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Discriminant Functions, Role Orientations and Judicial Behavior: Theoretical and Methodological Linkages

JAMES L. GIBSON

In a recent article Sidney Ulmer presented an interesting theoretical use of discriminant functions, or fact pattern analysis.1 Ulmer's research focused upon a concept which he termed "political activism" and its influence upon judicial behavior. Political activism is defined "as the ability of political or non-legal factors to explain variation in voting behavior. . . ."2 His substantive application of fact pattern analysis concerned the behavior of five

* The author wishes to thank Justin Green for helpful comments on an earlier version of this research. The assistance of Thomas G. Walker throughout the research project is also greatly acknowledged.


2 Ulmer, "Dimensionality and Change in Judicial Behavior," 55.
United States Supreme Court Justices in civil liberties cases over time periods ranging from 19 to 32 years. The technique and theory assume that the stimuli which affect the decisions in cases can be classified, a priori, into the categories of legal stimuli and non-legal or "political" stimuli. Judges who are influenced by case stimuli (ascertained by the discriminant analysis) which do not have a strictly legal interpretation are considered to be "activists." Ulmer asserts, "The reasoning here is that such considerations should be extraneous for decision since none are factors that the judicial system views as legitimate for deciding civil liberty claims. If judges make decisions in terms of such factors, they must step outside the legal system to do so." His research revealed considerable variation among judges (and across time for individual judges) in the degree of influence of the non-legal stimuli.

While Ulmer appears to be one of the first to link discriminant functions to the concept "activism," the distinction between legal and non-legal determinants of judicial decisions is old and enduring. The distinction is based upon the realization that judges' decisions are influenced by a variety of stimuli and consequently that "the law" is frequently only one of many criteria of decision-making. Non-legal stimuli have no foundation in precedents or statutes. The non-legal stimuli that Ulmer viewed as potential determinants of civil liberty decisions include

(1) a geographical factor—whether the case originated in a Southern state; (2) two litigant factors—(a) whether one of the litigants was a state government or its agency and (b) whether one of the litigants was a Negro or Negro organization; and (3) two socially negative factors—(a) whether the claimant was a criminal or alleged criminal and (b) whether the claimant was a subversive or alleged subversive. 4

Obviously these variables are only a few of the many non-legal stimuli which may influence judges' decisions. The real utility of the activism conceptualization is that it can be applied to a wide range of non-legal factors. Further, its application is by no means limited to appellate court decision-making; any instance of judicial decision-making can be analyzed from the activist framework. The discriminant function, a technique similar to multiple regression which is appropriate for dichotomous and polychotomous dependent variables, can be used to determine empirically the degree to

3 Ibid., 56.
4 Ibid.
which non-legal stimuli (independent variables) affect the decisions (dependent variable) of individual judges. Consequently, discriminant analysis is a statistical technique which is ideally suited for investigating activism in many areas of judicial decision-making. Despite the fact that the activism concept is one which is most unambiguously associated with appellate court judges, the concept may be useful for understanding the behavior of trial court judges. Trial court judges may be just as strongly influenced by non-legal criteria as appellate judges. Although the criteria are somewhat different, they can be classified as legal or non-legal in the same way in which the criteria affecting appellate judges can be classified. Thus, the purpose of this research is twofold: first, it tries to determine if activism is a concept which is relevant to understanding the behavior of criminal court judges. Following Ulmer, the discriminant functions will be used to characterize the behavior of the trial court judges on the activism dimension. If the concept is useful, we should find that non-legal criteria do indeed predict their behavior. Nevertheless, it is expected that there will be a considerable amount of variability among individual judges in activism, as there was among the justices of the Supreme Court.

The second purpose of this research is to explain this variance in activism by developing a theoretical linkage between judicial activism and the role orientations of judges. The most likely explanation of why some judges are influenced by non-legal criteria and others are not is the differing role orientations of the judges. The hypothesis to be tested is that the role orientation of the judge will determine whether or not he is influenced by the non-legal characteristics of criminal cases.

II

The judicial behavior analyzed in this report is sentencing behavior. In particular, the analysis focuses upon the severity of sentences given convicted felons. Sentencing is an extremely important behavior; it is one of the very rare instances in which the coercive power of the state is directly applied to individuals. Further, for mass publics, sentencing is probably the most visible activity of the largely invisible trial courts.5 Consequently, sen-

5 Very few data are available on this point. However, Jacob reports that in Wisconsin reading about crime trials and watching courtroom dramas on tele-
tencing may in large part determine attitudes toward the courts in general and compliance in particular. Punishing violators of the social order also carries enormous symbolic significance, employing as it does, symbols ranging from the legitimacy of public authority to personal security.

Sentencing is also an interesting area in which to investigate activism because sentencing decisions, like the decisions of Supreme Court judges, are relatively unrestrained. A great deal of discretion is granted to trial court judges in sentencing; indeed, discretion is so great that some judges have bitterly complained about the lack of guidance for their decisions.6 Certainly, the sentences of trial courts in most states have not been limited by statutes—in Georgia for instance the legal penalties for murder range from a sentence of one year to a sentence of life imprisonment! Further, appellate courts have been extremely reluctant to become involved in the sentencing decisions of lower court judges so that the likelihood of restraint from above is small. Even the practice of allowing judges to impose sentences upon defendants without written (or even verbal) justifications, which means that judges are not continually pressured to examine their own decision-making processes, reinforces discretion in sentences. The only significant restraints imposed upon trial court judges arise from the organizational nature of the criminal justice process.7 Judges are to some extent compelled informally to impose sentences which satisfy the expectations of the defense attorney and the prosecutor in the case. Nevertheless it is the judge who has the authority to invoke the power of the state, not the prosecutor. Further, prosecutors in the plea bargaining process must consider the sentencing policies of the judge: a judge need only reject the prosecutor’s recommendation a few times before the prosecutor begins assigning a substantial weight to the preferences of the sentencing judges.8 Thus, while

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trial court judges are probably sensitive to the organizational process, they are certainly the dominant decision-making actors in the sentencing process.

The focus upon sentencing behavior is justified for one final reason: the most valuable theories of judicial behavior should aid in understanding behavior in a variety of institutional contexts, and not be limited to a single court, or even level of courts. A theory limited to Supreme Court judges' voting behavior on civil liberties cases is no more useful than one limited to sentencing decisions of criminal court judges. If discriminant analysis and activism are to contribute to a theory of judicial behavior with wide applicability (and thereby contribute to parsimony), then they should be applied and tested within various decision-making contexts so as to develop a cumulative body of evidence. The similarities in different instances of judicial (and human, for that matter) decisional processes probably far exceed the idiosyncrasies. Thus, sentencing behavior is an example of judicial behavior which, within the context developed by Ulmer, is worthy of analysis.

III

This study is based on data from the criminal justice system of Atlanta, Georgia. The particular court under observation is the Superior Court of Fulton County, which is the basic trial court for criminal and civil matters. The court has exclusive jurisdiction in felony cases. There are two divisions—a Criminal Division and a Civil Division—which are staffed by a total of ten judges. The judges of the Superior Court are assigned to the Criminal Division on a quasirotational basis by the Chief Judge.

The cases utilized in this analysis were selected from five court terms by randomly sampling within each term. The five terms were the 1968 March-April Term, the 1968 September-October Term, the 1969 March-April Term, the 1969 September-October Term, and the 1970 September-October Term. Within each of these terms the random sample was selected using a sampling proportion of .5. The indictments included felony charges as well as charges of very serious misdemeanors. While all cases were initiated in these terms they were not necessarily tried within the term in which they were initiated. Of the 1,976 cases selected, 173 (slightly less than 9 percent) had not been disposed of by the time the data were col-
lected and therefore have been excluded. In 160 cases the defendant was either found not guilty or the case was dismissed before trial. Of the remaining 1,443 cases, 1,219 were felony cases and the rest were misdemeanors. Only felony cases have been considered in this analysis. An additional twenty-five cases in which nominal life sentences were given were excluded because the length of the effective sentence could not be specified.

This court system is strongly oriented toward plea negotiations, with bargaining widespread and overt. Bargaining is based almost exclusively on sentence length and disposition (i.e., probation, suspension, or incarceration) and rarely involves charge reduction.

IV

On its face sentence severity is a concept which is easy to measure quantitatively. In reality the difficulties are considerable. Two specific considerations account for most of the problems in constructing a measure. First, sentence severity is a function, in part, of sentence length and sentence disposition (i.e., whether the time is to be served on probation or suspension, within a prison, or some mixture of the two). Measures which are insensitive to either length or disposition (e.g., a “no incarceration” versus “some incarceration” variable) are inadequate.

The second difficulty is more closely related to the substantive orientation of the research. Sentences, and votes on civil liberty cases, are a function of two sets of stimuli, legal and non-legal. Ulmer found it unnecessary to control for differences among cases in legal stimuli since the judges were voting on the same cases. In collegial decision-making structures the frequency of legal stimuli

\[9\] There are several reasons for excluding misdemeanor cases. First, there is no variance in the sentences for these cases: all defendants received the maximum sentence, one year. This is apparently because only the most serious misdemeanors are processed by the Superior Court. Further, by eliminating the misdemeanor cases from analysis the single type of charge which involves very little discretion under Georgia law is eliminated. All felony charges allow for a great deal of discretion in the length of the sentence. Finally, felony and misdemeanor convictions carry very different stigmas (and even legal consequences, such as voting).

\[10\] For example, of the 16,925 cases which were resolved between January 1, 1968, and September 31, 1971, 93.3 percent were disposed of by means of guilty pleas.
is identical for each judge. There was no difference for instance among the judges in the frequency of "easy" (however defined) legal circumstances in which to uphold a civil liberty claim. All legal stimuli were the same for each judge. Consequently, differences in the behavior of judges in a particular set of cases cannot be ascribed to the invariant legal stimuli. Such is obviously not the case with sentencing decisions of trial court judges. These judges are not deciding the same cases. Consequently, the frequency of "easy" sentences per judge is not identical, requiring that differences in legal stimuli be controlled. Two case stimuli which are legal stimuli and which must therefore be controlled are the seriousness of the crime and the prior record of the defendant. If the sentencing judges were trying the same cases, the control would be unnecessary. The data however indicate significant differences among the judges. Using six categories of charge seriousness derived from the maximum length of sentence established by Georgia statutes, and a dichotomous measure of the prior record of the defendants, the data demonstrate significant differences among the judges. That is, the distribution of cases to judges by charge seriousness and the prior record of the defendants is not

11 An argument can be made that since Ulmer's analysis is based upon somewhat different cases for each of the five Supreme Court judges, a control for legal stimuli is necessary. Ulmer examines behavior in civil liberty cases over time periods ranging from 19 to 32 years. It is likely that the nature of civil liberty claims changed considerably over these time periods (as the nature of workman's compensation cases changed over a period of years in Michigan [see S. Sidney Ulmer, "The Political Party Variable in the Michigan Supreme Court," Journal of Public Law, 11 (1962), 352-363]). Ulmer offers a brief rebuttal to this line of argument in S. Sidney Ulmer, "Supreme Court Justices as Strict and Not-So-Strict Constructionists: Some Implications," Law and Society Review, 8 (Fall 1973), 13-32.

12 All felonies except auto theft carry a minimum sentence of one year; so the maximum sentence is an accurate measure of the seriousness of the crime, at least as perceived by the legislators. The number of cases in each of the 6 categories is 115, 226, 122, 191, 335, and 11.

13 While it may be desirable to use a variable indicating the number of prior felony convictions, the only measure available is a dichotomous variable. However, in terms of the legal influence of this variable it should most properly be measured as a dichotomy. Georgia has a first offender law which asserts that defendants without previous felony convictions are entitled to special consideration. Thus, the law itself is a dichotomy, making no distinction between five convictions, for instance, and ten previous convictions. Sixty-five percent of the defendants have been previously convicted of a felony.
uniform. In order to insure that the judges are responding to comparable legal stimuli any measure of sentence severity must be sensitive to the influence of the legal factors involved in the cases.

Many of these problems have been resolved by a special multiple regression technique. Because the development and validation of the procedure have been reported elsewhere, a full explication is not necessary here. Basically, the technique removes statistically the effect of the two most important legal stimuli, the prior record of the defendant and the seriousness of the charge on which he was convicted, from the length of the sentence. The effect of the disposition of the sentence is also neutralized by performing the regression within each disposition class and then standardizing the sentence length residuals within each of these classes. These standardized residuals are next dichotomized to insure further that the measure is unaffected by the legal stimuli. The result of the technique is a dichotomy characterizing each sentence as either “severe” or “lenient.” A “severe” sentence is severe in relation to sentences in cases similar in legal stimuli and similar in disposition. Thus,

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14 For instance, over 20 percent of the defendants sentenced by judges 1 and 7 were convicted on charges falling into the least serious category of charge seriousness while only 3.2 percent of the sentences given by judge 8 fall into this category. Similarly, 44.7 percent of the defendants sentenced by judge 4 had no previous felony convictions, while only 15.8 percent of the defendants sentenced by judge 9 had no previous conviction.


16 The crucial importance of controlling for legal stimuli has been forcefully argued by John Hagen in “Extra-Legal Attributes and Criminal Sentencing: An Assessment of a Sociological Viewpoint,” Law and Society Review, 8 (Spring 1974), 357-384.

The nine basic steps of the regression method are

1) First, all charges are assigned a charge seriousness score, based on the maximum length of sentence established by Georgia statutes. This is the measure outlined above and explained in footnote 12.

2) A dichotomous dummy variable is used to indicate whether or not the defendant has been convicted of a previous felony.

3) Next, the cases are categorized on the disposition of the sentence. There are 548 totally probated or suspended sentences, 206 total incarceration sentences, and 288 mixed sentences.

4) The length of sentence is measured in probation cases by the number of years on probation; in incarceration cases by the number of years in prison; and in mixed cases by the number of years in prison.

5) Within each disposition class the length of the sentence is regressed on
the result of the procedures is a dichotomous measure of sentence severity, which can be used as the dependent variable in the discriminant analysis.

This measure has several important advantages. First, most variance attributable to legal variables has been removed. Severity is

the charge severity measure and the prior record dummy variable using the equation

\[ Y_i = a + b_{1X}X_i + b_{1Z}Z_i \]

where \( Y \) = the length of the sentence, \( X \) = the charge seriousness measure, and \( Z \) = the prior record of the defendant. This step produced regression coefficients which indicate the relative impact of the non-legal variables on the length of the sentence for each disposition class. The results of the regression are:

<table>
<thead>
<tr>
<th>Disposition</th>
<th>N</th>
<th>R</th>
<th>a</th>
<th>( b_{1X} ) (CHARGE)</th>
<th>( b_{1Z} ) (RECORD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PROBATION</td>
<td>548</td>
<td>.2670</td>
<td>2.278</td>
<td>.2735 (.0450)*</td>
<td>.2438 (.1318)*</td>
</tr>
<tr>
<td>MIXED</td>
<td>288</td>
<td>.3297</td>
<td>0.2141</td>
<td>.7805 (.1322)*</td>
<td>---</td>
</tr>
<tr>
<td>INCARCERATION</td>
<td>206</td>
<td>.4201</td>
<td>-0.4200</td>
<td>1.3356 (.2038)*</td>
<td>.7068 (.8143)*</td>
</tr>
</tbody>
</table>

* \( F = 36.895 \). The figure in parentheses is the standard error.
* \( F = 3.421 \).
* \( F = 34.869 \).
  * The impact of the prior record was not significant enough to be entered into the regression equation.
  * \( F = 42.962 \).
  * \( F = 0.753 \).

(6) Using these equations predicted scores (\( \hat{Y} \)) are calculated. Residuals are then constructed by subtracting \( \hat{Y}_i \) from the observed \( \hat{Y}_i \). This produces a length of sentence measure which indicates the deviation of the actual sentence from the expected sentence.

(7) The residuals are then standardized within each disposition class using the formula

\[ S_i = (R_i - \bar{R}_j) * S_{R_j} \]

where \( S_i \) = the standardized sentence severity score, \( \bar{R}_j \) = the mean residual \( (j = \text{the disposition class}) \); and \( S_{R_j} \) = the standard deviation of the residuals.

(8) The next step is to calculate two mean standardized sentence severity scores for each crime: one for defendants with prior records and the other for defendants without prior records.

(9) Finally, each case is characterized as either above or below the mean standardized sentence severity score for its type of crime and type of defendant. For example, the sample included 122 motor vehicle theft cases. The average
measured in relationship to cases that are very strictly comparable—the similarity of the circumstances of the cases greatly increases our confidence that sentences characterized as severe are severe because of factors which are non-legal. While the strategy may be slightly conservative in the sense that some information is lost in the dichotomization, previous sentencing research has suffered most from the problem of spuriousness (due to different judges deciding significantly different cases) and this strategy minimizes the probability that the results are spurious.\textsuperscript{17} The second major advantage is that it makes the findings of this research directly comparable to Ulmer's findings. In order to employ discriminant analysis a dichotomized dependent variable (or a nominal polychotomies) is necessary. It is important in extending previous research to replicate the methodology whenever reasonable. Finally, discriminant analysis results in a widely recognized summary statistic, the “percentage of cases correctly predicted,” which has great utility for the rest of the analysis. Thus, this severity measure constitutes the dependent variable for the discriminant analysis.

Seven non-legal variables have been included as independent variables in the discriminant equations. They are all related to characteristics of the defendants and include (1) the defendant's race (white-black); (2) the defendant's sex (male-female); (3) the type of plea entered by the defendant (not guilty, nolo contendere, or guilty); (4) whether there was any reduction in the number of charges on which the defendant was convicted (reduction—no reduction); (5) the length of time between arrest and

standardized sentence severity score (i.e., the average residual, after standardization within each of the disposition classes) for defendants without previous felony convictions is $-0.082$. If an individual case has a severity score greater than $-0.082$ it is classified as “severe,” if the score is less than $-0.082$ it is classified as “lenient.” The mean for defendants with prior felony convictions is $0.091$, so appropriate individual cases are classified according to this figure. This procedure results in a classification of each of the cases in the sample.

\textsuperscript{17} Since a rather significant claim is made for this measure, it may be useful to provide evidence concerning its validity. The basic claim is that the effects of these legal stimuli have been removed. The assertion is justified: 42 percent of the defendants with prior records received severe sentences and 42 percent of the defendants with no prior records received severe sentences. Similarly, the respective percentage of defendants receiving severe sentences for the 6 classes of charge severity are 43, 48, 41, 32, 45, and 36. Thus it is clear that the results are not spurious.
trial (in five 30 day intervals); (6) whether the pre-trial period was spent in jail or on bail (jail—bail); and (7) an interactive variable which measures the pre-trial sanctions on the defendant (length of time between arrest and trial X pre-trial period in jail or on bail). These variables, like Ulmer's five independent variables, have no explicit legal foundation.

The current state of the criminal justice system makes these variables especially likely to influence the sentencing decision. The overcrowded nature of the urban criminal courts makes it necessary for judges to make low-information sentencing decisions. That is, judges, in the absence of information sufficient for rational decision-making, must rely on readily available cues as a basis for decision-making. The process is very similar to that by which party identification influences voting behavior in the United States. The cue provides information that is related to desirable goals in a probabilistic manner. For example, the last three variables are all indicators of pre-trial sanctions on the defendant. This information is readily available to the judge. If the goal of sentencing is to sanction the defendant, then the pre-trial sanctions should be subtracted from the total sanction to derive the post-trial sanction (i.e., the sentence). Thus, a lengthy pre-trial detention is likely to result in a relatively lenient sentence (if the judge is an activist). Finally, this leniency is not founded in law and hence is due to non-legal stimuli.

Obviously, these seven variables are not inclusive of all non-legal stimuli, just as Ulmer's five variables are not inclusive of all "political" factors in civil liberty cases. Consequently, a judge not characterized as an "activist" may in fact be an activist who relies

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18 This model of decision-making has some significant similarities to cue-theories of decision-making, as applied to both judicial and legislative behavior. The most prominent judicial cue studies are Joseph Tanenhaus, Marvin Schick, Matthew Muraskin, and Daniel Rosen, "The Supreme Court's Certiorari Jurisdiction: Cue Theory," in Judicial Decision-Making, ed. Glendon Schubert (New York: The Free Press of Glencoe, 1963), 111-132; S. Sidney Ulmer, William Hintze, and Louise Kirklosky, "The Decision to Grant or Deny Certiorari: Further Consideration of Cue Theory," Law and Society Review, 6 (May 1972), 637-643; and various other articles by Ulmer which have at least an implicit cue orientation. Matthews and Stimson have been the leaders in legislative cue research: Donald R. Matthews and James A. Stimson, "Decision-Making by U.S. Representatives: A Preliminary Model," in Political Decision-Making, ed. S. Sidney Ulmer (New York: Van Nostrand Reinhold Company, 1970), 14-43.
on variables not included in the equation (e.g., in sentencing, the defendant's social class; in civil liberty cases, the number of amicus curiae briefs filed). There is no way to avoid the possibility of this type of error, regardless of how many variables are included. Several factors, however, suggest that the probability of error, while certainly not zero, is minimized in this type of research. First, it is unlikely that an activist judge relies on some factors while ignoring other very highly related factors. For instance, a judge who is influenced by the defendant's race is probably also influenced by the defendant's social class because the relationship (at least for criminal defendants) between the two is so strong. Thus, if a judge is uninfluenced by the variables in the equation it is likely that he is uninfluenced by related variables which are not included. Consequently, including more variables would probably result in a high degree of multicollinearity and therefore affect the $R^2$ very little. Further, the factors which are included here (and by Ulmer) are readily available to the judge so that if an activist judge ignores these factors he must be relying on relatively less accessible variables. Finally (and the weakest but still not insignificant argument), data on these factors were readily available from court records.

To summarize: the degree to which the discriminant function predicts sentence severity indicates how much the judge relies on these characteristics in making his sentencing decision. If the discriminant function is a good predictor of behavior the judge is an "activist"; if the equation is not a good predictor then the judge is a "restraintist" (non-activist). While the method may be less than perfect, it can provide some interesting insights into criminal court decision-making.

V

Using these 7 factors as independent variables and the sentence decision (severe/l lenient) as the dependent variable, a discriminant function was derived for each of the 11 sentencing judges. Discriminant analysis has been well explicated by Ulmer, Kort, and Aldrich and Cnudde so it should suffice to say that it is a technique very similar to multiple regression.\textsuperscript{19} The procedures used to cal-

\textsuperscript{19} Ulmer, "The Discriminant Function and a Theoretical Context for Its Use"; Fred Kort, "Regression Analysis and Discriminant Analysis: An Ap-
Table 1

Activism as an Indicator to Sentence Severity Decisions
Fulton County Superior Court

<table>
<thead>
<tr>
<th>Judge</th>
<th>Percentage Correctly Predicted</th>
<th>Percentage of Variance Explained</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>66.1</td>
<td>20.3</td>
</tr>
<tr>
<td>2</td>
<td>64.0</td>
<td>6.0</td>
</tr>
<tr>
<td>3</td>
<td>69.5</td>
<td>16.2</td>
</tr>
<tr>
<td>4</td>
<td>58.1</td>
<td>5.6</td>
</tr>
<tr>
<td>5</td>
<td>75.7</td>
<td>29.2</td>
</tr>
<tr>
<td>6</td>
<td>55.0</td>
<td>14.9</td>
</tr>
<tr>
<td>7</td>
<td>72.4</td>
<td>26.9</td>
</tr>
<tr>
<td>8</td>
<td>83.3</td>
<td>38.9</td>
</tr>
<tr>
<td>9</td>
<td>81.8</td>
<td>35.1</td>
</tr>
<tr>
<td>10</td>
<td>64.2</td>
<td>8.7</td>
</tr>
<tr>
<td>11</td>
<td>60.8</td>
<td>4.8</td>
</tr>
</tbody>
</table>

culate the discriminant functions follow Kort precisely. Table 1 summarizes the results of the analysis. There is wide variance in the accuracy of the discriminant functions. Over 80 percent of the sentences given by judges 8 and 9 can be predicted by these 7 variables; less than 60 percent of the sentences given by judges 4 and 6 can be predicted. Evidently some judges rely quite strongly upon the non-legal aspects of cases whereas other judges are much less affected by them. These figures also compare favorably with those reported by Ulmer; the average "Percentage correctly predicted" for each of the justices for civil liberty decisions while they were on the Court are 71.1, 70.2, 67.8, 66.0 and 72.1 for Douglas, Black, Frankfurter, Clark and Reed, respectively. The overall average percentage correctly predicted for Ulmer's 5 judges is 69.6; for these 11 trial court judges it is 68.3.20 Thus, overall the degree of influence of the 7 non-legal variables is quite high; however, there is considerable variation among judges in the degree of influence;


20 These figures were calculated from the data given in Tables 3.2, 3.3, 3.4, 3.5, and 3.6 in Ulmer, "Dimensionality and Change in Judicial Behavior."
<table>
<thead>
<tr>
<th>Variable</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
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</thead>
<tbody>
<tr>
<td>LENGTH</td>
<td>.005</td>
<td>.036</td>
<td>-.014</td>
<td>.001</td>
<td>.013</td>
<td>-.021</td>
<td>.006</td>
<td>.911</td>
<td>.323</td>
<td>1.199</td>
<td>1.100</td>
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<tr>
<td>REDUCE</td>
<td>-.004</td>
<td>-.006</td>
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<td>.008</td>
<td>.020</td>
<td>.001</td>
<td>-.023</td>
<td>-.013</td>
<td>2.430</td>
<td>4.740</td>
<td>1.167</td>
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<tr>
<td>SEX</td>
<td>.070</td>
<td>.024</td>
<td>-.008</td>
<td>.005</td>
<td>.001</td>
<td>.005</td>
<td>.005</td>
<td>.001</td>
<td>.574</td>
<td>.474</td>
<td>4.039</td>
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<td>RACE</td>
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<td>.005</td>
<td>.008</td>
<td>-0.09</td>
<td>.015</td>
<td>.018</td>
<td>.039</td>
<td>.032</td>
<td>5.167</td>
<td>3.720</td>
<td>2.390</td>
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<td>JAIL</td>
<td>.004</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
<td>.004</td>
<td>.001</td>
<td>.001</td>
<td>.001</td>
<td>23.997</td>
<td>24.000</td>
<td>25.000</td>
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<td>PLEA</td>
<td>-.002</td>
<td>-.002</td>
<td>-.003</td>
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<td>-.003</td>
<td>-.003</td>
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<td>32.390</td>
<td>42.900</td>
<td>43.900</td>
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**Table 2**

**Discriminant Coefficients for Non-Legally Relevant Variables for Each Judge**

**KEY:**
- LENGTH = time between arrest and trial
- REDUCE = reduction in number of charges
- SEX = defendant's sex
- RACE = defendant's race
- JAIL = pre-trial period in jail or on bail
- PLEA = defendant's plea
- PRETRIAL = LENGTH x JAIL

* Variable not entered in the equation; F < .01
* Variable entered in the equation; variable has no variance

* Variable not entered in the equation; variable has no variance
and activism at the trial court level is observed at a level comparable to that of the U.S. Supreme Court.

Analysis of each of the independent variables also provides some interesting conclusions (see Table 2). The most powerful of the seven variables in terms of predicting whether the sentence is severe or lenient is whether or not there was a reduction in the number of charges on which the defendant was convicted (REDUCE). Interestingly enough, the effect of this variable differs across the judges. Some judges give more lenient sentences when charge reduction has occurred; others however give more severe sentences when there has been reduction. Finally, some judges are totally unaffected by this variable. Indeed, a great deal of variability in the coefficients can be observed for each of the variables. No variable operates consistently across the 11 judges. For some judges white defendants receive less severe sentences than blacks but for others whites receive more severe sentences. The same effect is observed for the next three most important variables—JAIL, PLEA, and SEX. LENGTH AND PRETRIAL make little contribution to predicting sentence severity.

These data provide no generalizable answer to the question of why judges make decisions as they do. This is true in three respects. First, as already observed, the signs and magnitudes of the discriminant coefficients vary across the judges. Second, there appears to be no pattern in the type of non-legal variable which influences activist judges. We might have expected, for instance, that because of the bargained nature of justice in the criminal courts the two variables most clearly related to the plea bargaining process would be the most influential predictors. While REDUCE is the most powerful predictor, PLEA, which represents a fundamental aspect of the plea bargaining process (i.e., penalizing defendants for putting the state to the expense of a trial), is relatively unimportant. The race of the defendant, a characteristic totally unrelated to plea bargaining, has a very significant effect on activists; the sex of the defendant however is nearly insignificant. The JAIL variable, which is unrelated to either the plea bargaining process or the personal characteristics of the defendant, is a fairly strong predictor. Thus, in terms of the individual variables which are significantly linked to sentencing behavior these data seem to demonstrate fairly idiosyncratic styles of decision-making. However, it still remains to determine whether there is some pattern in the activism dimension of their behavior.
Third, these results suggest that activism is not a concept which
determines the substance of a decision but rather determines the
processes of decision-making. For example, the two most activist
judges, judges 8 and 9, are influenced quite differently by the race
of the defendant. Consequently, while activism is a concept fre-
quently associated with "liberalism" it may be very much more
useful to think of the concept in Ulmer's terms—activism is "the
ability of political or non-legal factors to explain variation in voting
behavior. . . ." Despite the significant differences in institutional
and organizational contexts between the U.S. Supreme Court and
the Fulton County Superior Court the decision process, at least at
the theoretical level, is quite similar.

The analysis thus far has examined sentencing activism, defined
as the degree to which sentence severity is predictable from knowl-
dge of several non-legal characteristics of the case.21 "Activism"

21 The question of what "restraintist" judges base their decisions on is un-
fortunately unanswered since precedent plays a limited role in sentencing.
That is, activist judges rely on extra-legal factors to sentence—what are the
legal factors which influence the decisions of restraintists? This is a difficult
question to answer. In general, adherence to precedent is an extremely passive
style of decision-making in which the judge abdicates (at the extreme) re-
sponsibility for the decision. Rather than actively seeking a "just" solution
the precedent judge may well engage in a satisfying search for precedents.
This decision-making style is logically consistent with abdicating responsibility
for the sentence to the prosecutor. Hence a precedent orientation may be asso-
ciated with strong prosecutorial influence on sentence outcomes.

An imperfect test of that hypothesis can be conducted. The judges' orienta-
tions toward precedent can be correlated with the responses the judges gave to
the following question: "How influential do you believe the following factors
to be in your sentencing a defendant found guilty in criminal court?" The
Pearson Correlations are

- "the recommendation of the district attorney" .24
- "the prior record of the defendant" .20
- "the efforts of the defendant's attorney" .08
- "the attitude of the defendant" -.34
- "the type of crime" -.42

While the correlations are not outstanding (and they are based of course on an
N of 11), they do show a willingness of precedent judges to rely more on the
district attorney's recommendation and prior record of the defendant and less
on the type of crime and attitudes of the defendant. This seems to support
the hypothesis.

On the other hand, a restraintist sentencing orientation may be associated
with consistency in sentencing. A system of decision-making based on prece-
dents has as its primary objective certainty in the law. Certainty can only be
achieved by consistency. Further, the activist sentencer may be more con-
is the term used to describe the behavior of these judges; that is, activism on the bench is simply another dimension of behavior, similar to "liberalism," etc. The data have, however, told us nothing about the determinants, or correlates, of this behavioral activism. What can account for the variation in activist behavior? This is a question which Ulmer was not able to explore but one which is vital to a full understanding of the phenomenon. Fortunately, these data can provide some suggestive answers to the question.

For the remainder of the analysis the "percentage of variance explained" score will be used as the measure of activism. Judges with high percentages are more activist than judges with low percentages. Sentencing activism, based on the ability to predict correctly the severity of sentences with the seven case factors, is the dependent variable for the rest of the analysis.

VI

In its focus on legal and non-legal determinants of decisions, discriminant analysis is the behavioral complement to role theory. Judges acting in judicial roles are constrained in their behavioral alternatives by role expectations. Role expectations, notions of

cerned with "justice" and hence be more likely to individualize sentences. Thus it is hypothesized that a restraint orientation will be associated with consistency in sentencing. Consistency can be operationalized in terms of the standard deviation of the sentences given by a judge. A small standard deviation indicates that there is considerable consistency in the sentences. Consequently, it is hypothesized that restraint judges will exhibit a small standard deviation.

The findings fail to support the hypothesis. Considering all cases the judges sentenced, the correlation between the judges' role orientations and their standard deviations is -.28, a correlation which was hypothesized to be positive. The more activist a judge is, the smaller his standard deviation. Even when specific crimes are considered, the results remain the same. For five crimes, auto theft, forgery, aggravated assault, burglary, and drug abuse, there were enough cases to examine the sentencing consistency of each of the judges (i.e., each judge sentenced at least three cases). The correlations of the five standard deviations and the role orientation are all negative, ranging from -.07 for aggravated assault to -.65 for auto theft. The average correlation is -.33. What these data may suggest is that activist judges sentence on the basis of their own, well defined sense of justice (or attitudes), while restraintist judges are abdicating sentencing decision-making, possibly to the district attorney. Thus, while the notion that precedent implies consistency in sentencing is not supported by the data, precedent as implying a lack of control over the decision does receive some support.
what constitutes "proper" role behavior, are internalized, in one form or another, by the judge in the form of role orientations. A role orientation is the combination of the occupant's perception of role expectations and his own norms of proper behavior. Thus, the role orientation defines for the role occupant the range of appropriate behavioral alternatives in any given situation.

While there are a number of important role behaviors which are constrained by role expectations, our primary interest here is in how role orientations affect decisional behavior. The basic function of decision-making role orientations is to specify what variables can legitimately be allowed to influence decision-making, and in the case of conflict, what priorities to assign to different decision-making criteria. The role orientation specifies which behaviors are appropriate within the institutional decision-making structure. The formulation is consistent with the notion of Jaros and Mendelsohn that ". . . the judicial role may restrict judges from using defendants' social characteristics as criteria for sentencing. . . ." 22 That is, the role orientation specifies the proper method of decision-making, and the criteria that are legitimately part of the decision-making calculus.

This use of discriminant analysis integrates very nicely with this notion of role orientations. Both rely upon classifying stimuli as proper or improper determinants of sentencing behavior. An activist role orientation restrains the use of non-legal stimuli very little; these judges are probably "ends" oriented with any factors which contribute to the achievement of the ends ("justice," or whatever) considered as legitimate determinants of the decision. The restraintist role orientation is more restricted in the use of non-legal stimuli and is probably more "means" oriented. That is, activists cherish their own conception of justice; restraintists cherish "the law." If role orientations "restrict judges from using defendants' social characteristics as criteria for sentencing," then a restraintist role orientation should result in "restrained" sentencing behavior and an activist orientation should result in "activist" sentencing behavior. It is to this hypothesis that we now turn. 23


23 This activism-restraintism dimension is very similar to Levin's judicial and administrative decision-making models which he found useful for explaining
The role orientations of the sentencing judges were measured during personal interviews with them in 1972. The item used to measure role orientations has been previously used by Becker, the sentencing behavior of judges in Pittsburgh and Minneapolis. For instance:

"The judicial model has the following characteristics: (1) Decisions are made on the basis of the 'best' evidence as defined under the laws of evidence. (2) Decisions are made on the basis of complete evidence as developed by the adversary system. (3) A judge feels that he must maintain an image of detached objectivity, because it is as important to appear just as to be just. (4) A judge's decisions have a dichotomous specificity (yes-no), and they must assign legal wrong to one of the two parties. (5) A judge deduces his decision by a formal line of reasoning from legal principles that exist independent of policy considerations. (6) He evaluates his success by the degree to which his decisions have followed these procedures and by their satisfaction of abstract notions of justice and law. He generally has a greater concern for procedure than for substantive issues, and thus is more concerned with satisfying 'the law' as an abstract doctrine than arriving at 'just' settlements of individual cases. (7) A judge bases his decision on what he feels is best in objective terms—his criteria usually come from 'the law'—rather than what might be considered best from the perspective of the individual's self-interest, and he reaches his decision regardless of considerations of person.

The administrative model of decision-making has the following characteristics: (1) Decisions are made on the basis of the kind of evidence on which reasonable men customarily make day to day decisions. (2) Decisions are made on the basis of sufficient evidence gathered by the administrator's own investigation, and the length and depth of the investigation is determined by the resources available to him. (3) An administrator feels that he must seek intimate contact with the real world to be able to administer effectively. He feels that this is more important than maintaining an image of detached objectivity (i.e., appearing just). (4) He may adopt dichotomous (yes-no) or intermediate decisions (e.g., compromise decisions or delayed enforcement of a decision). (5) He deduces his decision by pragmatic methods from the policy goals incorporated in the program he administers. He has greater concern for arriving at 'just' settlements based on the particular merits of individual cases than for adherence to abstract notions of justice and the law. He seeks to give his clients what he feels they 'deserve,' and he bases his decision in large part on the needs of his individual clients. . . . (6) He has greater concern for substantive issues than for procedure, and thus he evaluates his success by the way the program he administers 'fits' real world demands and supports."


There is also a great deal of similarity between this use of precedent orientation and that of Berry. Berry, using a very similar measurement instrument,
Flango and Schubert, and others. The question reads, "How influential do you believe the following factors to be in your deciding a case?" The factors are "a highly respected lawyer (as a lawyer)," "your view of justice in the case," "what the public needs, as the times may demand," "precedent when clear and directly relevant," "common sense," "a highly respected advocate (as a member of the community)," and "what the public demands." A five point response set, ranging from "extremely influential" to "uninfluential" was used. While criminal sentences rarely provide trial court judges with opportunities to break precedent, by examining the influence ascribed to "precedent" as a criterion we can infer measures of the judges' willingness to consider non-legal criteria in sentencing. Thus, propensity to adhere to precedents is simply considered a subset of a larger group of propensities—propensities to use varied, legal and non-legal criteria in pursuit of just decisions. Because of its unambiguous symbolic status "precedent" is used as the critical measurement instrument. Thus, while several criteria are listed as alternatives, the real interest is in how the judge evaluates the role of precedent. Consequently, judges who rate "precedent" relatively low are hypothesized to rely more on non-legal factors and thus are more likely to be activists.

The correlation between the activism measure (percentage of

termed a precedent oriented judge a "mechanist." "These jurists have little realization that certain psychological processes and attitudes independent of the law are needed to make decisions. . . . Judges' personal views have no place in this type of decision-making. Reliance is placed on the impersonal commands of the law, which legally trained jurists are particularly capable of hearing." Marvin P. Berry, "Role Orientations of State Judges," Research Report No. 2, Washington State University, Department of Political Science, Division of Governmental Studies and Services (June 1974), 7. Interestingly, nearly one-half of the trial court judges in his sample could be classified as mechanists; for intermediate appellate court judges the figure was 68.2; for Supreme Court judges it was 51.6 (judges could be classified into more than one category).


25 This is identical to the procedure employed by Becker.
variance explained) and the degree of influence ascribed to precedent is a strong .54, indicating that nearly 30 percent of the variance in activism can be explained by the role orientations. However, it should be noted that the N is 11 so that not a great deal of confidence can be placed in the stability of the coefficient. Nevertheless, the strength of the relationship argues that the sample size does not totally undermine the finding; if this were a random sample of judges, which it is not, the correlation would be significant beyond .05. Thus it seems safe to say that the observed relationship to some extent confirms the hypothesis relating the role orientations to the use of non-legal stimuli in sentencing decisions.

VII

This research has dealt with a very significant activity engaged in by judges: sentencing behavior. A regression technique for measuring sentence severity was presented which is superior to previous techniques. The variation in this dichotomous measure of severity is due primarily to non-legal stimuli. Next, the impact of 7 specific non-legal stimuli on the severity of the sentences was evaluated for each of the 11 sentencing judges, by means of discriminant functions. Following Ulmer, this evaluation resulted in a measure of "sentencing activism" for each judge, a measure which states the degree of reliance by the judge on non-legal stimuli. The final step in the analysis involved using the role orientation of the judge to predict "sentencing activism." A strong relationship between role orientations and activism, posited on theoretical grounds, was in fact observed.

Research on role orientations and the determinants of judicial decisions has far to go to contribute significantly to a theory of

26 The correlation coefficient is only minimally dependent upon the choice of the measure of behavioral activism—i.e., the dependent variable. The measure employed is the percentage of variance explained. Differing measures produce the same results. For instance, it is legitimate to use a measure which indicates how much better the prediction using the discriminant function is in comparison to a prediction without additional "non-legal" information (i.e., a proportional reduction in error measure). Tau beta is such a measure. The correlation between the role orientations of each of the judges and the tau betas is .61. Using phi and gamma as measures of the dependent variable produces correlations of .61, and .62, respectively. Even if the "percentage correctly predicted" were used as the dependent variable the correlation would be .63.
judicial behavior. There is however great promise. Previous research efforts have demonstrated that psychological variables do in fact explain some variance in judges’ behavior. Similarly, it has been shown that the “facts” of cases can significantly affect the outcome. Curiously, however, role orientations have not been good predictors of behavior. Several studies have shown quite low correlations. The explanation may lie in the nature of the behavior measures. These is no reason to believe that an activist will engage in strictly “liberal” or “lenient” behavior. Conversely, there is no reason to believe that a “strict constructionist” will engage in “conservative” or “severe” behavior. Role orientations do not predict the substance or direction of behavior. The distinction is one of predicting activism from role orientations rather than predicting actual behavior. William Rehnquist and William O. Douglas could both be characterized as activists. This kind of argument is frequently used to explain Felix Frankfurter’s behavior, especially in civil liberties cases. Figure 1 illustrates the process. The role orientation merely specifies which criterion (in this simplistic illustration, law versus ideology) is allowed to determine the decision. In order to predict the substance of the decision it is necessary to know which criteria are relevant and their substantive position.

A judge’s role orientation should not then predict his behavior; neither should his ideology alone. In this research, role orientations should not predict, for example, the leniency of the judges’ sentencing behavior and indeed they do not \( r = .29 \). Role orientations

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27 Most research on role orientations has not been very concerned with explaining judicial decision behavior; rather the objective has been to develop typologies or to discuss various dimensions or conceptions of the judicial role. It is unclear what the final objective of these is. The few studies correlating role orientations with behavior include Henry Robert Glick, *Supreme Courts in State Politics: An Investigation of the Judicial Role* (New York: Basic Books, 1971); Kenneth N. Vines, “The Judicial Role in the American States: An Exploration,” in *Frontiers of Judicial Research*, ed. Joel B. Grossman and Joseph Tanenhaus (New York: John Wiley and Sons, 1969), 461-485; Victor E. Flango and Glendon Schubert, “Two Surveys of Simulated Judicial Decision-Making”; and J. Woodford Howard, Jr., “Role Perceptions and Behavior in Three U.S. Courts of Appeals,” (paper presented at the 70th annual meeting of the American Political Science Association, Chicago, Ill., August 29–September 2, 1974).

### Figure 1

**Hypothetical Relationships among Role Orientations, Decisional Criteria, and Judicial Behavior**

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<th>ROLE ORIENTATION</th>
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do predict reliance on non-legal stimuli in sentencing. Thus previous research which tends to question the utility of role orientations as predictors of behavior is based upon efforts to predict "substantive" decision behavior rather than focusing upon the determinants of the behavior.

This research is currently incomplete; a full test of the linkages among role orientations, attitudes and behavior is needed. If a sufficient number of judges were available, a multiple regression (or discriminant analysis) using interaction terms might prove most useful. For instance, the equation

\[ Y = b(Z_1X_1) + b(Z_2X_2) + \ldots + b(Z_nX_n) \]

where \( Y \) = the decision,
\( X \) = the decisional criteria, and
\( Z \) = whether the criterion is considered legitimate by the judge, could provide an excellent means to evaluate these linkage propositions. If the notion "judicial role" is to advance our understanding of judicial phenomena it must be integrated theoretically into judicial studies, and, more importantly, it must be able to predict judges' behaviors. The unification of role theory with fact pattern analysis may be the most fruitful approach to achieving these objectives. This research is a step in that direction.