.22	—.09	.06
Brandeis	—.85	.20	—.17	—.88	—.22	—.01
Stone	—.87	.32	—.03	—.88	—.27	.19
Cardozo	—.91	.31	—.09	—.90	—.25	.15

*Kaiser's Varimax Rotation

A comparison of Factor I in Table III, Factor I in Table IV, and the scale scores in Figure 4 suggests that they are measures of the same thing—namely, laissez faire (+) and laissez faire (—). Those values, it will be recalled, were conceptualized as being located in specific value spaces. The spaces were constructed in terms of the dimensions—intensity, congruency, and cognitive completeness. If these are the most significant dimensions of the laissez-faire values, Factor I in Table IV could be viewed as a composite of them and positioned in the value-space in Figure 2. Butler's position would be in the laissez-faire (+) space .86 from zero on all dimensions, that is, approximately where he was estimated to be in Figure 2. Similarly Brandeis' position would be the laissez-faire (—) space .85 from zero on all dimensions, again approximately where he was estimated to be in that figure. Justices McReynolds, Sutherland, Van Devanter, and Roberts would be in the laissez-faire (+) space—McReynolds occupying the same position as Butler, Sutherland and Van Devanter slightly closer to zero, and Roberts practically at zero point where the two spaces are joined. Justices Cardozo, Stone and Hughes would be with Brandeis in the laissez-faire (—) space—Cardozo and Stone slightly farther from zero and Chief Justice Hughes considerably closer to zero than Brandeis.

Obviously it is unlikely that the Justices' positions in the (+) and (—) value-spaces would in fact appear in a diagonal running from Butler to Cardozo as the above paragraph seems to indicate. Because of his high intensity, congruency, and cognitive consistency in regard

to laissez faire (+), the positioning of Butler, although rough, is probably fairly accurate. The same is probably true for Brandeis in regard to laissez faire (—). But in regard to the other Justices, especially Justices Roberts and Hughes, factor scores may be attributable considerably more to one value dimension than the others. Thus, in order to accurately position the Justices in value spaces, individual factor loadings must be broken down in terms of the contribution of each value dimension.

VI. Toward a Theory of Judicial Decision-Making

Implicit in the discussion of values in this paper is a stimulus-response model of judicial decision-making.[49] Responses are decisions of courts defined in terms of judges' behavior at the end of the decisional process. Stimuli are cases before courts for decision, but precisely what constitutes a "case" raises some difficult problems. Values and all the other postulated variables that connect stimuli and responses in some meaningful way are, of course, only theoretical constructs.

In a strict sense, a case before a collegial court is not a stimulus, but rather a set of stimuli—briefs read by judges, arguments of counsel, conference discussions, comments of law clerks, and so forth.[50] These sets of stimuli are not identical for all judges, partly because each judge perceives stimuli uniquely in terms of his own values, experiences, and needs. Lawyers who argue before collegial courts know this intuitively. Before ascending the bench, Robert H. Jackson, reflecting on his arguments before the Supreme Court, said of Justice Butler:

> He was relentless in bringing the lawyer face to face with the issues as he saw them. I think I never knew a man who could more quickly orient a statement of facts with his own philosophy. When the facts were stated, the argument was about over with him—he could relate the case to his conceptions of legal principles without the aid of counsel.[51]

If the sets of stimuli we call cases are considerably different for each judge, it would be fruitless to use techniques such as factor analysis or cumulative scaling in explaining collegial decision-making, for such techniques assume that the sets of stimuli are the same for all the judges. Discussing this problem, Coombs has written: "An anchor point is needed, and the same stimulus being presented to

49. Schubert also views judicial decision-making in terms of a stimulus-response model. See Schubert, *op. cit. supra* note 4.

50. Compare Coombs, *op. cit. supra* note 39, at 221.

51. Jackson, *In Memory of Mr. Justice Butler*, 310 U.S. xiv (1939).

different individuals provides such an anchor. If a stimulus differs in a significant way from one individual to the next, absolutely nothing can be done with just these observations. . . ." Abandoning the hypothesis that individuals differ in their responses "because they perceive the stimuli differently," Coombs concludes, "we concede that each stimulus is more or less the same thing for everyone, not just in its physical dimensions but in whatever its subjective characteristics might be."[52]

In developing a theory of judicial decision-making, the concession to which Coombs refers cannot be made because we have empirical evidence that judges do, upon occasion, perceive the same cases differently. The problem here is how to specify judges' perceptions. A first step in that direction is intensive study of the judges themselves, using data outside of the decisional process. Value analysis is important in this regard. If judges' values are located in value spaces, inferences can be made about how they perceive value phenomena; then there is some basis for determining whether perceptions overlap. Thus, the exploration of values appears to be a fruitful first step in the development of a theory of judicial decision-making.

In the example discussed in this paper—laissez faire in the 1935 and 1936 terms—it appears that there was sufficient perceptual overlap so that factor analysis and cumulative scaling were useful techniques in verifying the presence of the values under inquiry. It must be stressed, however, that the value and the period were chosen for illustrative purposes because there was considerable independent evidence of perceptual overlap in regard to laissez faire. In the study of other values in other periods, the perceptual problem must be solved if techniques like factor analysis and cumulative scaling are to be used fruitfully.

Although values are important variables in the decision-making process, other variables must be taken into account to explain the process. Anyone who has done extensive research on the manuscripts of Supreme Court Justices is aware of the great amount of evidence in certain historical periods indicating that a Justice's value position on Case A was (−) when in fact his recorded position in the official reports is (+). Obviously his voting behavior was connected with variables other than his values.

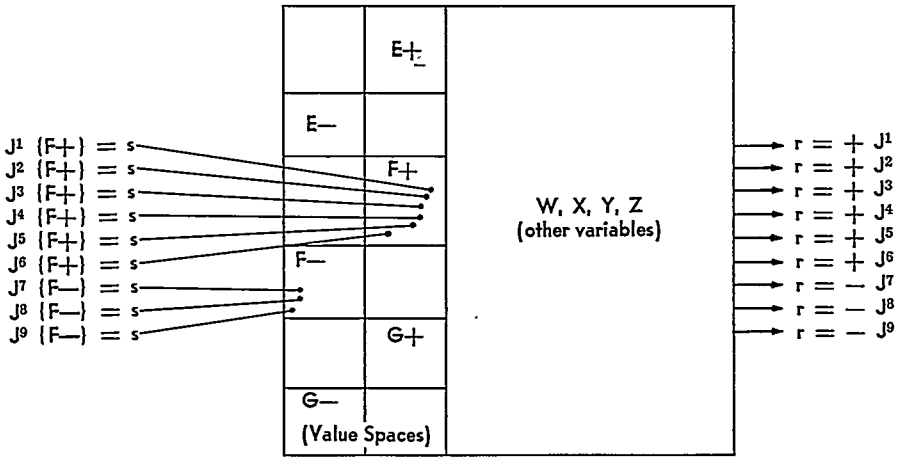
A rough outline of a model of judicial decision-making is shown in Figure 5. The sets of stimuli, such as {F+}, are viewed as points located in the same space with values. If a point representing a set of stimuli does not go beyond a judge's value position (that is, it is not more plus than the judge's position if his value is in a plus space),

52. COOMBS, *op. cit. supra* note 39, at 8.

then he acquires a plus value score; otherwise, he acquires a minus value score. Analysis then shifts to the remaining variables in the model.[53] If a judge receives a plus value score and the remaining variables are also plus or zero, then his response—that is, his vote—will be plus.

FIGURE 5

A DECISION-MAKING MODEL FOR COLLEGIAL COURTS



VII. Conclusion

This paper is a modest step in the direction of developing a fairly detailed, dynamic, empirical theory of judicial decision-making in which the concept of values is central. The identification of values poses no insurmountable problems. Although the data used here to illustrate value identification were public addresses of judges, other and perhaps better sources of value data are readily accessible. In studying the current judiciary, the lone dissenting opinion is an obvious candidate for content analysis. Although White's method of value-analysis was sufficient to identify the top values of Justices Brandeis and Butler, other more rigorous techniques, such as Osgood's, may prove more suitable in other research situations.

The multidimensionality of values requires further exploration. The dimensions postulated—intensity, congruency, and cognitive com-

53. Among the remaining variables are role, personality, and leadership. For a discussion of leadership in the Supreme Court, see Danelski, *The Influence of the Chief Justice in the Decisional Process*, Courts, Judges, and Politics 497-508 (Murphy & Pritchett eds. 1961).

pleteness—were considered only for illustrative purposes. They may not be the most important dimensions of value. Nevertheless, if other dimensions are shown to be more important, they can be used to construct value spaces in which values can be located. The problem of measuring the dimensions of values is important, and in light of the advances in psychometric techniques in recent years, it appears to be capable of satisfactory solution.

This paper has demonstrated the utility of factor analysis and cumulative scaling in the study of judicial behavior. In the past these techniques have been used, for the most part, to describe judicial behavior precisely. Here they were used for purposes of verification of hypotheses. They have limitations as research techniques, but only when we have developed an adequate theory of judicial decision-making will we know their precise limits.

The primary purpose in developing a theory of judicial decision-making is not the prediction of judicial decisions before they occur. Rather it is to understand scientifically the complex phenomena we call the judicial process. Some doubt that this is possible, and they may be correct. However, the scientific student of judicial behavior assumes, with Louis L. Thurstone, "that an unlimited number of phenomena can be comprehended in terms of a limited number of concepts or ideal constructs."[54] This paper has explored the utility of one of those constructs.

54. THURSTONE, MULTIPLE-FACTOR ANALYSIS 51 (1947).