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# Constituency, Party, and Representation in Congress

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EDMUND BURKE, James Madison, J. S. Mill, and others have expressed varying views on how a legislator ought to represent his constituency. Theorists have also offered different ideas about how legislators actually behave. Some, including Downsian theorists working with an “economic theory of democracy,” expect representatives to act exactly in accord with the policy preferences of their constituents (first section of Downs, 1957). Others argue that legislators are largely free of popular control and are influenced instead by interest groups’ wishes, party loyalties, peer pressures, or their own judgments.

The pioneering Miller and Stokes study of 1958 made possible for the first time a systematic empirical examination of linkages between sampled public opinion and roll call voting in Congress (Miller and Stokes,

**Abstract** Using congressional districts as primary sampling units, the 1978 National Election Survey provides improved (though still imperfect) measures of district opinion. Together with Census data on district demography, roll call voting scales, and information on congressmen’s party and personal characteristics, they permit a new examination of representation in Congress. Using these data we found a high degree of representation of district opinion on social welfare and (surprisingly) on women’s issues, nearly as much on racial issues, and much less on law and order or on abortion. District demography and congressmen’s party add substantially to the explanation of roll call votes. There is not, however, much “responsible party” representation in Congress. Future representation studies must face questions about the complex interplay among these factors, including reciprocal influences.

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1963, 1966). A number of researchers using the 1958 data (Cnudde and McCrone, 1966; Achen, 1977, 1978; Erikson, 1978; Karpis and Eulau, 1978; Weissberg, 1976, 1978) and other National Election Studies (Stone, 1977, 1979) have conducted increasingly sophisticated empirical analyses, but they have always been limited in their conclusiveness because of poor samples within congressional districts. A small number of interviews was conducted within each district, and the sampling scheme was not designed to produce random samples of opinion for districts.

It is now possible to study representation in Congress using better data on constituents' opinions from the 1978 National Election study (see Erikson, 1981). The 1978 survey, unlike others before, designated congressional districts as primary sampling units (PSUs). These PSUs promise considerable improvement in the representativeness of constituency samples. Moreover, the political times have changed in the more than two decades since 1958. New policy issues have arisen while some old ones have changed or faded. The newer survey, with a better sampling frame, offers a fresh opportunity to examine representation.

At the same time, however, we must not exaggerate the virtues of the 1978 data. For reasons of economy, interview administration within districts was not random; interviews were geographically clustered, counteracting some of the advantages of the new PSUs. Sample sizes (average  $n = 21$ ) in the 108 district PSUs were larger than in 1958 (average  $n = 13$ ), but by no means enormous. In addition, the lack of any parallel survey of congressmen means that some intervening processes involving representatives' attitudes and their perceptions of district opinion cannot be analyzed directly.

## Methods

We took the 108 sampled districts as our units of analysis. For each district we computed constituents' mean policy preferences on 10 selected issue items from the 1978 survey, covering social welfare, racial issues, law and order (or civil liberties), and the new issues of women's rights and abortion. In addition, we coded Census data for districts from the *Congressional District Data Book* (U.S. Bureau of the Census, 1973, 1974a, 1974b, 1974c), including median income and education, mean household size, and the proportions of the population that were urban, living in an SMSA, blue collar, black, and of foreign stock. These same district characteristics were also calculated from NES survey respondents' reports, so we could appraise the representativeness of the district samples. Further, we used the Census demographics and individual-level survey data to provide additional measures of constituency attitudes by

simulating district-level opinion, using a regression method similar to Erikson's (1978; see also Weber, et al., 1972–73; cf. Seidman, 1975).

Our chief dependent variables were a series of scales of congressmen's roll call votes in the 95th Congress (1977–78), on the issues for which we had measures of constituency policy preferences.<sup>1</sup> Along with the roll call scale scores for each congressman, we also included in our file the National Election Study supplementary data for district votes in 1978 and for congressmen's personal characteristics.

### Analysis and Findings

Early in our analysis we found that the 1978 constituency survey data are indeed better than those of 1958. The survey-measured demographic characteristics of districts correlate moderately well—and in some cases quite highly—with the Census figures (cf. Erikson, 1981). Practically all the correlations are higher than those found for the 1958 data (see Erikson, 1978: 518); the average correlation is .69 for 1978, compared with .56 for 1958. This is particularly encouraging in that the 1958 sample was compared with 1960 Census data, whereas our correlations are probably lessened by comparing the 1978 sample with the more distant 1970 Census.<sup>2</sup>

The data are still far from perfect, however. On the average no more than half of the variance in the presumably accurate Census figures can be accounted for by the surveyed district characteristics. This indicates

<sup>1</sup> To construct roll call measures, we used a method similar to the one described by Clausen and Horn (1977). Eliminating roll calls with a lopsided (90 percent–10 percent or worse) split or with strictly procedural content, we first classified votes into seven issue categories determined by the manifest content of the 1978 survey questions. We then factor analyzed separately the votes within each issue group to identify, if possible, a unidimensional structure. After performing a principal components analysis, we eliminated all votes that loaded on the first factor (unrotated) at less than .6, and excluded some minor redundant roll calls. We were left with 50 economic and social welfare votes (the first factor accounting for 55 percent of the variance), 19 law and order votes (54 percent of the variance), 33 racial votes (57 percent), 14 medical care votes (56 percent), 6 women's rights votes (68 percent), 17 abortion votes (78 percent), and 44 "other liberalism" votes (56 percent).

We constructed two types of roll call scales for each group of votes: factor score indices and simple additive indices (the proportion of liberal votes cast). The average correlation between the two was .98, so that they produce virtually identical results; those reported here are for the additive scales.

<sup>2</sup> Comparing the Census data with the district sample estimates for several population characteristics, we found the following Pearson correlations: percent urban, .77 in 1978 versus .71 in 1958 reported by Erikson (1978:516); percent voting Democratic, .88 versus .60; percent foreign stock, .80 versus .84; percent black, .84 versus .72 (percent nonwhite); percent blue collar, .47 versus .11; mean household size, .51 versus .37; percent living in SMSA, .72 (not available for 1958); median education, .58 (not available for 1958); median income, .61 (not available for 1958).

that the 1978 samples for districts are (as the 1978 National Election Study codebook clearly warns) often far off the mark. It is hoped that district samples will be larger and selected more randomly sometime in the future, perhaps through telephone interviewing.

Nonetheless, the improved district data justify attention to substantive results, some of which are summarized in Table 1. Just as Erikson did in reexamining the Miller-Stokes data, we analyzed the relationships between roll call votes and *simulated* opinions as well as *surveyed* district opinion. Although we are mindful of the perils of the correlation coefficient (Achen, 1977), we were not able to measure "centrism" as Achen (1978) has operationalized it, because no data were available on congressmen's attitudes. Given the different metrics involved, we consider correlations more easily interpretable than unstandardized coefficients as rough measures of "responsiveness."

Using this simple bivariate measure, we found only modest relationships between constituents' policy preferences and the votes of their congressmen. Many of the correlations between roll calls and surveyed opinion fall in the .3–.4 range. The fact that district samples are imperfect suggests that the true relationships are stronger than those reported in the first column of the table, but the correlations between congressional roll calls and the allegedly more accurate simulated district opin-

**Table 1. Correlations of District Opinions with Their Congressmen's Roll Call Votes ( $n = 108$ )**

<i>Issue</i>	<i>Surveyed Opinion</i>	<i>Simulated Opinion</i>	<i>Both Surveyed and Simulated</i>
Social Welfare			.60
Job guarantee	.33	.32	
Medical insurance	.45	.41	
Other liberalism	.43	.43	
Racial issues			.46
Integration—is it govt's business?	.31	.22	
Integration	.26	.35	
Aid to minorities	.41	.24	
Women's rights			.59
Women's rights	.33	.39	
ERA	.54	.41	
Law and order			
Rights of the accused	.04*	.16*	.17*
Abortion			
Abortion	.11*	.05*	.11*
Average for all issues	.32	.30	.39

NOTE: Entries in the first two columns are bivariate  $r$ 's; in the third column, multiple  $R$ 's.

\* Not statistically significant at the .05 level.

ions are about the same as those for surveyed preferences.<sup>3</sup> (As we will see, the two sets of variables taken together do much better.)

The original Miller and Stokes articles reported a substantial correlation between district opinion and roll calls for racial issues, a moderate correlation for social welfare policies, and a negligible one for foreign policy; they suggested some interesting possible reasons for the differences (Miller and Stokes, 1963, 1966; Miller, 1964). While these findings have been disputed by Achen (1977, 1978), Erikson (1978), and others on methodological grounds, they remain part of the conventional wisdom and a prime topic for investigation. The appearance of new issues on the agenda raises particularly intriguing questions as to where they fit.

In Table 1, our policy questions were grouped a priori (on the basis of their manifest content) into five categories: social welfare, racial issues, women's rights, law and order, and abortion. The similarities and differences across issues are interesting. The Miller and Stokes contrast between social welfare and race issues is erased or reversed. The correlations for job guarantee, medical insurance, and other liberalism are every bit as large—in fact generally larger—than those for aid to minorities and the two integration questions. (It is noteworthy that the highest correlating racial issue, aid to minorities, has a social welfare component.) Furthermore, the new issues of women's rights and the ERA display the same fairly high level of correlations. These genuinely new issues, not present in the 1958 data nor prominent in the political agenda at that time, show representational relationships in the 1970s similar to those of the old issues.

The similarities among issues extend further. Congressmen tended to cast consistently liberal or consistently conservative votes across most of these issues. All the roll call voting indices intercorrelated in the range of .9 (.8 for women's rights), except abortion (.5). Most were also related to the congressmen's political party (average  $r = .5$ ), a matter

<sup>3</sup> Part of the difference in this regard between our simulation results and those of Erikson (1978:523) occurred because we did not include the district's party vote in simulating district policy preferences. We feel that the inclusion of the district's party balance (highly correlated, of course, with the congressman's party affiliation) inflates the apparent opinion-roll call relationship when district partisanship or other factors rather than policy preferences may be at work. Our opinion-roll call correlations averaged .45 with party vote included in the simulations and .30 without it.

District-level opinions were simulated from the district Census data using equations of the form:

$\hat{Y} = b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4 + b_5X_5 + b_6X_6 + c$ , where  $\hat{Y}$  = the predicted district-level policy preference on a particular issue,  $X_1$  = median education,  $X_2$  = median income,  $X_3$  = proportion of residents of foreign stock,  $X_4$  = proportion blue collar,  $X_5$  = proportion black,  $X_6$  = proportion urban, and where  $b_1, b_2, b_3, b_4, b_5, b_6$ , and  $c$  are coefficients obtained from the corresponding OLS regression equations estimated from the individual-level survey data.

which will be discussed further. Thus many issues, including the new ones of women's rights, appear to have been assimilated into a broad liberal-conservative voting pattern in Congress (much clearer than the modest liberal-conservative dimension found in the electorate); and representation, as measured by constituency/roll call correlations, seems much the same across several issues.

Two issues which do not fit this schema are rights of the accused and abortion. For both of these, the correlations between roll calls and district preferences are very slight. Part of the explanation is that the survey responses for these issues do not correlate very highly at the individual citizen level with most of the other opinion items.<sup>4</sup> Rights of the accused appear to be assimilated by liberalism at the elite but not the mass level. Further, congressional voting on abortion has the weakest relationship with roll call voting on other issues (factor analysis showed it to constitute a strong separate dimension), and it is less strongly related to the congressmen's party ( $r = .32, p < .05$ ). Although abortion opinions at the individual level are related to sentiments concerning women's rights and the ERA,<sup>5</sup> it is the only issue which does not fit neatly into either congressmen's or citizens' liberal-conservative orientation. The abortion issue, with its tangled mixture of feminism, personal liberty, lifestyle, and morality, is different from other issues.

### Multivariate Analysis of the Representation Process

Thus far we have reported simple bivariate relationships between measured constituency opinion and roll call voting. But this tells us little about the processes by which representation occurs, and it may even conceal the extent of representation. We can learn more by including additional independent and intervening variables in the analysis, pertaining to district demography, congressmen's party affiliations, and congressmen's personal characteristics (e.g., see Froman 1963; Turner and Schneier, 1970).

Our approach to the many possible relationships among these factors has been step by step, examining them one at a time. We begin by simply returning to the variables of constituency opinion and roll call votes. Observing that the surveyed and simulated opinion measures each provide only imperfect but complementary indications of actual district

<sup>4</sup> The average correlations across individuals with opinions on all other issue are as follows: for guaranteed job/standard of living, .28; government health insurance, .31; general liberalism, .40; aid to minorities, .40; integration-government's business, .27; integration, .22; women's rights, .30; ERA, .34; rights of the accused, .17; abortion, .17.

<sup>5</sup> Citizen's opinions on abortion and women's issues load in the .4 to .6 range on an oblique factor upon which no other issues except "other liberalism" load as high as .2. When opinions are aggregated to the district level, a stronger women's factor emerges, with abortion loading at .77.

**Table 2. Proportion of Variance in Congressmen's Roll Call Voting Explained by District Opinion and Other Factors**

Issues	Explanatory Variables			
	Surveyed and Simulated District Opinion	Plus District Demography	Plus Congress- man's Party	Plus Congress- man's Personal Characteristics
Social welfare	.36 (.32)	.40 (.34)	.68 (.65)	.71 (.65)
Racial issues	.21 (.16)	.40 (.35)	.60 (.56)	.64 (.57)
Women's rights	.35 (.33)	.43 (.38)	.51 (.47)	.56 (.48)
Law and order	.03* (.01)	.31 (.26)	.59 (.56)	.63 (.57)
Abortion	.01* (.00)	.18 (.12)	.26 (.20)	.46 (.37)

NOTE: Entries are  $R^2$ 's (adjusted  $R^2$ 's in parentheses).

\* Not statistically significant at the .05 level.

preferences, we include *both* together in a regression equation predicting roll call votes. The first column of Table 2 presents the proportions of variance explained ( $R^2$ ) by both surveyed and simulated opinion.<sup>6</sup> For purposes of comparison with the earlier bivariate results, the corresponding multiple  $R$ 's are displayed in the third column of Table 1. We find

<sup>6</sup> A single social welfare roll call scale was constructed by averaging the measures for economic and social welfare votes, medical care votes, and other liberalism roll call votes, and it is used hereafter rather than the three separate (highly intercorrelated) scales. The roll call scales for social welfare, race, and women's rights votes therefore encompass issues addressed by more than one survey question. For these issues, district opinions on all relevant survey questions are included as separate independent variables in the regressions.

Here and subsequently we report findings mainly in terms of proportions of variance explained rather than coefficients for the effects of individual variables. We wish to summarize the explanatory power of different *sets* of variables. Normally we would have preferred presenting the individual coefficients as well, but this would have been cumbersome and perhaps also confusing, since multi-collinearity makes some of them quite unstable.

It is not usually appropriate to rely on standardized statistics, such as proportion of variance explained or standardized regression coefficients, to estimate the relative effects of variables across equations (or populations; see especially Achen, 1982:69–77), because of sensitivity to differences in the variances of individual variables from one equation to another. For example, if there is less variance in the dependent variable in one equation than in a second equation, a given independent variable can have the same *effect* in each equation (as estimated by an unstandardized coefficient) but explain different proportions of the variance. In our data, however, the standardized and unstandardized coefficients have approximately the same relative magnitudes, because the variances of most of the independent variables (district demographic characteristics, congressman's party, and his other personal characteristics) are identical across equations—they are the same measures for the same districts at the same point in time—and because the several dependent variables, which are all proportions of roll call votes, turn out to have nearly the same variances as well. Because standardized measures produce correct inferences in this case and because there is no convenient, single unstandardized coefficient available to summarize the effects of sets of variables (cf. Heise's (1972) "sheaf coefficient," which is standardized), we find it useful to compare proportions of explained variance. (See also Nie, et al., 1980:303, and footnote 8). When we mention regression coefficients for certain individual variables, however, we will report both the unstandardized ( $b$ ) and standardized ( $\beta$ ) estimates.



some substantial relationships that are notably stronger than the bivariate correlations presented earlier, indicating a very considerable degree of representation.

By this measure, the extent of representation appears to be greater than previously thought. Again the differences and similarities among issues are interesting. The most representation, with multiple correlations of approximately .6 ( $R^2 = .36$ ), appears to occur on social welfare policy and women's rights, a bit less for racial issues, and much less for law and order or abortion. The somewhat greater representation on social welfare than civil rights, while contrary to Miller and Stokes' reports from the 1958 data, is consistent with Erikson's (1978) reexamination of those data looking only at districts outside the South. (By 1978 regional differences on civil rights attitudes had moderated greatly.<sup>7</sup> In simulating opinion from district demographic data, we encountered no more difficulty for the South than for the Non-south.) It may well be, then, that the higher correlation for racial issues originally reported from the 1958 data was a methodological artifact. We would emphasize the similar extent of representation on the issues of social welfare, women, and race.

The very small relationships for law and order and abortion again can be attributed to the fact that they stand somewhat outside the liberal-conservative organization of political attitudes among constituencies which is linked with a strong liberal-conservative voting pattern in the House of Representatives.

Our multiple measures of constituency opinion appear to have eliminated most of the usual attenuation due to sampling error that depresses estimates of the extent of representation. Erikson (1981) adjusted for reliability his bivariate correlations based on 1978 survey-measured opinion (using ADA and ACA liberalism and conservatism scores rather than issue-specific roll-call scales as dependent variables). All the multiple  $R^2$ 's reported in Table 1, except for racial issues, are at least as high as his adjusted bivariate correlations.<sup>8</sup> It is, of course, possible that some attenuation remains, because of response errors in the survey data or other factors like the limited predictive power of the simulation equations. Even so, our estimates of the degree of representation are considerably higher than most past estimates.

<sup>7</sup> The average correlation was  $-.09$  (not statistically significant at the .05 level) between region (South) and district opinions on the three racial issues questions, and  $-.14$  (n.s.) for the three social welfare items. Region independently explained only 1 percent of the variance (n.s.) in roll call votes on both issues.

<sup>8</sup> The similarity of our findings also tends to vindicate Erikson's use of group ratings to assess representation on the general liberal-conservative dimension, if not on specific issues. The average correlation between our roll call scales (excluding abortion) and the ADA and ACA rating was  $.87$ .

The concept of representation underlying these findings is a very particular and perhaps narrow one, involving correspondences between roll call votes and the subjective policy preferences (as revealed by verbal survey responses, sampled and simulated) of constituencies. A broader conception of representation might take into account constituency preferences that are not articulated, and even underlying constituency interests or needs, some of which may be captured, if not determined, by the demographic composition of district populations.<sup>9</sup>

We estimated the extent of this broader kind of representation by adding a number of demographic indicators (median income, median education, proportion black, proportion foreign stock, proportion urban, and proportion blue collar) to the equation predicting roll call votes from district opinion.<sup>10</sup> The results are shown in the second column of Table 2.

We found that district demographic characteristics do indeed explain additional variation in congressional voting, raising significantly ( $p < .05$ ) the proportion of variance accounted for to nearly one half on some issues. The great increase in explanation of law and order votes is attributable mainly to the fact that congressmen from highly urban districts (unstandardized partial  $b = .39$ , beta =  $.27$ ,  $p < .05$ ) and districts with a high proportion of foreign born or first generation residents ( $b = 1.20$ , beta =  $.44$ ,  $p < .05$ ) voted more liberally than was indicated by district opinions on the "rights of the accused" question. Similarly, congressmen from these types of districts voted more pro-minority ( $b$ 's of  $.36$  and  $1.08$ ,  $p < .05$ , betas of  $.24$  and  $.38$ ,  $p < .05$ , respectively) on racial matters. Congressmen from blue-collar districts voted more frequently against abortion ( $b = -3.31$ , beta =  $-.23$ ,  $p < .05$ ) and those from black districts more for abortion ( $b = .66$ , beta =  $.24$ ,  $p < .05$ ) than their constituents' articulated preferences would predict.

Taken together these results suggest that there may be a substantial amount of contextual or demographic representation, over and above the representation of articulated policy preferences. Assuming that it does not merely reflect better opinion measurement, this effect of demographics could signify representation of unarticulated needs, or merely demo-

<sup>9</sup> Of course the concept of representation can be expanded much further. See Eulau and Karpis (1978) and the essays in Jewell and Leowenberg (1979).

<sup>10</sup> We had to exclude the simulated opinion measures from these regressions, because they are linear combinations of, and therefore perfectly collinear with, the separate demographic indicators. Note that the separate demographic variables may be better predictors of preferences than their fixed linear combinations, so that a part—we would judge a small part—of the improvement in predicting roll calls may be attributable to representation of policy preferences rather than demography, especially on the single-item issues of abortion and law and order.

graphically linked interest group influence or party loyalty overriding constituency views.

By this measure, differences among issues are reduced: there is approximately the same total amount of representation for social welfare, racial, and women's rights issues. There is less, though no longer so much less, on law and order and abortion, where representation occurs very heavily through demographic factors rather than explicit constituency opinions.

We next examined the role of the incumbent congressman's party affiliation. The third column of Table 2 shows the amount of variance in roll call votes attributable to constituency opinion, demographic composition, and the representative's party, all taken together. Clearly, party adds a great deal. For the first time we are accounting for more than half the variance in roll call voting on most issues.

In order to learn more about *processes* of representation, we decomposed the explained variance into portions attributable to constituency alone, to congressman's party alone, or shared by both. These are reported in Table 3. As shown in the third column, a congressman's party is a powerful predictor in itself. Independently of constituency opinion or demography, political party explains 28 percent of the variance in social welfare votes, 28 percent also for law and order, and 20 percent for voting on racial issues. These independent effects of party could reflect support for party positions, including those of party leadership of the president, or they could simply result from the distinctive policy attitudes that McClosky (1960) and others have found among party elites. Given the decentralized structure of Congress, shared ideology seems more plausible than party discipline. Party voting in Congress is clearly linked to

**Table 3. Partitioning the Variance in Roll Calls Explained by Congressman's Party, Constituency Opinion, and Demographic Characteristics**

<i>Issues</i>	<i>Proportion of Variance Explained By:</i>			
	<i>Party, Opinion, and Demographic Characteristics Together</i>	<i>Opinion and Demographic Characteristics Alone</i>	<i>Party Alone</i>	<i>Opinion/Demographic and Party, Shared</i>
Social welfare	.68 (.65)	.28 (.24)	.28 (.30)	.12 (.11)
Racial issues	.60 (.56)	.32 (.28)	.20 (.21)	.08 (.07)
Women's rights	.51 (.47)	.41 (.37)	.08 (.09)	.02* (.01)
Law and order	.59 (.56)	.25 (.21)	.28 (.29)	.06 (.06)
Abortion	.26 (.20)	.16 (.10)	.08 (.08)	.02* (.02)

NOTE: Figures in parentheses are adjusted  $R^2$ 's.

\* Not statistically significant at the .05 level.

constituents' party loyalties, which sometimes have historical roots unrelated to policy preferences or demographic characteristics for which we have data.<sup>11</sup>

It is also apparent from the second column of Table 3 that constituency opinion and demography have a strong impact on roll calls quite independent of the congressman's party. Some of this impact results from the kind of demographic representation we have alluded to, and some of it seems to work through classical processes of representation in which districts elect congressmen who share their policy preferences or who are willing to act as delegates in representing them.

We consider the variance in roll calls that is shared between constituency factors and congressman's party to be an indicator of the extent to which the political parties are acting "responsibly" to effect representation in Congress. It reveals the degree to which partisan voting by congressmen reflects differing constituencies of the two parties. Particularly given the liberal-conservative division in Congress and (to a lesser extent) among the citizenry, and the historical cleavages between Democrats and Republicans along liberal-conservative lines, we expected to find a substantial amount of this responsible party kind of representation.

Somewhat to our surprise, however, party and constituency characteristics shared relatively little of the explained variance in roll calls (see the fourth column of Table 3). Most of the effects of party and constituency are independent of each other. There is some responsible party representation (12 percent of the variance) on social welfare votes, the policy area most closely tied to the New Deal party alignment; but there is hardly any on the more recent and less party-related concerns of women's rights and abortion. Overall, representation occurs mostly independently of party, and party has most of its effect separate from constituency opinions or demographic characteristics. To a substantial extent, congressional partisanship is an elite (and perhaps interest group related) phenomenon.

We are convinced that the variables discussed so far capture at least the basic framework of the representation process, and the major determinants of roll call votes. Except for the case of abortion, these variables

<sup>11</sup> On average, district partisanship (measured, imperfectly, by the 1978 congressional party vote) independently accounted for less than 1 percent of the variance (n.s.) in roll call votes, but by itself it predicted the congressmen's party affiliation better than all the other constituency factors combined (independently explaining 38 percent of the variance). We did not include it in our analysis, because it adds virtually nothing to the explanation of congressional voting and because it has a complex and probably reciprocal relationship with constituency policy preferences. The role in representation of district party loyalty deserves further exploration, however.

collectively account for half or more of the variance in roll call voting, and in the case of social welfare, approximately two-thirds of it.<sup>12</sup>

The attitudes of the representatives themselves and their perceptions of sentiments in their districts are important intervening and, perhaps, independent variables not included in the 1978 data. The congressman's party affiliation may subsume these unmeasured variables to some extent. Personal characteristics of the legislator may do so as well; they may intervene in demographic as well as attitudinal processes of representation, and may have an independent impact of their own on roll call voting. Accordingly, we added a final set of variables, congressmen's personal characteristics (race, religion, occupational background, seniority, age, and sex) to the regressions predicting roll call votes. The results are displayed in the last column of Table 2.

On most issues congressmen's personal characteristics do not directly add very much to what has gone before; they explain only 3 percent to 5 percent (not statistically significant at the .05 level) additional variance in roll calls. They are more important as intervening variables—perhaps standing for congressmen's policy preferences—that are influenced by constituency preferences and demographic characteristics, and are related to congressman's party.

On the abortion issue, however, congressmen's characteristics make a substantial difference ( $p < .05$ ), nearly doubling the variance explained. In particular, quite independently of their party or their constituencies' characteristics, Catholic congressmen tend to vote against abortion ( $b = -.45$ ,  $\beta = -.46$ ,  $p < .05$ ) and black congressmen to vote for it ( $b = .39$ ,  $\beta = .23$ ,  $p < .05$ ). Of all our issues, abortion provides the clearest example of weak constituency representation and of legislators likely to be voting in accordance with their own consciences, interest group pressures, or their ethnic or religious loyalties.<sup>13</sup>

<sup>12</sup> Our confidence is bolstered by a bit of collateral evidence. We divided districts according to their responses (above or below the median) to a survey question asking, in effect, whether respondents wanted their congressmen to act as delegates or trustees. (See Eulau, et al., 1959; McCrone and Kuklinski, 1979). We then compared the results of our equations predicting congressmen's votes for the two types of districts. Substantially more of the variation in roll call voting was accounted for among the districts showing the greater desire that congressmen act as delegates: an average  $R^2$  of .66, versus .48. Oddly, however, this difference is attributable almost entirely to the increased impact of congressmen's party and districts' demographic characteristics. There is little or no more representation of measured constituency opinions in the districts showing greater preference for delegates.

<sup>13</sup> Although there are no Census data for the percentage of Catholics in congressional districts, we did examine the proportion of self-reported Catholics in our NES district samples. Using this measure, we found that Catholic congressmen were more likely to be elected from districts with large proportions of Catholics ( $r = .39$ ,  $p < .05$ ). This seems to suggest on the face of it that Catholic congressmen voted in accord with the opinions of their Catholic subconstituencies, which were presumably against abortion; but in fact Catholic

## Conclusion

Using multiple measures of constituency opinion—both surveyed and simulated—we found a substantial amount of correspondence between congressmen's roll call votes and their constituencies' policy preferences, with multiple  $R$ 's reaching .60. This was particularly true of social welfare and the new women's issues and (to a slightly lesser extent) racial issues, all of which fall on a liberal-conservative dimension of citizens' attitudes. The extent of representation is higher than previously reported, though still not accounting for much more than one-third of the variance in roll call votes.

Constituency opinions were much less well represented on the issue of law and order/rights of the accused, which conforms to the liberal-conservative continuum only at the elite level, and on the issue of abortion, which is dissociated from general liberalism-conservatism among congressmen as well as citizens. Representation may work best on issues that are institutionalized in party cleavages and linked to broad ideology among the public, where opinions are fairly firmly held and information about congressmen is easily obtainable.

The demographic characteristics of constituencies add considerably to the explanation of roll call votes, especially on racial, law and order, and abortion issues. Further work is needed to distinguish the extent to which this signifies direct demographic representation of unarticulated needs, as opposed to augmented measurement of policy preferences, or interest group activity, or demographically linked aspects of party loyalty.

The congressman's party affiliation is a strong predictor of roll call votes on most issues. But only to a surprisingly small extent does it serve, "responsible party" style, as an intervening variable for constituency opinion or demography. To a very great extent, congressmen's party acts as an independent factor on the elite level, probably reflecting shared ideology and/or interest group coalitions.

Finally, congressmen's personal characteristics do not have much independent effect on roll call votes, except in the case of abortion, where Catholic congressmen vote more anti-abortion (and black congressmen more pro-abortion) than their constituencies' opinions or demography

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citizens opposed abortion only weakly or not at all ( $r = -.13, p < .05$  at the individual level for the national sample, and a contrary .15, n.s., at the district level). Perhaps the Catholic congressmen misperceived constituents' preferences or responded to Catholic-based pressure groups that were important in their districts. But in any case we found that the congressmen's personal characteristics explained 20 percent of the variance in abortion votes, independently of the (estimated) percentage of Catholics in their districts—supporting interpretations based on the congressman's own beliefs or loyalties, or the influences of beyond-district interest groups.

would predict, perhaps for reasons of interest group pressure or personal belief. On most other issues, congressmen's personal characteristics are simply intervening variables, linking their constituents' attitudes and characteristics and party loyalties to legislative votes.

In reporting these findings we do not wish to minimize the remaining uncertainties about representation, or the difficulties that stand in the way of clarifying them. Future studies of representation would certainly profit from larger and better district samples. In order to disentangle different processes of representation, there should also be direct measurement of congressmen's attitudes and perception. But even with such improved data scholars will face some knotty analytical problems.

In this paper we, like Miller and Stokes and most others, have examined roll call votes and constituency policy preferences within a recursive model, postulating one-way causation. There is abundant reason, however, to think that many relevant variables (particularly congressmen's attitudes and perceptions) may affect each other reciprocally. That is, a nonrecursive model is the appropriate one (see Forbes and Tufte, 1968; Asher, 1976; Kuklinski and McCrone, 1980). The estimation of such a model is likely to prove quite difficult because of the lack of theoretically exogenous variables needed for identification. Thus, there is still a great deal to learn about the processes by which representation in Congress occurs, and no lack of difficulty in learning it.

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