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A BEHAVIOURAL APPROACH TO THE JUDICIAL PROCESS: SCALOGRAM ANALYSIS

by Sidney Raymond Peck

During the past decade, certain social scientists, known as judicial behaviouralists, have examined and attempted to explain the role of the courts in the development and administration of public law in the United States. Although they have developed several different approaches to the study of the judicial process, the judicial behaviouralists share certain characteristics which allow them to be identified as a school of thought.

They all look upon the administration of public law by the court as an aspect of political behaviour, in continuous interaction with other political institutions and forces; and, accordingly, they regard judges as policy-makers. They bring to the study of the court the theories and techniques of one or more of the social sciences, particularly, political theory, economics and social psychology, and focus upon the behaviour of individual judges and other participants in the judicial process. They use theories of statistics and statistical methods of data processing, and so are able to study much larger samples of the relevant data than was possible for earlier students of the judicial process.

To place the development of judicial behaviouralism in historical context, we must bear in mind that the legal realists, who wrote in the 1920s and 1930s, brought about a change in the ways in which American judges, academics and practitioners view the nature and function of the law and of the judicial process. For the past quarter-century, members of the three branches of the profession in the United States have understood the law as a social institution whose

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development both affects and is affected by changes in other social institutions. They have generally recognized that judges have substantial freedom in the application of precedent and statute; that, in at least some cases, judges make new law and do not simply apply old law; that, at least to some extent, judicial decisions are the product of the judge as a whole man, not as a trained professional; and that, if judicial decision-making is to meet the needs of a changing society, it must be based on principle and policy rather than doctrine and precedent.

The judicial behaviouralists, in emphasizing the function of judges as policy-makers in the political (that is, governing) process, build upon the foundations laid by the legal realists. Although their approach is new in technique and design, and has had a mixed reception, it is within the spirit of the jurisprudential tradition.

How will judicial behaviouralism be received in Canada? Canadian jurisprudence clearly bears the stamp of English positivism, modified to some degree by the influence of American legal realism and an early indigenous legal realism. These moderating influences are perhaps still more strongly felt by members of the law school faculties than by members of the Bar and Bench. The state of Canadian jurisprudence suggests that judicial behaviouralism will, at least initially, be less at home in this country than in the United States. Despite that possibility, it is clear that Canadian lawyers will want to acquaint themselves with new approaches to the institutions around which their professional lives are centred.

In this paper I outline generally and briefly the four approaches taken by the judicial behaviouralists; I discuss the theory and method of Guttman cumulative scaling; I examine the work of three behaviouralists who have applied cumulative scaling to the judicial process; I offer a critique; and, finally, I discuss the applicability of the method to the work of Canadian courts.

Judicial Behaviouralism: Four Approaches

Those behaviouralists who take what Schubert calls the “group interaction approach” to the study of the courts, argue that to understand the role played by courts in social and political processes, we must not regard judges as an isolated group whose activities can best be explained by a critical study of the reasons which they give to support their judgments. Instead, they say, we must investigate how judges are appointed and promoted, how interest groups attempt to influence the development of the law through litigation, what knowledge members of the community have about judges and their judgments, and what effect judgments have on the community. Students pursuing this approach investigate how consumer pressure groups, etc.


3 Vose, Clement E., The National Consumers’ League and the Brandeis Brief, (1957) 1 M&M J. Pol. Sci. 267. In footnotes 3 to 14, I list a selection of recent publications representative of the research of four groups of behaviouralists. Most of the works cited are discussed by Schubert in the pieces cited in footnote 1, supra, to which reference may be made for a more complete bibliography.
business pressure groups\textsuperscript{4} and special interest groups\textsuperscript{5} participate in test cases and other litigation in an effort to obtain judicial protection of the claims put forward by their members, and the extent to which such decisions as the school desegregation cases\textsuperscript{6} and the released time for religious education cases\textsuperscript{7} have been effective in practice.

The proponents of the “small group approach”\textsuperscript{8} make empirical studies of the Supreme Court of the United States, which analyse the dynamics of its functioning as a small group. The emphasis is on the identification and characterization of blocs of judges based on voting records;\textsuperscript{9} studies of the types of leadership or power exercised by the Chief Justice and other judges, particularly the importance of the power to assign the writing of judgments;\textsuperscript{10} studies of the relationship between the judges and their “law clerks”;\textsuperscript{11} and analysis of judicial behaviour on the basis of game theory.\textsuperscript{12}

A third behavioural approach is the study of the political socialization of judges. This involves a description of the social background of the justices of the United States Supreme Court, and an attempt to discover what relationships, if any, exist between their background characteristics and their decision-making behaviour.\textsuperscript{13} Researchers

\textsuperscript{5} Voss, Clement E., Caucasians Only: The Supreme Court, The N.A.A.C.P. And The Restrictive Covenant Cases, (Berkeley and Los Angeles, Univ. of Calif. Press, 1959).
\textsuperscript{8} Murphy, Walter F., Courts as Small Groups, (1966) 79 Harv. L. Rev. 1565.
\textsuperscript{11} Newland, Chester, Personal Assistants to Supreme Court Justices: The Law Clerks, (1961) 40 Ore. L. Rev. 299.
\textsuperscript{13} See for example, Schmidhauser, John R., The Justices of the Supreme Court: A Collective Portrait, (1959) 3 MdW. J. Pol. Sci. 1; Schmidhauser, John R., Stare Decisis, Dissent and the Background of the Justices of the [Footnote continued on next page]
single out as influential characteristics, socio-economic, religious, ethnic, political and educational background and the professional interests of the judges prior to appointment.

Another group of behaviouralists uses the theories and methods of attitudinal analysis, developed by social psychologists, to study judicial attitudes. The research attempts to identify judges' attitudes toward public policy issues, and to demonstrate the relationship between those attitudes and judicial decision-making behaviour. This research uses both factor analysis and Guttman cumulative scaling to measure and analyse judicial attitudes. The application of Guttman scaling techniques to cases decided by the Supreme Court of the United States has been carried on primarily by Glendon Schubert, Harold Spaeth and Sidney Ulmer. They claim to have demonstrated that the decisions of the Supreme Court Judges in the majority of cases are governed by their attitudes to civil liberties and to economic policy.

**Guttman Cumulative Scalograms**

The Guttman cumulative scale is a technique developed by social psychologists to measure the attitude of subjects toward social objects, and to locate the subjects on an attitudinal dimension or continuum. An attitude has been defined as an enduring syndrome of response consistency with regard to a set of social objects.

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15 See references, infra.

16 In this section and the section which follows, I discuss the views held by the behaviouralists and the conclusions they draw from their studies. I postpone assessment of their views and conclusions until the section entitled Critique.


Like many psychological variables, attitude is a hypothetical or latent variable, rather than an immediate observable variable. The concept of attitude does not refer to any one specific act or response of an individual, but is an abstraction from a large number of related acts or responses. For example, when we state that individual A has a less favourable attitude toward labour organizations than individual B, we mean that A's many different statements and actions concerning labour organizations are consistently less favourable to labour than are B's comparable words and deeds. We are justified in using a comprehensive concept like attitude when the many related responses are consistent. That is, if people who disapprove of the closed shop are also likely to want to outlaw strikes, and to oppose minimum wage laws, then it seems reasonable to speak of an anti-labour attitude.¹⁹

Social psychologists have attempted to measure attitudes by eliciting the verbal responses of subjects to questions or statements which relate to a given social object.²⁰ For example, to measure attitudes toward foreigners, subjects might be asked to respond to the following series of statements:

I am willing to accept foreigners

1. as visitors to my country;
2. as citizens of my country;
3. as members of my trade;
4. as neighbours;
5. as personal friends;
6. as relatives by marriage.²¹

Individual subjects may indicate that they are willing to admit foreigners to a certain degree of social relationship, but that they will exclude them from any closer relationship. If we assign to each subject, as his score, the number of the last statement to which he assents, indicating the closest relationship to which he is willing to admit foreigners, we are able to compare with one another the attitude of each subject. A subject with a score of 6 has a more favourable attitude toward foreigners than one whose score is 2. In this way we are able to measure the attitudes of individuals and to locate each on an attitudinal continuum or dimension.

The statements are cumulative in the sense that each one represents a more favourable attitude than the one which precedes it. Accordingly, it is expected that each subject who responds affirmatively to any statement will respond affirmatively to all statements which precede it, and each subject who responds negatively to any statement will respond negatively to all statements which follow it. Responses which meet these conditions are said to be consistent; those which do not are said to be inconsistent.

A subject might respond affirmatively to statements 1, 2, 3, 5 and 6, but negatively to statement 4. That the response to number 4 is inconsistent, may indicate that it is based on an attitude other than

²⁰ Newcomb, Social Psychology, supra, footnote 19, 496-534; Green, B. F., supra, footnote 17, especially 344-365.
²¹ This example is adapted from a scale devised by E. S. Bogardus, one of the first social psychologists to use cumulative scaling. See Newcomb, T. M., supra, footnote 19, 498-499.
the one under investigation; for example, it may be based on the subject's attitude toward expected changes in property values. This indicates that statement 4 relates to the latter additional dimension, rather than to the one under investigation.

We may use the series of statements as a measure of subjects' attitudes toward foreigners only if the statements relate to that attitudinal dimension and to no other, so that the responses are based on or determined by that attitude; that is, only if the statements are unidimensional. Where no inconsistencies occur in the responses, it is likely that all the statements relate to the attitude being investigated, and that the responses are made on the basis of that attitude. However, when inconsistencies occur, it is necessary to devise a test to determine whether all or most of the statements relate to the attitudinal dimension under investigation.

Louis L. Guttman devised a scale which, he suggested, establishes the unidimensionality of the statements contained on it. In constructing a Guttman cumulative scale, a researcher chooses questions or statements which he believes to be samples of the whole range of questions which relate to the attitudinal dimension under investigation, and which he believes to be distributed over the entire range of that dimension. The Guttman cumulative scale is a tabulation of the subjects' responses to those statements or questions.

We may construct a Guttman scale if we assume that five subjects A, B, C, D and E respond to the six statements about foreigners as indicated below. (An affirmative response is designated by a plus sign, and a negative response by a minus sign.)

<table>
<thead>
<tr>
<th>Statement</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>2</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
</tr>
<tr>
<td>3</td>
<td>+</td>
<td>+</td>
<td>+</td>
<td>-</td>
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<tr>
<td>4</td>
<td>+</td>
<td>-</td>
<td>-</td>
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<td>-</td>
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<tr>
<td>5</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>6</td>
<td>+</td>
<td>+</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

It is apparent that A's attitude toward foreigners is relatively favourable, and E's unfavourable. The attitudes of C and D fall between the two extremes represented by A and E. The only inconsistent response is that of B to statement 4.

Where the statements on the scale are such that all subjects do, in fact, respond consistently, the statements are said to be "scalable". Scalability is taken as evidence that the statements are unidimensional, that is, that the statements relate to a single attitudinal dimension, and that the responses to them are determined by that attitude (in the above example, the attitude to foreigners). Thus, it is said that scalability evidences unidimensionality.
However, in practice, a perfectly consistent scale occurs only rarely. Guttman takes the position that as long as the number of consistent responses constitutes more than ninety per cent of the total number of responses, it is likely that the responses are largely determined by a single dominant attitude, although secondary attitudinal dimensions may be responsible for the inconsistencies. Thus, Guttman is willing to accept as scalable, statements on a scale on which at least ninety per cent of the responses are consistent. Such less-than-perfect scalability evidences near-unidimensionality.

To measure the degree of consistency, Guttman developed a formula for a "coefficient of reproducibility" (R), which indicates in decimal form the percentage of consistency.22 Herbert Menzel23 developed a "coefficient of scalability" (S) which provides a more rigid standard of scalability. If R is .90 or greater, and S is .60 or greater, the array of statements is scalable, the statements are unidimensional, and the responses are determined by a single dominant attitude. Such an array of statements measures a single attitudinal dimension, and so may be used to measure the intensity of the attitude in subjects, and to locate the subjects along the attitudinal dimension.

Glendon Schubert has adapted the Guttman theory and method of cumulative scaling for use in the analysis of judicial decisions,24

22 R. is calculated by the formula

\[ R = 1 - \frac{\text{number of inconsistent responses}}{(\text{number of questions}) \times (\text{number of respondents})} \]

G. A. Schubert points out, in The Judicial Mind, supra, footnote 17, at 78, that "one of the weaknesses of cumulative scaling, from a statistical point of view, is the lack of any really uniform criterion of testing significance.... [V]arious rules of thumb have been conventionally associated with the use of [the] coefficient." One of these is that the responses to any question on the scale are not included in the calculation of R, if eighty per cent or more of those responses are either affirmative or negative. If responses to questions which elicit a nearly unanimous response were counted, the degree of consistency would be spuriously high because the closer the responses approach unanimity, the less possibility there is that some responses will be inconsistent. See Torgerson, supra, footnote 17, at 324; Green, B. F., supra, footnote 17, at 356; Lings, J. C., Multiple Scalamogram Analysis: A Set-Theoretic Model for Analyzing Dichotomous Items, (1963) 23 EDUCATIONAL AND PSYCHOLOGICAL MEASUREMENT, 504-510, cited in Schubert, G. A., The Judicial Mind, supra, footnote 17, at 81-83. See also Spaeth, Harold J., Judicial Power as a Variable Motivating Supreme Court Behavior, (1962) 6 MIDW. J. Pol. Sci. 54, at 58. Schubert, G. A., Quantitative Analysis of Judicial Behavior, supra, footnote 9 at 271, adopts Tannenhaus' reformulation:

\[ S = 1 - \frac{\text{number of inconsistencies}}{\text{number of responses}} \]

23 A New Coefficient for Scalamogram Analysis, (1953) 17 PUB. OPINION Q. 268. S is a more rigorous test for consistency than is R, because its calculation omits not only responses to any question which elicits a nearly unanimous response, but also responses by subjects who respond affirmatively (or negatively) to most of the questions on the scale. See H. J. Spaeth, supra, footnote 22, at 58 and 59. Schubert, The Judicial Mind, supra, footnote 17, at 81-83.

24 Schubert, Quantitative Analysis, supra, footnote 9, at 269-376, especially 272-289.
and his adaptation has been accepted by other judicial behaviourists.\textsuperscript{25}

The application of the Schubert adaptation requires that the researcher formulate a "reasonable, non-trivial"\textsuperscript{26} hypothesis, for example, that judges decide civil liberties cases\textsuperscript{27} on the basis of their attitudes toward the deprivation of a civil liberty, rather than on the basis of the legal considerations relevant to each case. Each non-unanimous case raising a civil liberty issue is treated as posing a question in the form, "Shall I allow a deprivation of the claimed civil liberty to the extent represented by this case?"\textsuperscript{28} The judges' votes, and not their reasons for judgment, are taken to be their responses to the questions posed by each case.

The vote of each judge is classified\textsuperscript{29} as a plus or a minus vote in terms of the attitude which is the subject matter of the hypothesis; for example, a vote will be classified as plus if it upholds the civil liberty claim, and as minus if it rejects the claim. The non-unanimous cases are arranged vertically in order of the number of plus votes cast in each case;\textsuperscript{30} and the judges are arranged horizontally in order of the number of plus votes cast by each judge.\textsuperscript{31}

The Guttman convention that a consistency of ninety per cent of the votes evidences the dominance of a single attitude is accepted. Therefore, if, on the scale of civil liberty cases, the coefficient of reproducibility is .90 or more and the coefficient of scalability is .60 or more, the researcher concludes in accordance with Guttman theory that civil liberty cases are scalable, that they are unidimensional, (that is, that they all relate to the same attitudinal dimension), and, accordingly, that all the judges reach their decisions in civil liberty cases on the basis of a single dominant attitude—their attitude toward civil liberties. Thus, the researcher concludes that the hypothesis is verified.


\textsuperscript{26} Schubert, Quantitative Analysis, at 280.

\textsuperscript{27} The definition of a civil liberties case is discussed below.

\textsuperscript{28} Ulmer, supra, footnote 25, at 295.

\textsuperscript{29} Problems involved in classification are discussed below.

\textsuperscript{30} The cases with 8 affirmative votes and 1 negative vote are placed at the top of the list and those with 8 negative votes and 1 affirmative vote at the bottom of the list. Unanimous decisions, either affirmative or negative, are often omitted from the scale. If they were included, they would be placed at the top or bottom of the scale; and therefore, of course, inconsistent votes cannot appear in unanimous decisions.

Note that a scale of judicial decisions contains all non-unanimous cases decided during a given term or terms which come within the definition of cases under study. Thus, the scale differs from the normal Guttman scale which contains only a sample of the questions that might be asked in relation to the attitude under investigation. See Schubert, Quantitative Analysis, at 274-277.

\textsuperscript{31} The resulting scale is similar in form to the scale produced supra. The members of the court take the place of the subjects on that scale, and the cases take the place of the statements. For a discussion of the construction and graphical presentation of the scalogram see Schubert, Quantitative Analysis, at 281-289.
The scale is taken to indicate the attitude of each judge in relation to that of every other judge. The judge at the extreme left is the one who casts the greatest number of plus votes; the judicial behaviourists claim that he exhibits the most favourable attitude to the issue raised by the cases. The remainder of the judges are ranked from left to right on the scale in accordance with the number of plus votes cast by each; the behaviourists argue that the order in which the judges are ranked indicates the extent to which the attitude of each favours civil liberty claims. Thus, if a plus vote is defined as a “liberal” vote, the scale is taken to indicate which judges are “liberal”, which are “conservative” and which are “moderate”.32 The description of any judge as “liberal”, “conservative”, or “moderate” is, of course, relative to the composition of the court, and to the extremity of the civil liberty claims raised in the cases before the court.33

The scale directs the researcher’s attention to cases containing inconsistent votes. If a vote is inconsistent because it is based on an attitude other than the one measured by the scale, the second attitude may perhaps be identified through the use of subscales. A second attitude may influence the judges’ votes in a case which involves more than one issue; for example, if a case on the civil liberties scale raises an issue of states’ rights, the judges’ votes in that case may be influenced by their attitudes toward states’ rights as well as by their attitudes toward civil liberties. It is possible to construct a subscale

32 In addition to the actual ranking of the judges on the scale, the attitude of each judge may be compared with that of every other judge in two ways: (1) by his scale position fixed at the point at which he begins to vote consistently negative (e.g. anti-civil libertarian); and (2) by his scale score computed by the formula:

\[ \text{scale score} = \frac{2 \times \text{scale position}}{\text{number of cases in the scale}} - 1 \]

Scale scores may range from plus 1.00 (indicating support of the civil liberty claim in all cases) to minus 1.00 (indicating failure to support the claim in any case).

Where the attitudes of the judges are measured only by their ranking on the scale, the measurement is ordinal: that is, we may say only that A who ranks at the extreme left of the scale is more favourable to civil liberties than is C, who ranks in the middle ranges, who, in turn, is more favourable than E at the extreme right. However, measurement by means of the scale score is interval: that is, it discriminates the degree of difference between judges, and allows us to say that A with a score of .6 and B with a score of .5 have attitudes which are more similar to each other than that of E with a score of .2 is to either of them. We may not say, however, that A is three times as favourable to civil liberties as E is, because there is no zero point, i.e. a point at which there is a total absence of favourability toward civil liberties (just as a temperature of 60° F. does not indicate the presence of three times as much heat at a temperature of 20° F.). See Schubert, The Judicial Mind, supra footnote 17 at 124-127, 144-146; Torgerson, supra footnote 17, at 1-40; Newcomb, supra, footnote 19, at 501-503; Tanenhaus, Joseph, The Cumulative Scaling of Judicial Decisions, (1966) 79 Harv. L. Rev. 1583, at 1584-1586.

33 For example, D on the scale shown, supra, would not rank as close to the far right of the scale if F and G were members of the court and were situated to the right of D. Similarly, if the civil liberty claim in cases 3, 4, and 5 were no more extreme than those in cases 1 and 2, D would have five plus votes instead of 2), and would appear to be as liberal as C.
which contains only those cases on the main scale which raise both issues. The behaviourists claim that the subscale enables them to investigate the extent to which the decisions in those cases are affected by the attitude to each issue.

1. Are the votes in the subscale cases sufficiently consistent to justify the conclusion, on the basis of Guttman theory, that the attitude toward civil liberties is the dominant attitude governing the decisions? If not, is it possible to construct an acceptable scale in terms of the judges’ attitudes toward states’ rights, and show that attitude to be dominant in cases raising both issues?

2. If the subscale shows that the attitude toward civil liberties remains dominant, it may also indicate whether the attitude toward states’ rights has a significant effect on the operation of the dominant attitude in the court as a whole. For example, if it is found that the attitude toward civil liberties remains dominant in these cases, will the court defer to deprivations of civil liberties by the states in a greater proportion of cases than it will defer to deprivations of civil liberties by the national government?

3. The subscale may indicate whether the secondary attitude has a significant effect on the operation of the dominant attitude in the decisions of an individual judge. For example, a judge may rank in second place on the master scale indicating a favourable attitude toward civil liberties, and consequently a readiness to hold that legislation which invades civil liberties is unconstitutional. If this judge ranks in seventh place on the subscale, this may indicate that his attitude in favour of states’ rights inhibits his attitude in favour of civil liberties, and causes him to be less ready to hold that state legislation which invades civil liberties is unconstitutional, than he is to hold that similar federal legislation is unconstitutional.34

It will have become apparent from the foregoing, that scalogram analysis proceeds on the assumption that judges decide cases on the basis of their attitudes toward policy issues, and not by applying statutes, precedents and legal rules. The behaviourists hold that scalogram analysis verifies that assumption, as they take the scalability of judicial decisions to establish that the decisions are unidimensional.

If the behaviourists’ assessment of the applicability of cumulative scaling to judicial decisions is accurate, then scalogram analysis may be used to predict how judges will decide cases. For example, if a researcher is able to assess the extent of the civil liberty deprivation represented by a pending case and so determine where that case

fits on the scale, he may predict how each judge will vote when the
case is heard.\textsuperscript{35}

\textbf{The Application of Cumulative Scaling to Judicial Decisions}

I will now consider briefly the work of Glendon Schubert, Sidney
Ulmer and Harold Spaeth, who have used the cumulative scalogram
to analyse decisions of the United States Supreme Court.

Glendon Schubert\textsuperscript{36} produces a composite picture of the United
States Supreme Court from 1946 to 1963, by scaling all non-unanimous
cases decided during that period.\textsuperscript{37} The resultant series of scales enables him
to examine the constancy of judicial attitudes, the relationships
between the attitudes of individual judges, changes in those
attitudes and changes in the collective attitudinal structure of the
court as a whole. He suggests that the voting behaviour of the judges
in all (non-unanimous) cases decided during the seventeen terms
may be explained on the basis of the judges' attitudes toward six
fundamental policy issues: political (i.e., civil) liberalism, economic
liberalism, governmental taxing authority, federalism (conflict be-
tween federal and state governmental interests), judicial activism
or restraint and judicial centralisation (the relationship between the
Supreme Court and the lower courts). Of the 1,657 cases decided non-
unanimously during the period, approximately one-third raise civil
liberty issues, one-third economic issues, and the remainder one of the
other four issues.\textsuperscript{38}

Schubert analyses the judges' attitudes toward the two major
policy issues, political liberalism and economic liberalism, by con-
structing two scales for each term of the Court. The C scale contains all
non-unanimous cases raising, as the primary issue, a claim to personal
(as distinguished from property) rights and freedoms, including claims

\textsuperscript{36} Schubert uses Guttman scales of judicial decisions as a step in the
construction of a multidimensional psychometric model of the Supreme Court
of the United States, which, he believes, will enable him to measure the
attitudinal and ideological variables responsible for the voting behaviour
of the judges. His method is to use factor analysis to locate each case in the
psychological space represented by the model, and Guttman scalograms
to locate the relevant attitudes of the judges in the same space. The vote of
any judge in any case can then be explained in terms of the relationship
between the locations of the case and of the judge's attitudes in the space.
A discussion and critique of Schubert's model is beyond the scope of this paper.
See SCHUBERT, \textit{The Judicial Mind}, especially at 22-83; \textit{The 1960 Term of The
at 90-93; \textit{Judicial Attitudes and Voting Behavior: The 1961 Term of the

Schubert has also scaled particular groups of cases, e.g., cases concerning
right to counsel, unreasonable search and seizure, and claims of aliens. See
his \textit{Quantitative Analysis}, at 290-376; \textit{Constitutional Politics}, (New York:
Holt, Rinehart, 1960); \textit{The Study of Judicial Decision-Making as an Aspect of
\textsuperscript{37} SCHUBERT, \textit{The Judicial Mind}, supra, footnote 36, at 97-157. \textit{The 1960
Term of the Supreme Court: A Psychological Analysis}, supra, footnote 36,
at 97-102; \textit{Judicial Attitudes and Voting Behavior: The 1961 Term of the
United States Supreme Court}, supra, footnote 36, at 119-128.
\textsuperscript{38} There were 562 cases, 537 cases and 558 cases respectively.
to freedom of speech, press, religion, assembly and petition, claims to fair procedure in both state and federal criminal trials and claims to racial equality. He defines the politically liberal position as favouring these claims. The E scale contains all non-unanimous cases "related to conflicts of interest between the economically affluent and the economically underprivileged", including fiscal claims of employees against employers, union-management disputes, governmental regulation of business, disputes between small and large businessmen and the constitutionality of state taxation. He defines the economically liberal position as upholding "the underprivileged" as against "affluence", that is, as upholding the employee, the union, the governmental regulation, the small business and the validity of the taxation.

Each of the C and E scales for each term from 1946 to 1963 has acceptable coefficients of reproducibility and scalability. Schubert concludes that the decisions on the C scale are predominantly motivated by the judges' attitudes toward political liberalism, and those on the E scale by the judges' attitudes toward economic liberalism.

On each of the term C scales, the judges are ranked from left to right in accordance with the frequency with which each voted to uphold the civil liberty claim. Those who upheld the claims most often appear on the left and are designated as politically "liberal" judges; those who rejected the claims most often appear on the right and are designated as politically "conservative" judges.

Generally speaking, judges ranked at both ends of the scales, that is, those designated as extremely "liberal" or extremely "conservative", are characterized by one-sided voting patterns: judges on the left side of the scale uphold the civil liberty claims, and judges on the right side of the scale reject the claims in a very high proportion of the cases which they decide.

Schubert interprets these scales as indicating that, on the whole, the attitudinal relationships among the judges remain constant from term to term. He claims that the attitude of each judge toward civil

39 Schubert, The Judicial Mind, supra, footnote 36 at 101. The C scales for each term appear at 104-112. The subcomponents of political liberalism are discussed at 158 to 160 and 170 to 182. Schubert concludes that the only subcomponents are political freedom (cases involving freedom of speech, association and press, and loyalty dismissals), and the right to fair procedure (under the Fifth, Sixth and Eighth Amendments to the United States Constitution). He argues, tentatively, that political equality (racial integration, legislative reapportionment and citizenship status), the right to privacy (against violation by agents of the government and self-incrimination) and religious freedom (exercise and separation of church and state) are not attitudinal subcomponents of political liberty. However, Schubert arrived at these views after he had constructed the scales of the 1946-1963 terms. Accordingly, the term scales referred to contain cases raising all five subcomponents.

40 Schubert, The Judicial Mind, supra, footnote 36 at 127-128. The E scales for each term appear at 130-138. The subcomponents of economic liberalism are discussed at 160-170.

41 For example, in 1948, Murphy J. upheld the claim in all 30 C scale cases and Rutledge J. in 25 of 30 cases. Vinson J. rejected it in 28 of 30 cases, and Burton J. in 29 of 30 cases. In 1960, Douglas J. upheld the claim in 49 out of 51 cases, and Black J. in 43 of the 51; Clark J. rejected it in 46 out of 51 cases, Harlan J. in 44 out of 50, and Frankfurter J. in 44 out of 51.
liberties and toward economic policy remains constant relative to the attitudes of each of the other judges. This is evidenced by the tendency toward consistency in the rank order of the judges on each of the term scales in the C scale series, and on each of the term scales in the E scale series. Many judges hold the same approximate rank positions in each series of scales during the entire length of their tenures. The only fundamental attitudinal changes in individual judges which Schubert identifies on the political liberalism scales are those of Chief Justice Warren who became more "liberal" after 1955, and of Mr. Justice Clark who became more "conservative". The E scales are taken to indicate that no judge significantly changed his attitude toward economic liberalism during the seventeen terms investigated.

The ranking of the judges on the E scale series differs from that on the C scale series. The "liberal" group is the same in both scales. But the four economic "conservatives" are politically "moderate". The economic "moderates" who were appointed before 1949 are political "conservatives". The economic "moderates" who were appointed after 1949 are political "liberals". The only fundamental attitudinal changes in individual judges which Schubert identifies on the political liberalism scales are those of Chief Justice Warren who became more "liberal" after 1955, and of Mr. Justice Clark who became more "conservative". The E scales are taken to indicate that no judge significantly changed his attitude toward economic liberalism during the seventeen terms investigated.

For example, Frankfurter J. ranks third (after Douglas and Black JJ.) on the 1954 C scale, and seventh on the 1960 C scale. Thus, he appears to have become more "conservative." However, the more accurate explanation is that his move to the right was caused by Chief Justice Warren's movement into third place in 1955, which moved Frankfurter J. into fourth place, and by the appointment of Brennan J. in 1956 and Stewart J. in 1958, who took the fourth and fifth positions respectively. See The Judicial Mind, supra, footnote 36 at 120-124.

Schubert suggests, too, that as the court itself selects the appeals which it hears, the appointment of more "liberal" judges (such as Brennan and Stewart JJ.) results in the court's hearing appeals which present more extreme civil liberty claims than those which would have been allowed to reach the court when its members were more "conservative". A vote by a justice such as Frankfurter J. against such claims is not evidence that he has become more conservative in an absolute sense. See The Judicial Mind, supra, footnote 36 at 114 and 118.
pointed after 1957 range politically from "moderate" to "moderate-liberal". Because of this lack of correspondence in the rank order of the two series of scales, Schubert concludes that general liberalism (containing both political and economic liberalism) is not a scalable attitude for these terms of the court. However, when we combine the ranks and scores on both scales, the most "liberal" and most "conservative" judges appear to be Douglas J. and Frankfurter J. in 1960, Douglas J. and Harlan J. in 1961, and Black J. and Harlan J. in 1962.

Schubert suggests that the cases not decided on the basis of the judges' attitudes toward the two major policy issues are decided on the basis of their attitudes toward the four other issues, governmental taxing authority, federalism, judicial activism and judicial centralisation. However, during most of the terms studied, there was an insufficient number of cases relating to these issues to produce scales.

Sidney Ulmer has made scales of all civil liberty decisions of the United States Supreme Court in each of the six terms between 1956 and 1961. He finds that the scales have acceptable coefficients in each year, when scaled in terms of the judges' attitudes to a deprivation of a claimed civil liberty. He concludes, therefore, that the judges make their decisions not by asking "What does the law require?" in each particular case, and not by considering constitutional provisions, legislation and precedent, but on the basis of their attitudes toward civil liberty claims.

48 Goldberg, Stewart, and White JJ. See Schubert, THE JUDICIAL MIND, supra, footnote 36, at 143-144.
49 Ibid., 97-98.
50 Ibid., 146-157.
51 There were sufficient cases to allow Schubert to construct four F scales of cases concerning government taxing authority and one N scale of cases concerning federalism (conflict between national and state governmental interest). Ibid., pp. 151-152. It is of interest that although Black and Douglas JJ. rank next to each other on the left side of the C and E scales for the 17 terms, (with minor variations in the C scales for 1946, 1947 and 1948, and in the E scales for 1946, 1948 and 1961.)

Black J. ranks considerably to the left of Douglas J. on the four F scales, indicating that Black J. is more inclined than Douglas J. to uphold government taxing authority because he sees the issue as one of government regulation of individuals, that is, as an issue related to political liberalism. On the other hand, he suggests the economic "conservatives" vote against government taxing authority because they see the case as raising an issue related to government interference with free enterprise. Economic "liberals" such as Douglas J. vote in favour of government taxing authority, because they too, see the issue as one related to economic liberalism.


53 Supreme Court Behavior and Civil Rights, at 295; The Analysis of Behavior Patterns on the United States Supreme Court, at 647; Quantitative Analysis of Judicial Processes, at 169; all cited, supra, footnote 52.
The ranking of the judges on Ulmer's scales, closely approximates the ranking on Schubert's "C" scales. The judges maintain an almost identical ranking on the scales over a period of years, and Ulmer takes this to indicate that the attitude of each remains constant, relative to those of the other members of the court. He concludes, therefore, that the findings made possible by the scalograms (used in conjunction with other predictive devices) afford a reliable basis for the prediction of future decisions, as long as the membership of the court remains constant.

One of the most interesting applications of scalogram analysis to the judicial process, is Harold Spaeth's use of subscales to examine the extent to which judges' attitudes toward secondary issues in multiple-issue cases affect their decisions.

Spaeth scaled all cases decided by the United States Supreme Court between 1953 and 1959, which contain an issue involving labour unions or government regulation of business. He constructs his scales in terms of the judges' attitudes toward economic liberalism, which he defines as "pro-union (as distinct from members of unions . . . ),"

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54 The judges' ranking on Schubert's and Ulmer's C scales for the 1956 to 1961 terms are as follows:

1956 SCHUBERT: Douglas, Black, Warren, Brennan, Frankfurter, Harlan, Whittaker, Burton, Reed, Clark

ULMER: Douglas, Black, Warren, Brennan, Frankfurter, Harlan, Whittaker, Burton, Clark


ULMER: Douglas, Black, Warren, Brennan, Frankfurter, Harlan, Whittaker, Burton, Clark


ULMER: Douglas, Black, Warren, Brennan, Stewart, Harlan, Frankfurter, Whittaker, Clark


ULMER: Douglas, Black, Warren, Brennan, Stewart, Harlan, Frankfurter, White, Clark, Whittaker


56 A Note on Attitudinal Consistency in the United States Supreme Court, 202-204; The Analysis of Behavior Patterns on the United States Supreme Court, 1956-59; both cited, supra, footnote 52.

In his earlier articles, Ulmer analyses the facts and reasons for judgment in cases containing more than one inconsistent vote and in the break-point case for each judge, that is, the first case in which each judge rejects the civil liberty claim. These discussions complement the scalogram analysis, as inconsistent votes invite explanation, and as the break-point cases indicate differences in the behaviour of judges who have similar voting patterns.

Ulmer defines as a civil liberty case, any case involving a claimed right of the type covered by the Bill of Rights and the post-Civil War amendments to the American Constitution. This definition is as broad as that used by Schubert, and includes both substantive claims (claims based on freedom of speech, the rights of citizenship) and claims to procedural due process in criminal trials (protection against former jeopardy, the use of illegally obtained evidence and confessions, and the right to jury trial and the assistance of counsel). Furthermore, the definition includes claims under both constitutional and statutory provisions. See Supreme Court Behavior and Civil Liberties, supra, footnote 52, at 288.

pro-competition and anti-business". As the resulting E scale has an acceptable level of consistent votes, he concludes that it verifies his thesis that the judges decide these cases not on the basis of the legal issues involved in each case, but on the basis of their attitudes toward economic policy. Spaeth then constructs the B subscale containing those E scale cases which concern regulation of business, and the W subscale containing those E scale cases which concern trade unions. As both subscales have acceptable levels of consistency, he concludes that the cases on each scale are decided on the basis of a single dominant attitude, that is, attitude toward business and toward labour unions, respectively.

The ranking of judges on each of these subscales is practically identical with their ranking on the E scale, and Spaeth takes this to mean that there is a high correlation between the attitudes of most judges toward labour and business, "pro-labour" judges being "anti-business", and "anti-labour" judges being "pro-business". Spaeth concludes that the high level of consistency of these two attitudes justifies combining them to comprise a single attitude toward economic liberalism.

Spaeth uses subscales to examine whether the Court's decision-making in either B scale cases or W scale cases is influenced, in a significant way, by considerations of states' rights or of deference to decision-making by administrative agencies, two factors which the courts have identified as influential.

To determine the effect of states' rights, he compares a subscale of all cases in which state legislation opposed business with a subscale

58 Ibid., 79.
59 During the seven terms (which are the first seven terms of the Warren Court), the Court decided 241 decisions relating to economic issues. Ninety-seven decisions were unanimous. Of the 144 non-unanimous decisions, ninety-three involve the regulation of business, and fifty-one involve labour unions. Ibid., 81.
60 Supra, footnote 57 at 86.
61 Ibid., at 84; An Analysis of Judicial Attitudes in the Labour Relations Decisions of the Warren Court, (1963) 22 J. Pol. 290-311.
62 The E and B scale ranking is Douglas, Black, Warren, Brennan, Clark, Stewart, Minton, Reed, Burton, Jackson, Frankfurter, Harlan and Whittaker, JJ. The W scale ranking is identical for the first five and last three positions; however, the judges in the middle positions are in the following order: Burton, Reed, Stewart, Jackson and Minton, JJ.

Schubert found that the extreme "liberal" and "conservative" judges have highly correlated attitudes toward business and unions, but that the "moderate" judges do not. Schubert's scale of attitudes toward business (for an overlapping period) correlates with Spaeth's. However, his scale of attitudes toward unions differs from Spaeth's with respect to the judges in the middle ranks. See The JUDICIAL MIND, 167-8.
63 Warren Court Attitudes, supra, footnote 57, at 88.

In spite of the rank order consistency, however, Clark appears as a fairly strong "liberal" on the B scale (61 anti-business decisions out of 85 participations), and as a moderate "conservative": on the W scale (50 anti-union decisions out of 51 participations). His designation on the E scale as a "moderate liberal" (52 pro-economic liberalism decisions out of 136 participations), suggests that, at least for him, it is misleading to consider the B and W subscales as forming one scale (E), or, in other words, to consider his attitudes toward business and unions as a single attitude toward economic liberalism.
of all cases in which national legislation opposed business; and a subscale of all cases in which state legislation opposed unions with one of all cases in which national legislation opposed unions. As the subscales, constructed in terms of attitude toward economic liberalism, have acceptable coefficients, he concludes that the decisions are made on the basis of the judges' attitudes toward economic liberalism and not on the basis of states' rights considerations. He concludes, from an examination of the subscales, that, speaking generally, the economically "liberal" judges oppose state legislation where the legislation opposes unions or supports business, and uphold state legislation where the legislation opposes business or supports unions. The economically "conservative" judges generally do the opposite. Thus, Spaeth concludes that in cases raising both issues (economic liberalism and states' rights), most judges are not motivated by considerations of states' rights.

Spaeth argues that this is true even of Mr. Justice

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64 Ibid., 91-95.
65 See also Spaeth, H.J., Judicial Power as a Variable Motivating Supreme Court Behavior, (1962) 6 MdW. J. Pol. Sc., 54. Spaeth investigates the "true judicial power" cases, that is, those in which variables such as civil liberties and economic liberalism are either absent, or subordinate to considerations of the exercise of power by the Court. He concludes that attitude toward states' rights is a third order variable, and is overridden not only by the judges' attitudes toward economic liberalism (a primary variable), but also by their attitudes toward judicial activism-restraint (a secondary variable).
66 An Analysis of Judicial Attitudes, supra, footnote 61, at 306; Warren Court Attitudes, supra, footnote 57, at 95. Mr. Justice Frankfurter ranks eleventh of thirteen judges on the subscale of cases in which federal regulation opposes business, and tenth on the subscale of cases in which state regulation opposes business. He attains this position on the right side of both subscales because Spaeth classified a relatively large number of his votes as being opposed to the regulation of business, whether such regulation is by the state or federal government. Spaeth's point is that if Frankfurter J. were concerned with states' rights, he would defer to regulation of business by the states (as opposed to regulation by the federal government). If he did so, he would rank lower (i.e. closer to the left side) on the subscale of cases involving state regulation opposed to business. Such a shift in rank order on a subscale indicates that the judge's decisions in cases appearing on that subscale are influenced by his attitude to the second issue in those cases (here, attitude to states' rights), in addition to or instead of his attitude to the primary issue in all the cases on the main scale (here, economic liberalism). In the case of Frankfurter J., Spaeth finds that such a shift in rank does not occur.

Wallace Mendelson denies that Spaeth has established that Frankfurter J. lacks concern for states' rights. He maintains that in eleven of the eighteen cases cited by Spaeth, the state regulation opposed to business is extraterritorial in nature; accordingly, he says, such regulations do not attract the protection afforded by the states' rights principle. If Mendelson is right, Spaeth's conclusion that Frankfurter J. is not concerned to protect state autonomy is unwarranted, as it is based on scales containing cases which have been inaccurately classified. (I discuss problems of classification below.) Mendelson does not say whether, in his opinion, Spaeth's subscale of cases in which state regulation opposed unions contains cases in which the regulations are extraterritorial. According to Spaeth's scales, Frankfurter J. decides the majority of those cases in favour of the state regulation. See W. Mendelson, The Untroubled World of Jurimetrics, (1964) 26 J. Pol. 914 at 920.

In evaluating the conclusion that Frankfurter J. is not concerned with states' rights in E scale cases, we should bear in mind the following statistics revealed by the subscales. Although the court as a whole upholds a slightly higher percentage of the scaled cases of federal regulation than of state regulation of business (68% as opposed to 61%), Frankfurter J., himself,
Frankfurter who often states in his opinions that the Court should defer to state legislation. The only judge whom Spaeth identifies as being influenced by considerations of states' rights in these cases is Mr. Justice Clark.

To determine whether the Court is influenced by a desire to defer to agency decision-making in B or W cases challenging an order of an administrative agency, Spaeth prepares a subscale of all cases in which an agency decision opposed business and one of all cases in which an agency decision supported business, and corresponding subscales of agency regulation of trade unions. He concludes that such cases are decided on the basis of the judges' attitudes toward economic liberalism, and not on the basis of the enunciated policy that the court should defer to the decisions of administrative agencies. Generally speaking, he finds that the economically "liberal" judges uphold the agencies' pro-union and anti-business decisions, and the economically "conservative" judges uphold the agencies' pro-business and anti-union decisions. It should be noted, however, that Joseph Tanenhaus, in a separate study, suggests that

upholds a slightly higher percentage of scaled cases of state regulation than of federal regulation (27% as opposed to 19%). This is reflected in a difference in his scale scores: —66 in the federal subscale and —44 in the state subscale. (See Warren Court Attitudes, supra, footnote 57, at 91-94.) Furthermore, Frankfurter J. upholds a slightly higher percentage of scaled cases of state regulation than of federal regulation of trade unions (90% as opposed to 75%); in this he follows the tendency of the court which upholds 75% of the scaled cases of state regulation and 60% of the scaled cases of federal regulation. (See An Analysis of Judicial Attitudes, supra, footnote 61, at 300, 302.)

Thus, Frankfurter J. shows a somewhat greater deference to state regulation than he shows to federal regulation.


Clark ranks in a tie with one other judge for fifth place on the subscale of cases in which national regulation opposed unions; that is, he defers to federal regulation less often than 7 of the 12 other judges who were members of the court between 1953 and 1959. But he ties with four other judges for sixth place on the subscale of cases in which state regulation opposed unions; that is he defers to federal regulation less often than only three of the other twelve judges. His greater deference to state regulation in these cases is evidence that his attitude to states' rights is a secondary variable which, along with his attitude to economic liberalism, affects his decision-making. This conclusion is buttressed by his ranking in eighth place on a subscale of cases in which national regulation supported unions. That he is less willing to support federal regulation than state regulation, is consistent with a concern for states' rights. See Warren Court Attitudes, supra, footnote 57, at 92-93.

An Analysis of Judicial Attitudes, supra, footnote 61, at 299-303.

Warren Court Attitudes, supra, footnote 57, at 91-100.


Spaeth concludes that only Minton, Burton and Brennan JJ. show deference to agency decisions in business cases, and only to a marginally significant extent. (Warren Court Attitudes, supra, footnote 57, at 97.) Only Burton and Reed JJ. show deference to decisions of the National Labor Relations Board. (An Analysis of Judicial Attitudes, supra, footnote 61, at 307-8.)

In Supreme Court Attitudes Toward Federal Administrative Agencies, (1963) 22 J. Pol. 502, 516-517, Tanenhaus concludes that the voting behaviour...
in cases in which the Court reviews federal agency decisions, most of the judges are not motivated by their attitudes toward economic policy. Until these conclusions are reconciled, the question must be considered open.

Critique

As I have attempted to show, Schubert, Spaeth and Ulmer bring to the study of the judicial process a theory of attitudinal measurement developed by social psychologists. They attempt to understand judicial decision-making by concentrating on judges rather than on cases, on judicial votes rather than on judicial opinions, and on the judges' attitudes toward policies rather than on the legal principles, statutes and precedents which judges cite. Apart from their application of the Guttman theory, their approach to the judicial process would not have appeared alien to the American legal realists.

The legal realists were well aware that in at least some cases judges have a wide discretion, that the exercise of that discretion may depend upon extra-legal policy preferences and that the reasons given in opinions may not represent the route by which judges reach decisions, but rather a rationalization to satisfy the requirements of a professional tradition. One suspects that the legal realists would have welcomed the empirical work done by the behaviouralists, but would have been critical of the theoretical framework which leads them to assert, almost as a matter of doctrine, that all judges decide law cases in accordance with a single dominant attitude toward policy issues.

The behaviouralists purport to justify that assertion on the basis of the Guttman theory of cumulative scaling, which holds that scalability with certain conventional levels of consistency evidences unidimensionality. There is, however, a convincing body of opinion and evidence to suggest that, for scales of judicial decision, scalability does not evidence unidimensionality. We must recall that Guttman theory was developed in connection with scales containing relatively simple questions, to which each subject is directed to respond in accordance with his own feelings. It is for this reason that the analyst expects the responses to reflect the subjects' attitudes. Furthermore, the researcher who prepares the scales attempts to compose questions which are related to a single attitudinal dimension and are distributed over the entire range of that dimension. It is for this reason that the researcher expects each subject to affirm all statements up to a certain point, and to disagree with those beyond that point. In short, the conclusion that the scalability of responses establishes that the responses are motivated by a single dominant attitude rests on the assumption that the subjects feel free to respond on the
basis of their attitudes, and that the items eliciting the responses are widely distributed along a single attitudinal continuum.

To the extent that the proposition that scalability evidences unidimensionality rests on the assumption that, in spite of their protests to the contrary, judges feel free to decide cases on the basis of their attitudes toward policy, the judicial behaviouralists must assume the very thing they purport to demonstrate. Furthermore, the behaviourists have not shown that the cases which appear on each scale raise issues which relate to a single attitudinal dimension. The C scale, for example, as defined by Ulmer and Spaeth and as originally defined by Schubert, includes not only cases which raise claims for substantive freedoms of different sorts (speech, assembly, religion), but also cases which raise claims for procedural safeguards of different sorts (right to counsel, protection against illegally obtained evidence). There is no reason to assume that these very different sorts of claims are the objects of a single attitude.74

Schubert, himself, suggests a different sort of reason for rejecting the contention that scalability at the conventional level evidences unidimensionality for scales of judicial cases. He points out that the level of agreement of United States Supreme Court judges is so high (in part, because of their similar professional and socio-economic backgrounds) that the normal requirement that ninety per cent of all votes cast be consistent, is not sufficient to guarantee unidimensionality.75 This suggestion seems to be consistent with the view put forward by social psychologists, that the responses of a group of subjects who are well acquainted with the objects of the attitude under investigation, will be more consistent than those of a group of uninformed subjects.76

It is generally admitted that a weakness of cumulative scaling is the lack of a uniform criterion for testing scalability.77 The coefficient of reproducibility is not satisfactory as it tends to be high if the scale includes many unanimous or nearly unanimous decisions. The coefficient of scalability, which was designed to overcome the defects of the coefficient of reproducibility, is itself high if the scale includes many cases in which the court divides nearly evenly (5-4, 6-3) along

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74 Indeed, Schubert's most recent view is that three of the subcomponents of the C scale as originally conceived by him (political equality, right to privacy and religious freedom) relate to attitudes which are different from the attitude to which the other two subcomponents (political freedom and fair procedure) relate. See supra, footnote 39. If Schubert is right, the fact that his C scale cases, as originally defined, form an acceptable scale, itself suggests that, for judicial cases, scalability does not evidence unidimensionality. Even if cases on a scale relate to a single attitudinal continuum, it has been suggested that Schubert's method of ordering cases does not necessarily arrange the cases ordinally on the intensity continuum, and accordingly, that it cannot be assumed that the judges are ranked ordinally. See Tanenhaus, supra, footnote 35 at 1590-1592.

75 See Bibliographical Essay, supra, footnote 1, at 442.

76 Newcomb, T. M., supra, footnote 19, at 517.

77 SCHUBERT, THE JUDICIAL MIND, 73-80. See also Torgerson, supra, footnote 17, at 322-324.
the same lines. Thus, the value of the R and S coefficients may be “acceptable” (i.e. over .90 and .60 respectively), even when it is clear that the decisions in the scaled cases could not have been reached on the basis of a single attitude.

For these reasons, students of the judicial process should be unwilling to accept the scalability of judicial decisions as evidence of unidimensionality. It follows, then, that the scalogram analysts are not able to establish, simply by producing “acceptable” scales, that judicial decisions are determined by the judges’ attitudes toward policy issues. The existence of a scale does not establish that the judges vote as they do because they base their votes on their attitude to policy. That is to say, the existence of a scale does not explain why judges vote as they do.

Nevertheless, the work of the judicial behaviouralists is valuable for an understanding of the judicial process because the scalogram is an informative descriptive device. The scalogram focuses on voting behaviour in large numbers of related non-unanimous decisions, highlighting the voting patterns of individual judges and of the court as a whole. It permits the construction of a composite picture of the judges’ voting behaviour over a period of years as the membership of the court changes. Subscales enable the researcher to isolate groups of cases which contain a common secondary issue, and to focus upon

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78 Tanenhaus, supra, footnote 35 at 1593. See also Torgerson, supra, footnote 17 at 323.

79 Ibid. Tanenhaus, supra, footnote 35, at 1593, reports the following: “If one takes all the cases in Volume 355 of the United States Reports handed down on days of the month divisible by three, and then classifies them so that a favorable vote is assigned when a Justice supported petitioners (or appellants) with even docket numbers or opposed those with odd docket numbers, and a negative vote for the reverse behavior, one obtains an S of .62.”

G. A. Schubert anticipated this reductio ad absurdum, and specified that the researcher’s hypothesis must be “reasonable and non-trivial”. See supra, footnote 26. And see QUANTITATIVE ANALYSIS OF JUDICIAL BEHAVIOR, 280-281:

... it would be trivial to test votes in favor of criminal defendants with Irish names decided by the court during the same period—even if the resulting scalogram should have an ‘acceptable’ C R and meet other technical criteria.

80 Note that both Schubert and Spaeth have expressed surprise that certain scales exhibit an acceptable degree of consistency. Schubert states in an early article that every hypothesis he tested up to that time resulted in an acceptable scale. See Schubert, The Study of Judicial Decision-Making as an Aspect of Political Behavior, supra, footnote 36, at 1016; Spaeth, H. J., Judicial Power, supra, footnote 66 at 80-81. Furthermore, Spaeth points out that under Guttman’s theory of scaling, one normally expects inconsistent votes to be concentrated at the respondent’s break-point (that is, the point at which he begins to respond negatively), because this is the “zone of indecision” where his attitude changes from favourable to unfavourable. However, in scales of judicial decisions, inconsistent votes are not distributed in this way. That they are not, is consistent with the view that the cases do not relate to a single attitude. See Warren Court Attitudes, supra, footnote 57, at 50; Sprague, John, Error, Information and Unidimensionality: A Note on Some Methodological Problems in the Cumulative Scaling of Judicial Voting Records (Dept. of Political Science, Washington University, St. Louis, Mo., to be published.)

voting patterns in those cases. Thus, scalogram analysis may enable the researcher to discover that certain relationships exist between judges' votes and the policy issue raised by the cases; for example, that the effect of most of the votes of some judges is consistently to uphold (or, to oppose) civil liberty claims, and that the effect of the votes of other judges is sometimes to uphold and sometimes to oppose such claims.

An instrument which describes the effect of judicial votes on policy issues is valuable although it does not in itself explain why the judges voted as they do because it may assist the researcher to arrive at such an explanation. Having discovered a relationship between the judges' votes and policy, the researcher will be able to examine its significance. By analysing the issues, the reasons for judgment, the unanimous cases not on the scale, and the voting behaviour in the scaled cases, he may conclude that some judges do reach their decisions on the basis of their attitudes to the policy issues involved.

In short, I suggest that the scalogram does not do everything the behaviouralists claim for it, but that it is helpful for what it does. The scalogram does not explain why the judges vote as they do; that is, it does not warrant the conclusion that their votes are based on their attitudes to the policy issues raised by the cases. It does not establish that their votes are based on any single attitude. But, it does describe the effect of their votes in terms of values. With the help of the scalogram description of the effect of the judges' votes, the researcher may be able to explain on what basis the votes are cast. For some judges in some cases (not for all judges in all cases), the explanation may be that the votes are based on the judges' attitudes to the policy issues raised in the cases.

A view of the scalogram as a descriptive device only, and a rejection of the assumption that scalability evidences unidimensionality, involves, of course, an abandonment of the theoretical foundations of Guttman cumulative scaling and of the pretension that the scalogram is a step in the development of a "science" (in the technical sense) of the judicial process. The behaviouralists believe that their work constitutes the beginnings of such a science, which, when developed, will afford theoretical knowledge (not simply empirical

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82 Cf. Tanenhaus, *Supreme Court Attitudes*, supra, footnote 73, at 510:

"It is extremely important to remember that a test of significance cannot tell us whether a hypothesized relationship is important or trivial, nor can it tell us why a justice acted as he did. All that the test can do is to indicate with what probable error we may assume that a postulated relationship exists." (The italics are mine.)

82a Wallace Mendelson, who is generally critical of the judicial behaviouralists' work, is willing to concede that a judge who consistently decides cases in favour of a certain value, for example, one who consistently upholds or opposes the civil liberty claim, and who, as a result, appears at the extreme left or right of the behaviouralists' scales, likely bases his decisions on his attitude toward that value; however, he argues that there is no reason to say that a judge whose decisions are more evenly balanced in favour of and in opposition to the value, and who therefore ranks in the middle of the scale, bases his decisions on his attitude toward the value. See, Mendelson W., *The Neo-Behavioral Approach to the Judicial Process: A Critique*, (1963), 57 *Am. Pol. Sci. Rev.* 593 at 598.
knowledge) about the judicial process. It seems desirable, however, for lawyers to adopt the techniques of analysis devised by members of other disciplines to the extent that they appear to be reliable, and to leave to social scientists and mathematicians the larger task of developing a scientific basis for an explanation of the judicial process, if it is possible to do so.

As I have indicated that I believe that scalogram analysis, as a descriptive device, may throw light on the workings of the judicial process, I wish to discuss some of the difficulties involved in its use.

The traditional legal scholar, the legal realist and the behaviouralist, all hope to find regularities in judicial decision-making which will enable them to formulate general principles descriptive of judicial behaviour. This is necessary for accurate prediction. Both the traditional legal scholar and the realist focus on the reasons for judgment, the former to see what rules the judges apply, and the latter to discover the "real", perhaps unstated, rules, principles and policies underlying decisions. The behaviouralist, although he shares with the legal realist the quest for the "real" rather than the stated reasons for decisions, focuses on the judges' votes rather than on their opinions.

The relative merits of opinions and votes as data for investigation are discussed by Tanenhaus. The behaviouralists argue that perusing opinions may not assist explanation or prediction because a judge may not express his real reasons, either because tradition demands that he not do so or because he has not perfectly articulated them; secondly, that judges vote more often than they write opinions, and, therefore, that voting behaviour may be the only available data; and, thirdly, that it is possible to record votes in a value-free way and so arrive at an objective description or explanation of the judicial process. The critics of judicial behaviouralism point out that counting votes oversimplifies the choices which judges must make between competing values and that it is not valid to count each vote equally, as some decisions are more important than others. Mendelson takes issue particularly with the claim that by focusing on the judges' votes, the behaviouralist avoids a subjective evaluation of the judges' behaviour. Mendelson appears to suggest not only that it is impossible to classify votes objectively, but also that it is impossible to classify them at all.

83 Schubert, G. A., Judicial Attitudes and Voting Behavior: The 1961 Term of the United States Supreme Court, supra, footnote 36, at 100-107, 142.
86 Mendelson, W., The Neo-Behavioral Approach, supra, footnote 82a at 596.
87 Ibid., 595.
88 The Untroubled World of Jurimetrics, (1964) 22 J. Pol. 914, at 916, 918.
I suggest that the behaviouralists are wrong when they claim that votes may be classified objectively, and that Mendelson is wrong when he claims that votes cannot be classified meaningfully at all. I suggest that the classification of votes requires a subjective decision; that that decision, although subjective, may be meaningful; and that the reader who consults a scalogram is able to assess it intelligently if he is informed of the problems which the researcher encountered in classifying the votes, and of the way in which those problems were solved.

One difficulty in the use of the scalogram as a descriptive device concerns the classification of judges' votes in cases containing more than one issue. Scalogram analysis requires the researcher to abstract from a series of cases (many of which raise more than one issue), a single issue, for example, civil liberty claims, and to classify each judge's vote in each case in terms of that issue (for example, as upholding or rejecting the civil liberty claim). Of course, an individual judge whose vote has the effect of rejecting the claim, may actually base his vote on a different issue in the case. He may not intend to vote against the civil liberty claim, except in the sense that he knows that his vote on the other issue has the effect of rejecting the civil liberty claim.

The classification of such a vote on a scalogram as a vote in opposition to the civil liberty claim is a misdescription, if the classification is regarded as indicating that the judge intends to vote against the civil liberty claim. The behaviouralists do regard the votes on their scalograms in that light. However, the classification is quite accurate if the scalogram is understood (as I suggest it should be) only as describing the effect of the vote as rejecting the civil liberty claim.

It is, of course, difficult for the researcher to relate such a description to an explanation of the votes in terms of the judge's attitude toward the civil liberty claim. For the purpose of arriving at such an explanation, it seems desirable and legitimate to develop techniques which will permit the researcher, where possible, to classify the judge's behaviour in a way that reflects the effect his decision would have on the civil liberty claim if he based his decision on that claim.

Accordingly, I propose that in order to examine judicial behaviour in multi-issue cases, the researcher prepare three scales:

(1) On the first scale, the behaviour of each judge will be classified in accordance with its effect on the primary issue (for example, the civil liberty claim).

(2) On the second scale, the behaviour of each judge will be classified as follows:
   (a) if the judge says that he bases his vote on the primary issue, the vote will be classified accordingly;

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(b) if the judge indicates that his views on both issues are such that he bases his vote on both, then the vote will be classified as if it were based on the primary issue alone;

(c) if the judge says that he bases his vote on the secondary issue, but indicates how he would vote on the primary issue, the vote will be classified in accordance with that indication; and

(d) if the judge says that he bases his vote on the secondary issue and says nothing about the primary issue, or says that he does not base his vote on the primary issue, his vote will not be counted.90

(3) On the third scale, decisions falling within classes (a), (b) and (c) will be classified as they are on the second scale. Decisions falling within class (d) will be classified in accordance with the effect that the judge's decision has on the primary issue. This will reflect the judge's willingness to allow his vote on the secondary issue to have the effect which it does have on the primary issue.91

The first scale shows the effect of all votes on the primary issue. The second scale shows how the primary issue is affected by the votes of those judges who vote on it, and how it would be affected by the votes of judges who do not vote on it, but who indicate how they would vote on it. The second scale does not deal with the behaviour of judges who neither vote on the primary issue, nor indicate how they would vote on the primary issue. The second scale relates the effect of votes to the judges' attitudes toward the primary issue, more clearly than does the first scale. The third scale relates votes and attitudes less clearly than the second in one sense, because it includes votes of judges who neither vote on the primary issue nor indicate how they would vote on the primary issue. On the other hand, it throws additional light on the way votes relate to attitudes, by showing the effect on the primary issue of votes which judges base on the secondary issue, but which they know will affect the primary issue.

I suggest that the three scales will describe the multi-dimensional behaviour of judges in multi-issue cases more accurately than a single scale can do. Taken together, they will afford complementary descriptions of judicial behaviour in terms which will help the analyst bridge the gap between the effect of a vote on the primary issue, and the attitude of the judge toward that issue.

A further problem of classification concerns cases for which it is difficult to determine in what way a vote affects the value which the analyst wishes to investigate. For example, it may be difficult to determine whether a vote is pro-business or anti-business for the


91 Judicial behaviour of the type discussed in category (d) may also be described by the use of subscales.
Mendelson comments on problems which arise in classifying votes in terms of Spaeth's definition of economic liberalism (as, inter alia, pro-competition and anti-business), as follows:

... No doubt in some circumstances increased competition hurts enterprise; while in others it has an opposite effect. Short of a careful economic analysis of each individual situation, how can one say whether a particular order supports or opposes business? Indeed, what business is referred to as being supported or opposed? The applicant's business? That of the rival carriers? The affected shipper's business? The transportation business? Or business in general?²

Mendelson seems to suggest that classification of a judge's decision as pro- or anti-business is impossible. If that is true for a particular case (as it might be for a case in which the two parties are similar business concerns and the court is asked to decide between conflicting business interests), the case should be omitted from the scale, as irrelevant to the value under investigation. The relationship between judicial votes and attitude toward business is worthy of investigation only if the court has made a significant number of decisions which may be classified as being in favour of or opposed to business.

If a scale contains many cases for which classification in terms of the value under investigation is doubtful, the descriptive value of the scale is reduced. Conclusions based on such a scale must be assessed accordingly.³

The discussion of some of the difficulties which may arise in the classification of votes suggests that the behaviouralists over-state their case when they claim that their focusing on votes rather than opinions makes possible an objective treatment of the cases. Meaningful classification involves decisions which are subjective and about which there may be disagreement. In difficult cases, the researcher should explain the basis of the classification (much as accountants use footnotes to explain some of their figures), so that the reader may assess the validity of the scalogram description of the voting behaviour. The more contentious the classification of cases, the less confidence may be placed in the scalogram description.

A further difficulty in the use of the scalogram as a descriptive device, arises from the fact that it may be possible to relate a voting pattern to two or more policies which are put in issue simultaneously in such a way that any vote affects both of the policies in fixed ways. For example, a scale of civil liberty cases may be taken to show

² Jurimetrics, supra, footnote 88, at 916.
³ See also Fuller, L. L., An Afterword: Science and the Judicial Process, (1966) 79 Harv. L. Rev. 1604, at 1612-13. He refers to a study conducted by Schubert in which cases were classified by a panel of three judges, who first classified each case independently, and then discussed any disagreement in classification until agreement was reached. See Schubert, G. A., Jackson's Judicial Philosophy: An Exploration in Value Analysis, (1965) 59 Am. Pol. Sci. Rev. 940, at 942. Fuller comments:

"The important issue lies, however, not in the utility of precautions that can reduce the risk of misinterpretation, but in the difficulties inherent in the scoring task itself."

Surely the difficulties are not different in kind from the difficulties involved in formulating other judgments. Is it reasonable to ask for anything more than "precautions that can reduce the risk of misinterpretation"?
what effect the judges' votes have on civil liberty claims, or what effect they have on the validity of challenged governmental measures in cases where the law is not clear. A vote which upholds the civil liberty claim always invalidates the legislation; a vote which rejects the civil liberty claim always upholds the legislation. Thus, the voting pattern may be related to the value of political liberalism or the value of judicial restraint. Each relationship may be equally plausible. This is perhaps a special form of the multi-issue case.

Where the voting patterns described on the scalogram may be taken to show the relationship between the judges' votes and each of two or more policies, the researcher must choose which relationship he will investigate. He will, of course, choose to investigate those policy issues which he considers "reasonable and non-trivial", and which appear to afford a fruitful basis for explanation, considering the subject matter of the cases, the legal principles and policies involved and the reasons for judgment. Any assessment of the validity of his explanation, must bear in mind that it is based on judicial voting behaviour which may be described in different ways.

The Application of Scalogram Analysis to the Supreme Court of Canada

Canadian lawyers will enquire whether scalogram analysis may usefully be applied to the decisions of the Supreme Court of Canada. Researchers who attempt to do so will encounter one preliminary difficulty of a technical nature. As many cases are decided by courts composed of fewer than nine judges, a scalogram will contain many blank spaces representing non-participation. Accordingly, the descriptive value of the scalogram will be less than it is for the Supreme Court of the United States, where, generally speaking, the entire court hears every case. It will not be possible to assess the extent of this difficulty until an attempt is made to apply scalogram analysis to the Supreme Court of Canada.

The Supreme Court of Canada, of course, hears private as well as public law cases. As far as I know, American researchers have applied scalogram analysis only to public law decisions. However, it will be of interest to attempt to examine, through the application of scalogram analysis to Supreme Court decisions, whether any relationship exists between judicial voting behaviour and the values raised in private law cases. Do the decisions of some judges in contract and

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94 See Mendelson, Neo-Behavioral Approach, supra, footnote 82a, at 596-7; Becker, Inquiry, supra, footnote 81; Tanenhaus, supra, footnote 35, at 1588-9.

Mendelson, Becker and Tanenhaus argue that even if scalability indicates that the decisions are based on a single attitude, it is impossible to identify with certainty the nature of the attitude, and therefore it is impossible to say on what attitude the decisions are based.

Ulmer agrees that scalogram analysis (as he conceives it) does not identify the relevant attitude. The Analysis of Behavior Patterns in the United States Supreme Court, supra, footnote 52, at 647 and 648. SCHUBERT, QUANTITATIVE ANALYSIS OF JUDICIAL BEHAVIOR, supra, footnote 9, at 280.

95 Supra, footnote 28.

commercial law cases tend, more than those of others, to promote commercial convenience or freedom of contract? Do the decisions of some judges in tort cases tend, more than those of others, to promote the wide distribution of the losses inherent in modern society, without regard to fault? Unlike the Supreme Court of the United States, the Supreme Court of Canada hears cases involving substantive criminal law. Will the scalogram analysis describe interesting relationships between judicial voting behaviour and different types of offences?

If, as a result of the positivist tradition in Canadian jurisprudence, reasons for judgment in Supreme Court decisions are written in the "formal style", rather than the "grand style", scalogram analysis may prove to be an important research technique in Canada. As judgments written in the "formal style" tend to discuss precedent and rules of law rather than policy, it is difficult to discover, from a reading of those judgments, what values the Court seeks to foster. Therefore, scalogram descriptions of the effect of judicial voting would appear to be a helpful complement to traditional approaches to such judgments.

Finally, the application of scalograms to decisions of the Supreme Court of Canada might be found to be particularly useful, because there appears to be little knowledge in this country about judicial attitudes and value preferences. Quite apart from the work of the judicial behaviouralists, American lawyers and legal scholars have for many years been aware of the judicial propensities of individual members of the United States Supreme Court. Indeed, one of Mendelson's criticisms of the work of the behaviouralists is that many of their conclusions are not new, but only confirm what students of the court already know.98 In Canada, however, a description of the relationship between judicial voting and the values raised by the cases will add significantly to an understanding of judicial behaviour.

97 For this distinction, see Llewellyn, K., The Common Law Tradition—Deciding Appeals, (1960).
98 Mendelson, W., Neo-Behavioral Approach, supra, footnote 82a, at 602.