JUDICIAL CHARACTERISTICS AND JUDICIAL DECISION-MAKING STUDY

(ICPSR STUDY NUMBER 7084)

PRINCIPAL INVESTIGATOR
STUART S. NAGEL

ICPSR EDITION
AUGUST 1976

INTER-UNIVERSITY CONSORTIUM FOR POLITICAL AND SOCIAL RESEARCH
P.O. BOX 1248
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C O D E B O O K

CODING KEY FOR

JUDICIAL CHARACTERISTICS AND JUDICIAL DECISION-MAKING
(Stuart Nagel, U. of Illinois)

General

X (-) = Information not available
Y (+) = Categories not applicable

Col. 1-3. Identification (313 Judges)
See Dissertation appendix for names.

Col. 4. Judges leaving between Jan. 1 and Dec. 31, 1955

1. Yes, left (excluded from correlations I, II, and III below)
2. No, did not leave

I. Correlations of Backgrounds with Decisions

A. Backgrounds

Col. 5. Political Party

1. Republican
2. Democrat
A blank or
Any punch other than 1 or 2 ~~on blank~~ on columns 5 through 22 and 56 indicates the judge was unusable in the correlation of backgrounds with decisions for one or more of the following reasons:
   a. He left the court before the end of the year
   b. He fell in a position between hole 1 and hole 2
   c. His court did not have some judges in hole 1 and some judges in hole 2 on this column
   d. Information was not available
   e. He could not be positioned in either hole 1 or hole 2 ~~on this column~~.
   i.e., categories not applicable

Col. 6 Nativist Group

1. Yes, indicated membership
2. No, did not indicate membership

Col. 7. Business Group

1. Yes
2. No

Col. 8. ABA

1. Yes
2. No

Col. 9. Veterans Group

1. Yes
2. No

Col. 10. Country Club

1. Yes
2. No

Col. 11. Former Businessman

1. Yes
2. No

Col. 12. Former Prosecutor

1. Yes
2. No

Col. 13. Regulatory Agency Experience

1. No
2. Yes - Note reversed. Code carefully.

Col. 14. Religion (unusable in decisional correlation because not dichotomous)

1. Methodist
2. Presbyterian
3. Episcopalian
4. Baptist
5. Congregationalist
6. Unitarian Univeralist
7. Lutheran
8. Other Protestant denomination or just Protestant
9. Catholic
0. Jewish

Col. 15. Christianity

1. Protestant
2. Catholic

Col. 16. Protestantism

1. Higher status (2, 3, 5, 6 above)
2. Lower status (1, 4, 7, above)

Col. 17. Ancestral Nationality (unusable in decisional correlation because not dichotomous)

1. Part or all British, i.e. English, Scotch, or Welsh (rest unknown)
2. Irish - Part or all Irish (rest British or unknown)
3. German - part or all German (rest British or unknown)
4. Scandinavian - part or all Scandinavian (rest British or unknown)
5. French - part or all French (rest British or unknown)
6. Dutch - part or all Dutch (rest British or unknown)
7. Other combinations involving only north and west Europe
8. Part or all non-North-West Europe (rest North-West Europe or unkno

Col. 18. British v. Non-British

1. British
2. Non-British

Col. 19. Law School Tuition

1. Relatively high (over $240)
2. Relatively low (under $120)

Col. 20. Age

1. Relatively high (over 65)
2. Relatively low (under 60)

Col. 21. City Size Where Started Practicing Law

1. Relatively Low (under 5,000)
2. Relatively High (over 100,000)

Col. 22 Questionnaire (unusable in decisional correlation)

1. Answered
2. Answered too late
3. Died
4. Wrote back but declined to answer
5. Did not write back or answer

Col. [redacted] 28, 29. Blank

Col. 23. Initially chosen by appointment or election

1. appointed (unlike at least one other judge onhis court)
2. elected (unlike at least one other judge on his court)

Col. 24. Initially chosen by appointment or election

1. appointed
2. elected

Col. 25, 26, 27 (See Page 8)

B. Decision Scores

Col. 30. Criminal Cases (for defendant)

1. At or below the average of one's court on the decidon score in 1955 only using cases on which all non-L (see col. 4) judges sat.
2. Above the average

A 3 punched on columns 30 through 44 indicates the judge could not be give a decision score because there were no full-court (excluding L's), non-unanimous cases or all the judges had the same decision score.

Col. 31. Business Regulation (for agency)

1. Below or at
2. Above

Col. 32. Regulation of non-business entities (for non-businesses)

1. Below or at
2. Above

Col. 33. Unemployment Compensation (for claimant)

1. Below or at
2. Above

Col. 34. Free Speech (for broadening)

1. Below or at
2. Above

Col. 35. Criminal-Constitutional (for finding violation)

1. Below or at
2. Above

Col. 36. Tax cases (for government)

1. Below or at
2. Above

Col. 37. Divorce cases (for seeker)

1. Below or at
2. Above

Col. 38. Divorce Settlement (for wife)

1. Below or at
2. Above

Col. 39. Landlord-Tenant (for tenant)

1. Below or at
2. Above

Col. 40. Labor-management (for union)

1. Below or at
2. Above

Col. 41. Creditor-Debtor (for debtor)

1. Below or at
2. Above

Col. 42. Sales (for consumer)

1. Below or at
2. Above

Col. 43. Motor accident (for injured party)

1. Below or at
2. Above

Col. 44. Employee-Injury (for worker)

1. Below or at
2. Above

Col. 45-59. Blank

II. Correlations of Reforms with Objectivity

Col. 50. Party Pattern Voting

1. Voted in accordance with the pattern of his party in more than half of the three types of cases used.
2. Voted contrary to the pattern of his party in more than half of the three types of cases used.

A blank or
Any punch other than 1 or 2 on a blank on col. 50 through 53 indicates the judge was unusable in the correlation of columns 51, 52, and 53 with column 50 for one or more of the following reasons:

a. Voted in accordance with the pattern of his party in exactly half of the three types of cases used.
b. Participated in exactly half of the three types of cases used.
c. Not a bipartisan court and thus not in appendix 3.
d. Information not available on party affiliation or else the judge is neither a Democrat nor a Republican.

Col. 51. Selection

1. Appointed
2. Elected

Col. 52. Ballot

1. Judge elected on a non-partisan ballot
2. Judged elected on partisan ballot

Col. 53. Term of Office

1. Long (more than 8 years tenure)
2. Short (8 or less years tenure)

Col. 54. Blank

III. Correlation of Attitudes with Decisions

A. Attitudes

Col. 55. Liberalism Score

1. At or below 109
2. Above 109

Any duplication of this deck must blank out columns 55, 56, & 61 to preserve the anonymity of the judicial attitudes.

B. Decisions

Col. 57. Criminal cases (for defendent)

1. At or below the average of the respondents from one's court on the decision score in 1955 only using cases on which all non-L (see col. 4) judges sat.
2. Above the average

A 3 punched on columns 57 through 60 indicates the judge could not be given a decision score for the correlation of attitudes with decisions because there were no full-court non-unanimous cases or all the responding judges had the same decision score.

Col. 58. Business Regulation (for agency)

1. Below or at the average of the respondents
2. Above

Col. 59. Motor accident (for injured party)

1. Below or at avg. of respondents
2. Above

Col. 60. Employee Injury (for worker)

1. Below or at avg. of respondents
2. Above

II b. Further correlation of reforms with objectivity

Col. 61. Value position voting

1. Voted in accordance with his value position in criminal cases
2. Voted contrary to his value position in criminal cases

A blank or
Any punch other than 1 or 2 or a blank on columns 61 through 64 indicates the judge was unusable in the correlation of columns 62, 63, and 64 with column 61 for one or more of the following reasons.

a. Voted half for the defense and half for the prosecution
b. Participated in non full-court non-unanimous criminal cases.
c. Not a court that was split on the criminal attitude item between those agreeing and those disagreeing.
d. Neither agree nor disagreed with the criminal attitude item.
e. Did not respond to the attitudinal questionnaire.
f. Did not respond to the biographical questionnaire of the Directory of American Judges or Who's Who

Col. 62. Years of Judicial Experience

1. More than 17 years
2. 17 years or less

Col. 63. Robe Wearing

1. Does not wear robes
2. Does wear robes

Col. 64. Scholarship (see 1962 APSA paper)

1. Indicated that he held a scholarly position
2. Did not indicate that he held a scholarly position

IV. Frequency Distribution of Background and Attitude Characteristics

Col. 25. Law School Tuition

1. Relatively high (over $240)
2. Relatively low (under $120)
3. Middling

Col. 26. Age

1. Relatively high (over 65)
2. Relatively low (under 60)
3. Middling

Col. 27. City Size Where Started Practicing Law

1. Relatively low (under 5,000)
2. Relatively high (over 100,000)
3. Middling

Col. 55. Liberalism Score

1. At or below 109
2. Above 109

Col. 65. Political Party

1. Republican
2. Democrat

Col. 66. Nativist Group

1. Yes, indicated membership
2. No, did not indicatemembership

Col. 67. Business Group

1. Yes
2. No

Col. 68. ABA

1. Yes
2. No

Col. 69. Veterans Group

1. Yes
2. No

Col. 70. Country Club

1. Yes
2. No

Col. 71. Former Businessman

1. Yes
2. No

Col. 72. Fromer Prosecutor

1. Yes
2. No

Col. 73. Former Agency Experience

1. No
2. Yes - Note reversed. Code carefully

Col. 74. Religion

1. Methodist
2. Presbyterian
3. Episcopalian
4. Baptist
5. Congregationalist
6. Unitarian Univeralist
7. Lutheran
8. Other Protestant denomination or just Protestant
9. Catholic
0. Jewish

Col. 75. Christianity

1. Protestant
2. Catholic

Col. 76. Protestantism

1. Higher Status (2, 3, 5, 6 or col. 74)
2. Lower status (1. 4, 7, of col. 74)

Col. 77. Ancestral Nationality

1. Part or all British, ie. English, Scotch. or Welsh (rest unknown
2. Irish - Part or all Irish (Rest British or unknown)
3. German - part or all German (rest British or unknown)
4. Scandinavian - part or all Scandinavian (rest British or unknown
5. French - part or all French (rest British or unknown)
6. Dutch - part or all Dutch (rest British or unknown)
7. Other combinations involving only north and west Europe
8. Part or all non-North-West Europe (rest NorthWest Europe or un-

Col. 78: British v. Non-British

1. British
2. Non-British

Col. 79-80. State

1. Ala.	13. Iowa	25. Neb.	37. R.I.
2. Ariz.	14. Kan.	26. Nev.	38. S. C.
3. Ark.	15. Ky.	27. N. H.	39. S. D.
4. Calif.	16. La.	28. N. J.	40. Tenn.
5. Colo.	17. Me.	29. N. M.	41. Tex.
6. Conn.	18. Md.	30. N. Y.	42. Utah
7. Del.	19. Mass.	31. N. C.	43. Vt.
8. Fla.	20. Mich.	32. N. D.	44. Vash.
9. Ga.	21. Minn.	33. Ohio	45. Wash.
10. Idaho	22. Miss.	34. Okla.	46. W. Va.
11. Ill.	23. Mo.	35 Ore.	47. Wis.
12. Ind.	24. Mont.	36. Pa.	48. Wyo.
			49. Federal

MULTIPLE CORRELATION OF JUDICIAL BACKGROUNDS AND DECISIONS

Stuart S. Nagel
University of Illinois

March, 1973, draft

MULTIPLE CORRELATION OF JUDICIAL BACKGROUNDS AND DECISIONS

I. THE BASIC RESEARCH DESIGN

In the early 1960's this writer published a series of articles dealing with the relation between judicial backgrounds and judicial decisional propensities.[1] The basic methodology involved comparing: (1) the percentage of Democratic judges (or +X judges) who were above the average of their respective state supreme courts regarding the proportion of times they decided in favor of the defense in criminal cases (or the +Y position), as compared to (2) the percentage of Republican judges (or -X judges) who were above the average of their respective state supreme courts. The data consisted of all the state supreme courts that were bipartisan or bi-group on background X and all their non-unanimous cases of 1955.[2]

Some reviewers of the research indicated that additional insights into the relation between judges' backgrounds and decisions could be obtained by determining the relations between two or more background characteristics simultaneously and two or more decisional propensities.[3] It is the purpose of this article to provide such a multiple correlation analysis of judges' backgrounds and decisions.[4]

The original research design is not directly applicable however, to a multiple correlation approach, since it involved only within-court comparisons in order to guarantee that comparisons would only be made among judges hearing the same cases under the same

law in the same place at the same time.[5] Thus, if we wanted to compare Catholic judges with Protestant judges on criminal case decisional propensity holding political party constant while using the original research design, then this would require finding one or more state supreme courts that have some Catholic Democrats, Catholic Republicans, Protestant Democrats, and Protestant Republicans. We would then compare (1) the percentage of Catholic Democratic judges who were above the average of their state supreme courts on the proportion of times deciding in favor of the defense in criminal cases as compared to (2) the percentage of Protestant Democratic judges who were above the average of their courts. We would do the same with Catholic Republican judges and Protestant Republican judges.

Likewise, if we wanted to know the combined effect of religion and party, then we would make a similar comparison between Catholic Democrats, Catholic Republicans, Protestant Democrats, and Protestant Republicans. We are, however, not likely to be able to make such comparisons because the average state supreme court only has seven judges; and among its seven judges, a court is not likely to have four sets of judges having the religion and party characteristics as specified above. Such comparisons become even more unlikely if we try to control for more than onebackground variable or combine more than two background variables.

As an alternative research design, we can first determine the correlation between each background characteristic and the criminal case decisional propensity, again using only the bi-group state supreme courts and the non-unanimous cases of 1955.

Only bi-group courts are used because religion, party, or other background characteristics cannot explain decisional differences on any given court if there are no differences on the background characteristic involved among the judges on that court.[6] Likewise, only non-unanimous cases are used because they are the only ones in which there are differences to be accounted for. Each correlation, however, will be based on a different number of judges since the number of judges serving in 1955 on bi-group courts depends on what two groups are being compared, or in other words on how many +X judges and -X judges there are on courts which have both some +X judges and some -X judges.

As our next step, we can place these correlation coefficients into a correlation matrix from which a multiple correlation or multiple regression analysis can be generated. Doing so involves making the assumption that the N or number of judges on which each correlation is based is in some sense a representative sample of all the judges on which each correlation could have been based. Assuming the sample of usable entities is representative of the population from which the entities were drawn is a less reasonable assumption when usability as here is not randomly determined. One can, however, make allowances for non-representativeness in interpreting the results. Thus if Democratic judges are found to be more liberal than Republican judges, one can recall that the only usable judges in the research design are those who are serving on bipartisan courts meaning northern courts. Thus on that finding northern Democrats are being compared with northern Republicans rather than southern Democrats with northern Republicans.

II. THE NON-MULTIPLE CORRELATION RESULTS

Table 1 provides the main results from such a multiple correlation analysis of judicial characteristics and decisions. Because of their predictive power and to preserve the continuity of this research with the writer's prior research, virtually the same twelve background and two attitudinal variables were used.[7] The background variables relate to political party, pressure group affiliations, pre-judicial occupations, education, age, geography, and ethnic affiliations.[8] The only change was to add an economic liberalism attitude to the criminal liberalism attitude in place of a general liberalism attitude since the more general attitude lacked clarity and specificity as to what it described.[9]

Two decisional propensities are used as the dependent variables. One relates to whether each judge was above or below the average of his court with regard to the proportion of times deciding in favor of the defense in criminal cases. Since all these cases were at the state supreme court level, they emphasized legal rather than factual issues and often procedural or constitutional legal issues. They thus were more like civil liberties cases than typical criminal cases which concentrate on questions of guilt or innocence.

The other decisional propensity variable combines eight economic decisional variables which this writer formerly used. They relate to whether each judge was above or below the average of his court with regard to the proportion of times deciding

TABLE 1. The Non-Multiple and Multiple Relations among Judicial Characteristics and Decisions

Background Characteristics (The category hypothesized to be more liberal is mentioned first)	Criminal Case Decisions: Correlation with Above Average Defense Propensity for One's Court	Criminal Case Decisions: Useable Judges in Sample	Criminal Case Decisions: Additional Variance Accounted For (%)	Economic Case Decisions: Correlation with Above Average Liberalism Propensity for One's Court	Economic Case Decisions: Useable Judges in Sample	Economic Case Decisions: Additional Variance Accounted For (%)
I. Party						
1. Democrat vs. Republican	+.26	85	11%	+.37	103	44%
II. Pressure Groups						
2. Not a member of business group vs. is	+.01	80	0	-.05	99	--
3. Not a member of ABA vs. is	+.12	190	1	+.02	224	1
4. Not a member of nativist group vs. is	+.11	44	4	+.11	50	3
III. Occupations						
5. Not a former businessman vs. was	+.12	97	--	+.13	112	10
6. Not former prosecutor vs. was	+.12	181	3	-.03	222	2
IV. Education						
7. Attended low tuition law school vs. high	-.12	70	3	+.05	91	3
V. Age						
8. Under 65 vs. over 65	-.02	134	--	+.08	168	--
VI. Geography						
9. Practiced initially in a large city vs. small town	00	68	0	-.10	81	13
VII. Ethnic						
10. Catholic vs. Protestant	+.25	59	13	+.05	77	9
11. Low income Prot. denom. vs. high	+.09	108	2	-.03	140	--
12. Part non-British ancestry vs. only British	+.09	180	2	+.01	213	1
VIII. Attitudes						
13. High economic liberalism score vs. low	-.18	75	3	+.11	86	--
14. High criminal liberalism score vs. low	+.25	75	1	+.07	86	4
TOTALS	174%	1446	43% = R^2	121%	1752	90% = R^2
AVERAGES	+.12	103	4%	+.09	125	9%

in favor of the administrative agency in business regulation cases, the claimant in unemployment compensation cases, the tenant in landlord-tenant cases, the labor union in union-management cases, the debtor in creditor-debtor cases, the consumer in sales-of-goods cases, the injured party in motor vehicle accident cases, and the employee in employee injury cases. To obtain a composite economic decisional score, each judge had his decision score from each of these types of cases summed together and divided by the number of types of cases on which he was scored. Each judge thus received a composite score indicating whether he tended to be above or below the average of his court on liberalism in economic case decisions.

Reading from left to right, Table 1 is divided into two parts with data for the criminal cases on the left side and data for the economic cases on the right side. The first data column provides the one-to-one or zero order correlation coefficients for each background characteristic correlated with having a defense propensity in criminal cases relative to the judges on one's own supreme court.[10] The second column shows the sample sizes of useable judges on which these correlation coefficients are based. Judges are only considered useable if they are serving on bi-group courts on the background independent variable and hearing some non-unanimous cases on the decisional dependent variable.

All the background characteristics are worded in a dichotomous way such that the category hypothetized to be more

liberal is mentioned first. Thus, a positive correlation in the first column indicates that the general hypothesis was supported that liberal background characteristics tend to correlate with favoring the defense in criminal cases and favoring the liberal side in economic cases. Political party can be seen to be a relatively good predictor of decisions in both criminal cases and economic cases.[11] Being Catholic rather than Protestant is also a good predictor or indicator although not necessarily a cause of favorable defense decisions in criminal cases.[12] Whether or not a judge had formerly been in business (as a director, executive, or proprietor) was the next best predictor to political party in the economic cases.[13]

Correlation, of course, in itself does not indicate causation. One must go beyond these correlation coefficients in order to offer and test hypotheses explaining the relations. Thus, party affiliation probably does not cause decisional propensities or even liberalism attitudes although it may tend to reinforce prior attitudes which may have been partly responsible for one's party choice.[14] Likewise, religious affiliation probably neither causes attitudes or decisional propensities, nor is it generally caused by attitudes. Instead, religious affiliation tends to be more due than even party to the social inheritance of values within the family. It probably correlates with decisional propensities largely because of its association with differences in class backgrounds and identifications, urbanism, and reaction to discrimination. A more detailed causal

analysis would involve analyzing the correlations among the background variables particularly while varying some and statistically controlling for others.[15]

There are two substantial negative correlations with the criminal case decisions namely tuition-cost of law school education and the economic liberalism attitude. On the one hand, one might hypothesize graduates from low tuition law schools (especially commuter law schools) would be more liberal because they tend to come from lower economic backgrounds and therefore might have more empathy with the kind of people who are criminal case defendants. On the other hand, everyone in the sample as of the time of the data gathering was a state supreme court judge. Those state supreme court judges who went to low tuition schools underwent more of a rags-to-riches phenomena than those supreme court judges who had gone to high tuition law schools. People who go from low economic status to high economic status often are not so tolerant of people who have a low economic status who they feel ought to be able to rise up like they themselves did.

The negative correlation between the economic liberalism attitude and deciding for the defense is probably partly due to the fact that these criminal cases as previously mentioned frequently involve civil liberties issues and some studies have found low or even negative correlations between economic liberalism and civil-liberties liberalism especially among large city ethnic Democrats. More important, however than the nature

of the cases is the nature of the judges in the sample, particularly when they are grouped along party and religious lines since those were the two background characteristics most related to criminal case decisions. An analysis of the complete correlation matrix showing the correlations between each variable and each other variable reveals that being a Democratic judge had a +.30 correlation with liberal economic attitude and a -.03 correlation with liberal criminal attitude, and being a Catholic judge had a +.06 correlation with liberal economic attitude and a -.16 correlation with liberal criminal attitude. These non-concurring correlations on the part of the Democratic and the Catholic judges toward economic liberal attitudes and criminal liberal attitudes seem to be the key explanation for the "inconsistency" between liberal economic attitudes and liberal criminal decisions.[16]

The only substantially negative correlation with regard to the economic cases is the one involving the background variable of having practiced initially in a large city rather than a small town. On the one hand one would hypothesize judges with a small town background to be more conservative in economic cases than judges with a large city background given the usual finding that rural people (possibly due to their greater economic self-sufficiency) tend to be less sympathetic toward economic underdogs. State supreme court judges who initially practiced in large cities, however, tended to be more likely to be associated with firms practicing corporate business law; whereas

judges who initially practiced in small towns tended to be more associated with general practice firms or to have a solo practice and thus possibly to have done some criminal defense work.

III. THE MULTIPLE CORRELATION RESULTS

The third data column on each side of Table 1 shows the additional variance accounted for by each characteristic when all the other characteristics are statistically held constant. If the same sample size were used in calculating each correlation coefficient then the additional variance accounted for would be calculated by multiplying the correlation coefficient for each characteristic by the standardized multiple regression weight.[17] This is so because a multiple correlation coefficient squared is the sum of the products of each correlation coefficient and each standardized multiple regression weight. The standardized multiple regression weights are not shown because they have little value in themselves except as intermediate mathematical values generated by canned computer programs for (1) determining the amount of additional variance accounted for on the dependent variable by each independent variable, or (2) for obtaining unstandardized regression weights which are needed to create a regression equation or formula for predicting how entities will be positioned on the variable being predicted.[18]

By squaring the multiple correlation coefficient, one obtains the total amount of variance accounted for. The total variance accounted for among the judges in the criminal cases by the fourteen characteristics is 43 percent. The total variance accounted for among the judges in the economic cases is 90 percent. The characteristics were capable of accounting for more of the

variance in the economic cases probably because they are more uni-dimensional or purer than the more ideologically diverse criminal cases.

To obtain the multiple correlation coefficient and the standardized regression weights, it was necessary to use as input a correlation matrix showing the correlation among all of the background decisional variables. The computer program assumes each correlation is based on the same sample size. Because each correlation is based on a different sample size, however, some of the correlations are mathematically inconsistent with each other. As a result, the computer is not able to calculate standardized regression weights for all the characteristics which explains the dashes in the variance-accounted-for column.

Also as a result, the basic formula for calculating the additional variance accounted for has to be slightly modified because the basic formula may result in a set of about 14 percentages that sum to more than 100 percent. The basic formula as mentioned is the correlation coefficient (symbolized r) times the standardized regression weight (symbolized B) for each independent variable. The sum of these products should equal the multiple correlation coefficient squared (symbolized R^2). If the values shown in the third data column are symbolized V. then the ratio of $(r \cdot B)$ to the sum of the $(r \cdot B)$'s should be equal to the ratio of V to R^2. Thus, each V in the third data column algebraically equals $(r \cdot B \cdot R^2)$ divided by the sum of the $(r \cdot B)$'s. This means (where "/" is read "is to", and "=" is read "as") that if $(r \cdot B)/\Sigma(r \cdot B) = V/R^2$, or if $(r \cdot B)/V = \Sigma(r \cdot B)/R^2$, then V equals $(r \cdot B \cdot R^2)$ divided by $\Sigma(r \cdot B)$.

The third data column does not significantly change the rank order of the absolute or unsigned correlation coefficients from the first data column. What it does tell us is something about the nature of the overlap among the background and attitudinal characteristics as predictors of the criminal and economic decisional propensities. One cannot simply sum the correlation coefficients in order to determine how much of the total variance one has accounted for. Given the overlap among the variables, doing so is likely to redundantly add to more than 100 percent. By statistically eliminating the overlap, the values in the third data column do not add to over 100 percent.

On the other hand, the overlap is not so great among the judicial characteristics as predictors that one can obtain a maximum prediction by merely using the background characteristic that has the highest correlation with the decisional variable. On the contrary, if one were to just use political party to predict whether a judge is above or below the criminal average of his court (on the proportion of the times he decided for the defense), then one would be able to account for only 7 percent of the variance which is +.26 squared or r squared, rather than the 43 percent of the variance which can be accounted for by trying to use all fourteen variables. In fact, one can account for 25 percent of the variance by just using the first three variables which show up in a step-at-a-time regression analysis, namely political party, economic attitude, and criminal attitude. These three variables had substantial non-redundant correlations with the criminal decision variable.

Likewise, by themselves, each of the judicial characteristics cannot account for much of the variance on whether a judge is above or below the economic average of his court (on whether he was more often or not above his court's average on the proportion of times he decided for the liberal side). If all ten useable variables are taken together, however, about 90 percent of the variance can be accounted for. Political party by itself, for example, only accounts for 14 percent of the variance or +.37 squared. However, when the muddying influence of the other variables is statistically held constant, the political party variable becomes capable of accounting for 44 percent of the variance. One should also note that a background variable may have a low correlation by itself with economic cases and yet be useful in building up the total variance accounted for by in effect filtering out irrelevancies from other background variables with which it correlates.[19]

To say we have accounted for 90 percent of the variance means that 90 percent of the spread among the judges on the economic decisional variable is associated with the spread among the judges on the ten useable background variables. Expressed in other words, our R^2 of 90 percent and our multiple correlation R of .95 mean that if we use a regression equation based on our ten useable variables to predict a judge's decisional position, we will reduce the percentage of our error by 69 percent from the degree of error we would have made if we simply predicted that every judge would have the same score as

the average judge in the total sample. This 69 percent figure is arrived at by subtracting from 1.00 the square root of $1 - R^2$.

As an alternative to this mathematical rather than empirical approach to evaluating our prediction accuracy, one can apply the criminal case regression equation generated by the regression analysis to each judge in order to predict his position as being above or below the average of his court. Any judge who is predicted to be above on the basis of his characteristics and who was below is a misprediction, as is any judge who is predicted to be below who was actually above. The percentage of mispredictions or the percentage of accurate predictions out of the total predictions made is a more common-sense meaningful measure of our prediction accuracy than calculating the amount of variance accounted for. This mispredictions method perhaps should be called the mispostdictions method since the events being predicted have already occurred. Although their meaning is harder to grasp, prediction accuracy scores calculated by the variance-accounted-for method should correlate reasonably well with those calculated by the mispredictions method.[20]

Both the variance-accounted-for method and the percentage of mispredictions method are means of describing the strength of the multiple correlation. They do not indicate the probability that the multiple correlation coefficient might really be zero in spite of its size by virtue of chance sampling distortion. To determine the likelihood of obtaining a multiple correlation

as high as the square root of 43 percent or 90 percent with an average sample size of 103 or 125 (as in Table 1) and 12 or 10 useable independent variables, one plugs those numbers into the formula $[R^2/(1-R^2)] - [(N-k-1)/k]$, where N equals the average sample size and k equals the number of useable variables.[21] Taking the result of that calculation to an F-probability table indicates that neither R^2 could have occurred purely by chance sampling error (if the real R were zero) more than once in a thousand times. Even if one considers the N to refer to the smallest sample size rather than the average sample size, the chance probability of either multiple correlation really being zero is still less than five in a hundred times.

One can make similar calculations of the statistical significance for each correlation coefficient and each additional variance accounted for with regard to the likelihood of any one of them being zero.[22] However, none of the statistical significance calculations for R^2 or the other values in Table 1 are very much worth calculating (unlike the above correlation analysis) because: (1) statistical significance is so much due to the size of the sample rather than the size of the correlation; (2) the sample of judges was not randomly drawn from some universe of judges, but rather represents the universe of useable state supreme court judges serving in 1955; (3) assumptions may not be sufficiently met concerning normal curve distributions and equality of variance spreads on the variables or a linear rather than curved relation among the variables, and (4) no one argues

that judicial background characteristics have a zero correlation with judicial decisions although some do argue that the correlation is low or in some sense is not high enough.[23]

IV. SOME CONCLUSIONS

The methodological purpose of this article has been to show some of the things that can be done using multiple correlation techniques to supplement non-multiple correlation techniques in analyzing the relations between judicial background and attitudinal characteristics and judicial decisions. In addition to this methodological purpose, the article has further indicated the importance of political party as a predictor of judicial propensities in criminal cases and especially in cases involving economic conflict. It has also indicated in the multiple correlation context that a judge's religious orientation is an important predictor in criminal cases and his pre-judicial association with the business world is an important predictor in economic cases.

Although judicial backgrounds may be useful in predicting which judges or what kind of judges will be above or below the average of their court on various types of decision scores (or at least those scores associated with economic or criminal cases), judicial background variables are not so useful in predicting the outcomes of cases in general.[24] This is so largely because being above or below the average of one's court is determined only by those cases in which the judges on one's court differ, and such cases may only constitute about 12 percent of the cases heard on the average state supreme court.[25] Even in those 12 percent, one may be more interested in knowing whether the plaintiff or the defendant will win and why than in knowing

how the judges will divide. In order to make such predictions, what is needed is an analysis of the factual and legal variables within the cases being predicted from and being predicted to, although one or more factual variables may relate to the dominant party or plurality, religion, or pre-judicial occupation on the court.[26]

In spite of the limitations on judicial background analysis for predictive purposes, such analysis does serve useful purposes for aiding in the improvement of the legal process. It is useful for providing a better causal understanding of the nature of judicial decision-making.[27] It also enables one to demonstrate better the need for making judges more representative of the people over whom they judge if one can show that certain background characteristics have a substantial relation to certain judicial propensities.[28] Furthermore, if one finds that some judges have a higher correlation between their background characteristics and their decisional propensities than do other judges, then one can make statements about methods of decreasing these correlations by analyzing how the low-correlation judges or their courts differ from the high-correlation judges.[29] Finally, an analysis of these relations can provide some data that might be helpful to voters in the selection of judges and to opposing lawyers in the selection of jurors.[30] Although this writer has tried to extend raw judicial background analysis to these broader purposes, much remains to be done along the lines suggested. It is hoped that the methods described here and in materials cited in the footnotes will be extended to other courts, judges, cases, countries, and time periods to build more findings and better theories for understanding and improving the legal process.

FOOTNOTES

1. S. Nagel, "Political Party Affiliation and Judges' Decisions," 55 American Political Science Review 843-850 (1961); "Judicial Backgrounds and Criminal Cases," 53 Journal of Criminal Law 333-339 (1962); "Ethnic Affiliations and Judicial Propensities," 24 Journal of Politics 92-110 (1962); "Testing Relations between Judicial Characteristics and Judicial Decision-Making," 15 Western Political Quarterly 425-437 (1962); "Off-the-Bench Judicial Attitudes," in G. Schubert, Judicial Decision-Making (Free Press, 1963), 29-54.

2. Further details concerning the original methodology are given in S. Nagel, "Testing Relations between Judicial Characteristics and Judicial Decision-Making," 15 Western Political Quarterly 425-437.

3. J. Grossman, "Social Backgrounds and Judicial Decision: Notes for a Theory," 29 Journal of Politics 334-351 (1967); J. Grossman, "Social Backgrounds and Judicial Decision-Making," 79 Harvard Law Review 1551-1628 (1966); W. Murphy and J. Tanenhaus, The Study of Public Law (Random House, 1972), 103-111 and H. Glick and K. Vines, State Court Systems (Prentice-Hall, 1973) 82-84. Some aspects of Grossman's articles are countered by S. Goldman, "Backgrounds, Attitudes, and the Voting Behavior of Judges: A Comment on Joel Grossman's 'Social Backgrounds and Judicial Decisions'," 31 Journal of Politics 214-222 (1969), but

Grossman replies in "Further Thoughts on Consensus and Concern: A Reply to Professor Goldman," 31 Journal of Politics 223-229 (1969).

4. The IBM card data and coding key from which all the calculations are made in this article are available on request from this writer or from the Inter-University Consortium for Political Research at Ann Arbor. Tables showing the names of the judges, their backgrounds, their decisional propensities and the citations to the cases used are available in S. Nagel, Judicial Characteristics and Judicial Decision-Making, (Ph.D. dissertation, Northwestern University, 1961, University Microfilms order no. 62-865). These materials can be used for checking the calculations or for secondary analysis.

5. Failure to control for these important case determinants when comparing judges can easily lead to spurious results. For example, Glendon Schubert compares northern trial judges with southern trial judges in union-management cases later heard by the U.S. Supreme Court, and he finds the southern trial judges decided in favor of the union about the same percentage of times as the northern judges (G. Schubert, Judicial Behavior: A Reader in Theory and Research 458 (1964)). Southern union-management cases, however, may be much easier to decide in favor of the union given the facts involved.

Likewise, the findings of some other studies are somewhat muddied by not accounting for differences in the cases among

groups of judges (J. Schmidhauser, "Stare Decisis, Dissent, and the Background of the Justices of the Supreme Court of the United States, 14 Toronto Law Journal 194-212 (1962); S. Goldman, "Voting Behavior on the United States Courts of Appeals, 1961-1964," 60 American Political Science Review, 374-383 (1966); and D. Bowen, "The Explanation of Judicial Voting Behavior from Sociological Characteristics of Judges" (unpublished Ph.D. dissertation, Yale University, 1965). Richard Schwartz, on the other hand, has clearly indicated awareness of this comparability problem (R. Schwartz, "Judicial Objectivity and Quantitative Analysis," 1963 Modern Uses of Logic in Law 139-142 (1963), as have R. Watson and R. Downing, The Politics of the Bench and the Bar (Wiley, 1969), 311; and also Stephen Sacks in reviewing Henry Glick's, Supreme Courts in State Politics (Basic Books, 1971) at 67 American Political Science Review 221-22 (1973).

6. When this writer used judges serving on one-party courts in the correlation of political party and decisions, the correlation dropped greatly although the sample sizes increased since more judges could be considered useable judges. Similar lowered correlations were observed when the writer used judges serving on courts that were homogeneous with regard to other background characteristics being correlated.

7. For further detail on the background characteristics, see S. Nagel, "Judicial Backgrounds and Criminal Cases," 53 Journal of Criminal Law 333-339 (1962).

8. The number of variables could be added to by inserting into the regression equation some variables that represent (1) the squares or exponents of certain of the 14 variables if non-linear relations were suspected and (2) the multiplied product of certain pairs of the 14 variables if joint interaction effects on the dependent variable were suspected. See H. Blalock, Social Statistics (McGraw Hill, 1972), 459-464 and 502-506. Likewise the number of variables could be reduced (thereby reducing the multicollinearity or intercorrelations among them) by constructing a single score for a related block of variables within the 14 variables. Id at 457, 503.

9. The economic liberalism statement in the mailed questionnaire with which the judges were asked to agree or disagree strongly or mildly read, "Present laws favor the rich as against the poor." The criminal liberalism statement read, "Our treatment of criminals is too harsh; we should try to cure, not to punish them." For further detail on the questionnaire, see "Judicial Attitudes and Those of Legislators and Administrators" in S. Nagel, The Legal Process from a Behavioral Perspective (Dorsey, 1969), 199-218; and "Off-the-Bench Judicial Attitudes," in G. Schubert, Judicial Decision-Making (Free Press, 1963), 29-54. In the correlation and regression analysis used to generate Table 1, the two attitude variables were each coded with five categories or degrees, and the twelve background variables were coded as dichotomous.

10. The correlations in this first column of Table 1 do not correspond exactly to the differences between the percentages which are shown in S. Nagel, "Judicial Backgrounds and Criminal Cases," 53 Journal of Criminal Law 333-339 (1962) because the correlation coefficient between X and Y is arithmetically not exactly the same as the difference between the percentage of +X judges who are +Y and the percentage of -X judges who are +Y. See Nagel, "Applying Correlation Analysis to Case Prediction, 42 Texas Law Review 1006-1017, at 1009-1010 (1964). The substantial deviation with regard to the education variable is due to a typographical error in the earlier article.

11. Other works which find Democratic judges differ from Republican judges include D. Leavitt, "Political Party and Class Influences on the Attitudes of Justices of the Supreme Court in the Twentieth Century" (paper delivered at the 1972 Midwest Political Science Association meeting); M. Feeley, "Another Look at the 'Party Variable' in Judicial Decision-Making: An Analysis of the Michigan Supreme Court," 4 Polity 91-104 (1971); M. Feeley, "Comparative Analysis of Decision-Making on State Supreme Courts (University of Minnesota thesis, 1969); S. Ulmer, "The Political Party Variable in the Michigan Supreme Court, 11 Journal of Public Law 352-362 (1962); S. Ulmer, "Politics and Procedure in the Michigan Supreme Court," 17 Southwestern Social Science Quarterly 375-384 (1966); S. Ulmer, "Leadership in the Michigan Supreme Court, in G. Schubert, Judicial Decision-Making (Free Press, 1963), 13-28; G. Schubert,

Quantitative Analysis of Judicial Behavior (Free Press, 1959), 129-142; J. Herndon, "Relationships between Partisanship and the Decisions of the State Supreme Courts," (unpublished Ph.D. dissertation, University of Michigan, 1963); S. Goldman, "Voting Behavior on the United States Courts of Appeals, 1961-1964," 60 American Political Science Review 374-385 (1966).

No significant or less significant differences were found by D. Adamany, "The Party Variable in Judges' Voting: Conceptual Notes and a Case Study," 63 American Political Science Review 57-73 (1969); J. Walker, "A Note Concerning Partisan Influences on Trial Judge Decision-Making," 6 Law & Society Review 645-649 (1972); and E. Beiser and J. Silberman, "The Political Party Variable: Workmen's Compensation Cases in the New York Court of Appeals," 3 Polity 521-531 (1971).

Although Ken Dolbeare's presentation seems to contain arithmetic errors and does not involve judges hearing the same cases, his data shows 6/17 or 35 percent of his Democratic judges decided for the administrative action in zoning cases and 7/23 or 30 percent of his Republican judges decided for the administrative action, contrary to his reported findings. A similar recalculation of his data can be made with regard to religion and zoning cases (K. Dolbeare, Trial Courts in Urban Politics (Wiley, 1967), 77-78.

12. Other works which find Catholic judges differ from Protestant judges include: K. Vines, "Federal District Judges and Race Relations Cases in the South," 26 Journal of Politics

337-357, at 353 (1964); S. Ulmer, "Dissent Behavior and the Social Background of Supreme Court Justices," 32 Journal of Politics 580-598 (1970); S. Ulmer, "Social Background as an Indicator to the Votes of Supreme Court Justices in Criminal Cases: 1947-56 Terms," 17 Midwest Journal of Political Science (forthcoming, 1973). No significant differences were found by S. Goldman, op. cit. note 11; or Harold Chase, et al., "Catholics on the Court," The New Republic 13-15 (Sept. 26, 1960).

13. This writer attempted to determine the relation between political party (and other related background characteristics) and judicial propensities on the national supreme courts of Australia, Canada, India, Ireland, and the United Kingdom simultaneously, using the same within-court bivariate comparisons as described here. The general findings involved substantially lower correlations and thus apparently a lower ideological component than with the American court data possibly because American courts: (1) have more discretion to create judge-made law under the American common law system; (2) have more power to nullify legislative and administrative acts under the American judicial review system; (3) have more ideological leeway given the subjectivity of such key constitutional concepts as equal protection and due process; (4) are often elected with accompanying partisan and ideological side effects; and (5) can at the state supreme court level be less visible and thus less inhibited in their ideological divisions.

14. Values cause party affiliation more than party affiliation causes values, but party affiliation and its accompanying activities can reinforce prior values as is recognized in D. Adamany, "The Party Variable in Judges' Voting: Conceptual Notes and a Case Study," 63 American Political Science Review 57-73 (1969) and S. Nagel, "Political Party Affiliation and Judges' Decisions," 55 American Political Science Review 843-850 (1961) at p. 847.

15. H. Blalock, Causal Inferences in Nonexperimental Research (U. of North Carolina press, 1964), and H. Blalock, Causal Models in the Social Sciences (Aldine, 1971).

16. Economic cases are easier to predict from political party and attitudes than civil liberties and appellate criminal cases are (S. Nagel, "Political Parties and Judicial Review in American History," 11 Journal of Public Law 328-340 (1962).

17. J. Guilford, Fundamental Statistics in Psychology and Education (McGraw-Hill, 1956), 397; J. Tanenhaus, M. Schick, M. Muraskin, and D. Rosen, "The Supreme Court's Certiorori Jurisdiction: Cue Theory," in G. Schubert, Judicial Decision-Making (Free Press, 1963), 111-132; and S. Ulmer, "Social Background as an Indicator to the Votes of Supreme Court Justices in Criminal Cases: 1947-56 Terms," 17 Midwest Journal of Political Science (Forthcoming, 1973). Instead of multiplying the correlation coefficient by the standardized regression weight

to determine the relative contribution of each independent variable, Bowen squared the partial correlation coefficient (Bowen, op. cit. note 5). There does not seem to be any mathematical support for Bowen's approach.

18. The unstandardized regression weights are not shown because we are not trying to develop a 14-variable prediction equation. Instead we are trying to say something about the relative and collective importance of the 14 background variables in predicting or accounting for variation on the two decisional variables.

19. Guilford, op. cit. note 17, at 402-403. Ancestral nationality may be an example of such a filtering or suppressor variable since it has a low correlation with economic cases, a high correlation with the important party variable, and since its removal from the regression equation in a backward stepwise analysis resulted in a substantial reduction in the multiple correlation coefficient. It may exert a filtering effect by removing some of the non-ideological component from the party variable since some ethnic nationality groups tend to be Democrats or Republicans more out of inertia and group reinforcement than out of ideology.

20. The mispredictions method is used in S. Ulmer, "Dissent Behavior and the Social Background of Supreme Court Justices," 579 Journal of Politics 580-598 (1970); and S. Nagel, "Predicting Court Cases Quantitatively, 63 Michigan Law Review 1411-1422 (1965). The mispredictions method could not be meaningfully applied to enough judges involved in Table 1 because it required that each judge be useable on each background characteristic. For further detail on the mispredictions method, see S. Nagel, "Prediction Accuracy Percentages as a Supplement to Correlation Coefficients" (unpublished paper available from the writer on request).

21. H. Blalock, op. cit. note 8, at 464-465.

22. Ibid., 397-400, 466-467.

23. Grossman says "Bowen's findings cast clear doubt on the explanatory power of background variables taken by themselves" (J. Grossman, 79 Harvard Law Review 1551-1564, at 1561 (1966)). Murphy and Tanenhaus quote Bowen as saying, "the sociological background characteristics of these judges . . . are generally not very helpful" (Murphy and Tanenhaus, op. cit., note 3 at 107). In a paper summarizing his dissertation, however, Bowen says:

> The predictive power of these variables (party, region, religion, prestige of schools attended, age, and tenure) is generally quite low when they are taken by themselves. . . . When we take all six independent variables and examine their total contribution the picture brightens considerably. The six sociological characteristics together will explain anywhere from 20% to over 40% of the variance in these cases. And to put the situation bluntly, explaining somewhere around a quarter to better than a third of the variance is not, in current political science, to be sneezed at."

See D. Bowen, "The Explanation of Judicial Voting Behavior from Sociological Characteristics of Judges" (unpublished paper available from this writer or Bowen) similar statements are made at pages 19 and 57 of his dissertation.

24. If background variables include knowing the judges are American judges rather than Russian or French, then that kind of variable might be useful in explaining differences in the decisions between American, Russian, and French cases. Knowing the judges on a given state supreme court are all

Americans, however, won't explain how and why they sometimes differ in their decisions.

25. B. Canon and D. Jaros, "State Supreme Courts--Some Comparative Data," 42 State Government 260-264 (1969).

26. S. Nagel, The Legal Process from a Behavioral Perspective (Dorsey, 1969) attempts to discuss the legal process via its legal, factual, and personnel aspects, rather than just the personnel aspects out of the total context.

27. For a good causal analysis of the role of background attitudinal characteristics along with legal and factual elements in determining one kind of judicial propensity, see J. Hogarth, Sentencing as a Human Process (U. of Toronto Press, 1971), especially 211-228 and 341-382. In comparing judges on their sentencing patterns, however, Hogarth does not control for the type of crimes or cases which the judges hear although some judges may hear more serious cases and doing so may correlate with their background characteristics.

28. S. Nagel, "Characteristics Associated with Supreme Court Greatness," 56 American Bar Association Journal 957-959 (1970); and "Unequal Party Representation on the State Supreme Courts," 40 Journal of the American Judicature Society 62-65 (1961).

29. S. Nagel, Comparing Elected and Appointed Judicial Systems (Sage Professional Papers in American Politics, 1973).

30. Ibid.; and S. Nagel and L. Weitzman, "Sex and the Unbiased Jury," 56 Judicature 108-111 (1972).

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