Ideology, "shirking", and representation*

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1. Introduction

In theory, republican government arises from the fact that the citizens are too numerous to be gathered in one place to make decisions. From the larger number a smaller number must be chosen and given the power to make decisions. How the small number should decide is the question of representation, and this question has been a central concern of public choice from the field's earliest days.[1] Most of the work has dealt with elucidating how different ways of structuring legislatures and elections affects the diversity of interests that can be represented. Much of this research has treated the representative fairly mechanically, assuming that he somehow embodies the preferences of his electorate.

Students and practitioners of politics have long grappled with a more detailed concern with the role of the representative. Pitkin (1967) noted that representation involves a combination of three elements: an "acting instead of", an "acting in the interests of", and "an acting in accord with the wishes of". Edmund Burke's famous distinction between the delegate and the trustee has been a staple of studies of Congressional representation. A wide variety of studies by political scientists of Congress in recent times all share the same conclusion: members of Congress act as delegates (Mayhew, 1974; Fenno, 1978; Fiorina, 1989). Indeed, this view is so widely held by political scientists that it is routinely incorporated into more formal theories of legislative decision-making.

A recent wave of empirical studies, mostly by economists, also views

representatives as delegates: more precisely, as agents of a set of voters/principals.[2] It has become common in that literature to investigate the extent of "shirking" by a legislator; i.e., to ascertain the extent to which there is a distinction between the interests of the represented and the interests of the representative.

A key distinction between economics and political science approaches lies in the notion of constituency. Economic studies have tended to define constituency in terms of purely economic variables, treating as "shirking" any variation in the representative's voting behavior not explained by these variables. Political scientists, on the other hand, have emphasized the entrepreneurial activities of politicians in building and maintaining constituencies that lead to electoral success.

In this essay, we highlight three types of empirical evidence that cast doubt on the purely economic approach. At the same time, we suggest that at the current state of theoretical development, the political science approach provides little guidance for testing hypotheses about the connections between the electorate and the performance of representatives.

2. "Ideology" and the coherence of roll call voting

Roll call voting in Congress is highly coherent. Poole and Rosenthal (1991) have shown that a spatial model of low dimensionality fits the pattern of roll call votes remarkably well for the entire post-World-War-II period. On average, a one-dimensional model correctly classifies 85% of roll call votes in the 80th through 100th Congresses. This primary dimension is readily interpreted in terms of a familiar left-right ideological spectrum. Location of congressmen along this dimension correlates better than 0.9 with such familiar roll-call-based interest group ratings as those of Americans for Democratic Action (ADA), the AFL-CIO's COPE, American Conservative Union (ACU) , or the American Security Council (ASC).

Poole (1988) discusses some of the reasons for this coherence. It is consistent with the notion of "constraint" advanced in the "belief system" framework of Converse (1964) and elaborated more formally in terms of a spatial theory of voting by Hinich and Pollard (1981). The low dimensionality of roll call voting implies that a good summary measure of a legislator's overall voting record will tend to be a good predictor of his vote on subsets of roll calls or even on individual roll calls. Indeed, it almost guarantees that such summary measures will be better predictors than a necessarily incomplete list of variables based on average constituency characteristics (Jackson and Kingdon, 1992). It should therefore not be surprising that measures of "ideology", such as interest group ratings, are significant explanatory variables in models of roll call voting, even

Table 1. Weighted regressions using data from Kalt and Zupan (1984)

	$\bar{R}^2$
1. Economic variables only	0.210
2. NOMINATE only	0.490
3. NOMINATE plus economic variables	0.553

when other variables specific to the set of roll calls being analyzed are included in the set of regressors.

To illustrate this, we consider two studies of roll call voting in which the authors have taken considerable care to capture the economic impacts of the policies to be voted on. The first of these is Kalt and Zupan's (1984) well-known study of voting in the Senate on strip mine regulation. The second is Richardson and Munger's (1990) work on House and Senate legislation concerning social security.

Kalt and Zupan's key dependent variable is ANTISTRIP, an index derived from 21 Senate roll calls between 1973 and 1977. On line 1 of Table 1 we report the adjusted R^2 of the specification used in Kalt and Zupan's Table 1, column 1. This specification uses only a constant and eleven economic variables as explanatory variables.[3] Line 2 of our Table 1 shows $\bar{R}^2$ when we estimate the ANTISTRIP equation, using only a constant and the first dimension of a two-dimensional NOMINATE scaling of the 1977 Senate.[4] There is a dramatic improvement in fit. Adding all the economic variables to this specification improves the fit only marginally: the improvement is statistically significant but small.[5]

Richardson and Munger (1990) analyze individual roll calls, two each in the House and the Senate in 1983. The votes involve changes in Social Security benefits and taxes. Richardson and Munger take great pains to compute the constituent net economic benefit related to each roll call. In Table 2, we report results using Richardson and Munger's data for two of the roll calls; the top half is the vote on a House amendment and the bottom is a vote on a Senate amendment. The first line of Table 2 corresponds to Model 1 in Table 1 of Richardson and Munger,[6] using a constant and their economic variables only. This specification correctly classifies 69.2% of the votes, but this is exactly the percentage on the majority side of the 132–296 split by which the amendment in question was defeated. In fact, the specification predicts all representatives voting Nay. In effect, it does exactly what a naive model that predicts all votes go with the majority would do. Its proportional reduction in error (PRE) vs. the "everyone votes with the majority" model is thus exactly zero.[7] A specification using only a constant and the members' ADA scores yields a significant improvement in the likelihood (line 2 of our Table 2), as well as an increase in

Table 2. Logit estimates using data from Richardson and Munger (1990)

House Vote #21 (9 March 1983; Yea = 132, Nay = 296)

	−2 log likelihood	%correct	PRE
1. Economic variables only	521.48	69.2	0.000
2. ADA only	284.63	82.7	0.439
3. ADA plus economic variables	279.65	82.2	0.424
4. ADA plus economic variables plus PARTY	276.44	81.8	0.409

Sentae Vote #41 (22 March 1983; Yea = 28, Nay = 67)

5. Economic variables only	110.33	70.5	0.000
6. ADA only	94.22	74.7	0.143
7. ADA plus economic variables	89.64	74.7	0.143
8. ADA plus economic variables plus PARTY	89.23	74.7	0.143

classification success to 82.7% and a corresponding increase in PRE. Adding economic variables and PARTY, as in Richardson and Munger (1990) (their Table 1, Models 2 and 3), produces little improvement in likelihood and a slight decline in classification success.

For the Senate roll call, the results parallel those for the House. The economic model has a PRE of zero, since it predicts that all Senators vote Nay (the actual vote was 28 Yea, 67 Nay).[8] Using ADA score by itself improves both likelihood and PRE, though not as dramatically as for the House vote. Adding economic variables and PARTY has no effect on these measures.[9]

The point here is not that economic interest is not important in the voting behavior of legislators. There is little doubt that it is. The point is that econometric attempts to *eliminate* the role of factors other than those captured by even carefully constructed measures of economic interest are futile.[10] Because roll call voting is highly structured, voting on a given roll call or even a group of roll calls will typically exhibit much the same structure. It is tempting to call this structure "ideology". But it is more accurate to think of it as a combination of constituency- and legislator-specific factors whose separate roles are not readily disentangled by the approaches used in empirical models to date.[11]

3. Roll call voting, exit, and "shirking"

The position of each individual legislator on the "ideological dimension" is quite stable (Poole and Rosenthal, 1991).[12] There is very little drift of a legislator relative to others. This is consistent with two hypotheses: (1) Legislators

represent relatively fixed constituencies, whose preferences are summarized in the dimensional location recovered from the legislator's roll call history; (2) Legislators develop a "brand name" associated with their location. This brand name has value as electoral capital, as a summary indicator of the legislator's current (and past) voting record and as a signal of future position (Lott, 1987). The electoral process tends to reinforce this stability: politicians who exhibit too much drift are penalized by voters (Glazer and Robbins, 1983; Kau and Rubin, 1993; Lott and Davis, 1992; Wright, 1993).

Loomis and Poole (1992) have assembled a large data set that allows us to look at the change in roll call voting patterns by House members over most of the post-World War II period. The data include members of the House of Representatives who served in at least two consecutive Congresses from the 80th (1947–48) through the 98th (1983–84). For each pair of consecutive Congresses in that period, our sample includes all representatives who served in both Congresses in the pair. This pooling of time series and cross section data yields 6288 observations.

We again use a one-dimensional NOMINATE scaling to summarize a legislator's roll call record.[13] Consider a representative, j_k, who served in both the kth and $(k + 1)^{th}$ Houses, and let

$$\Delta_{j_k} = |\text{Representative } j_k\text{'s NOMINATE score in } (k + 1)^{th} \text{ House} - \text{Representative } j_k\text{'s NOMINATE score in } k^{th} \text{ House} |$$

Of course, some representatives who served in both the kth House and the $(k + 1)^{th}$ do not return in the $(k + 2)^{th}$. Such a representative will not appear in our sample for the next Congress pair (i.e., for the $(k + 1)^{th}$ and $(k + 2)^{th}$ Congresses). We have coded the reasons for departure as follows (each is a dummy variable equal to 1 if the condition is true, 0 otherwise):[14]

DIED: the incumbent died in office
LOST: lost a primary or general election
HIRUN: quit to run for higher office (e.g., Senate, governor)
APPOINT: appointed to higher office (e.g., Cabinet, state supreme court judge)
RETIRE: retired

We are interested in whether Δ_{j_k} varies systematically between those who remain in the House and those who leave. Because the NOMINATE scores we use to define Δ_{j_k} are computed separately for each Congress, we need to allow for shifts in the mean of Δ_{j_k} from one pair of Congresses to the next. Accordingly, we define indicator variables C_{80} through C_{97}, corresponding to pairs of consecutive Congresses from the 80th/81st through the 97th/98th; with $C_{t,j_k} = 1$ whenever $t = k$, and 0 otherwise $(t,k = 80,81,\ldots,97)$.

The spatial location of a representative is estimated more precisely if he votes on a large number of roll calls than if he votes on only a small fraction of them.[15] Some of the variation in Δ may be due to the fact that those who die or leave office in mid-term vote less frequently, inducing a larger Δ_{j_k} for purely computational reasons. To control for this effect, we use a variable NOTVOTE, defined as the sum of the fraction of roll calls on which the representative did *not* cast a vote in the kth and the $(k+1)^{th}$ Congresses.

A representative who is present in both the kth and the $(k+1)^{th}$ Congresses, but who was redistricted between the two Congresses may have shifted his roll call voting pattern in adjusting to his new district. We allow for this possibility by including a variable REDIST, which equals 1 if such redistricting occurred, and is zero otherwise.

Finally, we also allow for the possibility that changes in the pattern of roll call voting are related to electoral margins. This may be the case if, for example, representatives with secure seats have more "slack" and are less constrained in their voting behavior (as argued, for example, by Kalt and Zupan, 1990). The variable $VOTESHR_{j_k}$ is the representative's share (as a fraction) of the two-party vote in the election for the $(k+1)^{th}$ Congress.

Accordingly, we estimate a regression of the form

$$\Delta_{j_k} = \alpha + \sum_{t=81}^{97} \beta_t C_{t,j_k} + \gamma_1 DIED_{j_k} + \gamma_2 LOST_{j_k} + \gamma_3 RETIRE_{j_k} +$$

$$\gamma_4 HIRUN_{j_k} + \gamma_5 APPOINT_{j_k} + \gamma_6 REDIST_{j_k} + \gamma_7 NOTVOTE_{j_k} +$$

$$\gamma_8 VOTESHR_{j_k}$$

Table 3 gives results, omitting the coefficients on the C_t terms.[16] The striking observation is that there is no significant difference in roll call voting between those who remain in office and those who leave for whatever reason. In column 1, only the coefficient of NOTVOTE is significant at anywhere near a 5% level. One interpretation of that coefficient is the purely computational one we gave above. Another possibility is that NOTVOTE is picking up an effect found by Lott (1987), that — while they do not change their voting behavior when they do vote — those who plan to retire shirk in the conventional sense: they vote on fewer roll calls. This may also apply to those who run for higher office, and is certainly relevant to those who leave in midterm for appointed office either in this world or the next.[17]

Column 2 reports results when we omit the NOTVOTE variable. The coefficient of HIRUN is now significant (t = 2.10) and that of APPOINT is marginally so (t = 1.88). At this level of analysis, we have not disentangled how much of the extra shift in roll call voting by those who leave the House to run for

Table 3.

	(1)	(2)
DIED	−0.0038	0.0055
	(0.0061)	(0.0058)
LOST	−0.0001	0.0017
	(0.0031)	(0.0031)
RETIRE	−0.0024	0.0010
	(0.0034)	(0.0033)
HIRUN	0.0043	0.0082
	(0.0040)	(0.0039)
APPOINT	0.0101	0.0167
	(0.0089)	(0.0089)
NOTVOTE	0.0226	
	(0.0046)	
REDIST	0.0014	0.0014
	(0.0024)	(0.0024)
VOTESHR	0.0030	0.0012
	(0.0045)	(0.0044)
$\bar{R}^2$	0.100	0.097
N = 6288		

Estimated standard errors in parentheses.

Both specifications include a constant term and C_{81} through C_{97}.

higher office is due to a difference in voting behavior or is simply the result of the noisiness of scaling in the year when such members are absent from the House. In any case, the total effect is small: for HIRUN, there is an increase in Δ of 0.008 on a scale that is approximately 2.0 units wide. In terms of a mean Δ of 0.064, this represents a shift of approximately 12%. The remaining results of Column 2 tell the same story as Column 1.[18]

Our findings are consistent with those of Lott and Bonars (1993). They performed an analysis similar in spirit to ours, with a data set of about 700 observations from the House over the 1975–90 period. Using five different interest group ratings, they report very stable voting patterns over a representative's career and conclude that there is "little evidence that politicians who retire completely from political office or aspire to another elected position alter their voting patterns during their last terms in office."

4. Constituency, agency and representation

Florina (1974), Fenno (1978), and others have stressed the importance of the distinction between a legislator's geographic constituency and his election constituency. There is ample evidence from the large participant-observer litera-
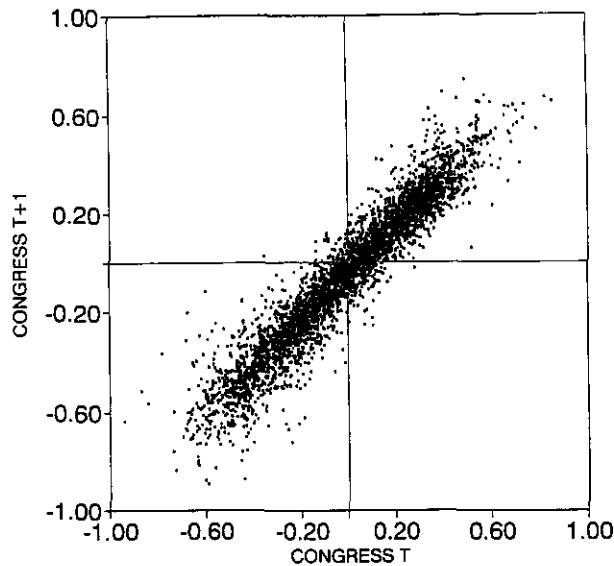
Figure 1. All continuing members (Not redistricted and reelected n = 3947)

ture in political science that politicians (especially successful ones) act as entrepreneurs who devote considerable time and energy to form support constituencies. A given geographic constituency can potentially support many different election constituencies. Senators from different parties, with quite different voting records, are just the clearest example of this.[19]

In Figures 1–3, we present some evidence that even in House districts there appears to be a fairly broad range of roll call voting behavior that can be supported by a given geographical constituency. We use the data from the previous section. Figure 1 shows representatives who continued from Congress t to Congress t + 1 in the same geographic district. The axes represent NOMINATE coordinates in each Congress. As we noted in the previous section, in the vast majority of cases, there is little Congress-to-Congress movement by a given legislator.

Figures 2 and 3 show those representatives who were in Congress t but not in t + 1. Their coordinates are shown on the horizontal axis, and that of their replacement on the vertical axis. Even for same-party replacements, the movement from t to t + 1 is quite a bit greater than what we see in Figure 1. (The average shift from t to t + 1 for continuing members is 0.065 (s.d. = 0.063), while for same-party replacements it is 0.129 (s.d. = 0.109).) It is beyond the scope of this brief essay to analyze these data more fully.[20] We present them here as straightforward illustration of our point about the scope for diversity of election constituencies.

Estimating the characteristics of election constituencies is problematic. All
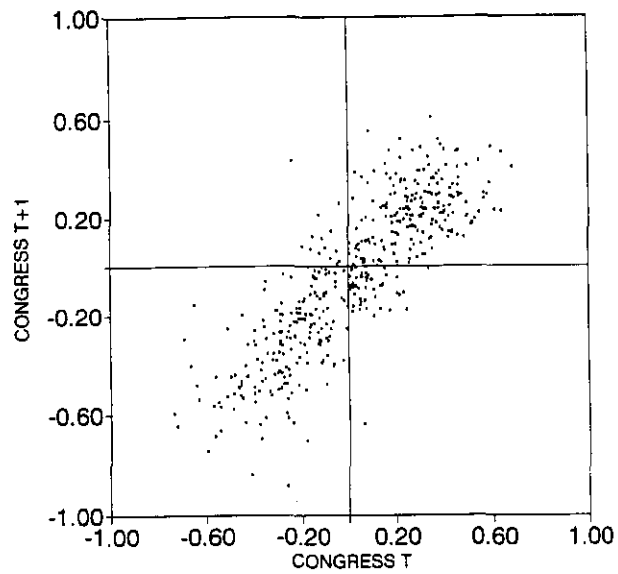
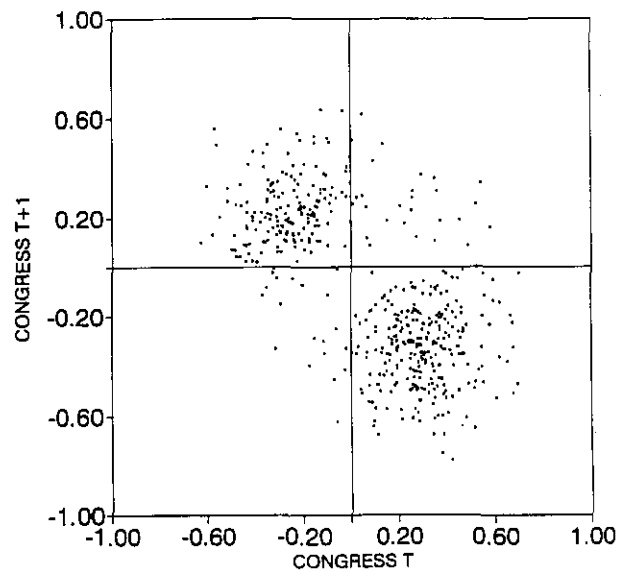*Figure 2.* Same party replacements (Not redistricted n = 452)

Figure 3. Opposite party replacements (Not redistricted n = 497)

attempts so far have been *ad hoc*. Recognizing the distinction between geographic and election constituencies is important. Yet there is also the risk of running into a tautology if we say that, by definition, a legislator is serving his election constituency. From this perspective, of course, the question of "shirking" has no meaning.

In the absence of good theoretical models of how a given legislator develops and maintains an election constituency, empirical analysis of roll call votes is unlikely to shed much more light on questions of representation. The theoretical analysis required for further progress would have to address more directly the relationship between legislator and electorate. We need to make more precise the sense in which a large group of voters with heterogeneous preferences can be viewed as principals and the legislator their agent. What is the nature of the (implicit) contract? How is it enforced? How should the frequently observed entrepreneurial activities of politicians in creating and fostering election constituencies be incorporated into such a framework? These and related questions pose important challenges for the next stage of public choice analyses of representation.

Notes

1. All or parts of three chapters of *The Calculus of Consent* are devoted to the subject. An article in the third issue of this journal's precursor explicated Lewis Carroll's theory of parliamentary representation (Black, 1967).
2. A recent issue of *Public Choice* is devoted to articles on this subject. Grier (1993) provides an overview.
3. We replicated Kalt and Zupan's (1984) estimated coefficients and standard errors exactly. As Kalt and Zupan (1990) report, the R^2 given in the tables of their 1984 paper are incorrect. Our Table 1 shows our own computations.
4. A detailed explanation of the estimation technique can be found in Poole and Rosenthal (1991). Loosely speaking, NOMINATE can be thought of as a singular value decomposition method for a rectangular matrix of binary choice data. The coordinates are from the two-dimensional dynamic estimation of the entire roll call voting record of the Senate from 1789 to 1985.
5. Using Kalt and Zupan's PROLCV measure instead of NOMINATE produces a similar result. The $\bar{R}^2$ corresponding to Line 2 of Table 1 is then 0.451 and Line 3 becomes 0.531. PROLCV is an index based on a sample of roll calls on environmental issues. We prefer NOMINATE, which is computed using essentially *all* roll calls.
6. Our logit estimates are quite close but not identical to those reported by Richardson and Munger (1990). We were not able to clear up the discrepancies before the deadline for submission of this manuscript. The numbers we report are based on our estimates.
7. PRE = 1 − (no. of votes incorrectly classified)/(no. of votes on the minority side)
8. This is Model 1 of Richardson and Munger's Table 3A. Richardson and Munger used two different computations for the economic variables in the Senate logits. In one variant, they added the net benefits for each House district in the state to get statewide net benefits. In the other, they weighted each district's net benefit by the vote share obtained in the district's 1982 House race by the senator's party. This was done in the spirit of Peltzman (1984), to approximate an election constituency (as distinct from a geographic constituency) for each senator. Lines 5–8 of our Table 2 use the first (unweighted) measure. The results are virtually identical if we use the weighted measure of net benefits instead.
9. The other two roll calls used by Richardson and Munger are on final passage of the Social Security bill in each house. The Senate bill (CQ vote #53) passed by a wide margin (89–9). The

"ADA only" model has a significantly higher likelihood than "economics only", though they both have PRE = 0. Adding economic variables to ADA raises the likelihood slightly and correctly classifies two more votes. The House vote (CQ #23), which carried with 283 Yea and 149 Nay, causes problems for all the models. The likelihoods are similar and all the PRE's are close to zero.

10. Peltzman (1984) comes closest to succeeding in establishing that measures like the ADA scores can be derived from purely economic variables. In a later paper, however, "ideology" returns as "history", as a factor other than readily-measured economic interest (Peltzman, 1985).

11. Jackson and Kingdon (1992) argue that if roll call voting is structured mostly along a single dimension, then the impact of variables like ADA or NOMINATE will be overestimated (coefficients biased upward) relative to that of economic variables (coefficients biased toward zero). Using measures derived from roll call votes as explanatory variables is "explaining votes with votes." Yet they also show that methods like that of Kalt and Zupan (1984) to extract the "economic core" in ADA scores are plagued with the problem of statistical inconsistency. Hence, such approaches cannot be relied on to disentangle constituency interest from legislator preferences.

12. Members of Congress vote consistently over time on issues and are very sensitive to their voting history (Clausen, 1973; Fiorina, 1974; Asher and Weisberg, 1978; Stone, 1980; Bullock, 1981).

13. Each Congress was scaled separately and the one-dimensional coordinates were then regressed on the corresponding coordinates from the one-dimensional dynamic estimation (Poole and Rosenthal, 1991). This has the effect of putting the pair of Congresses in the same metric -- albeit one in which members serving three or more terms are allowed to move linearly in time. Since we are interested in movements from Congress to Congress, we chose to use these benchmarks. We also tried removing this "systematic" movement (that is, the long-run linear movement) from our dependent variable, Δ, and this had no effect on the results. For more detail, see Loomis and Poole (1992).

14. These data were compiled by Michael Loomis. For more details on the analysis described here, see Loomis and Poole (1992).

15. There are two policy outcomes for each roll call – one corresponding to Yea and one to Nay. In a deterministic model, if there are q roll calls, then the midpoints of the Yea/Nay pairs define q + 1 possible regions for the representative's spatial location. As q increases, the size of these regions gets smaller, thereby pinning down the estimate of the legislator's position more precisely. (We actually used a probabilistic model, but the underlying logic still holds.)

16. These coefficients range from 0.00 in the earlier Congresses to about −0.04 in the later ones. (The mean of the dependent variable is 0.064.) The coefficients from C_{87} on are negative, increasing in absolute value, and generally significantly different from zero with p < .01. This is consistent with the finding reported in Poole and Rosenthal (1991) of increasing stability of estimated locations from one Congress to the next in more recent years.

17. The second of these appointments is more likely than the first. Our sample includes 97 cases of exit due to death but only 41 cases where APPOINT = 1.

18. A variety of alternative specifications gave essentially the same results. These other estimates used nonlinear functions of the vote share as well as functions of the change in vote share. Interactions between reason for exit and vote share or redistricting did not uncover significant differences between those who stayed in Congress and those who left.

19. Krehbiel (1993) shows that the voting records of senators from the same state diverge far more than would be predicted by a purely geograhically-based definition of constituency. He uses these results to argue that even a *perfect* measure of geographic constituency interests performs badly compared to *imperfect*, garden-variety measures derived from roll call voting, such as interest group ratings.

20. For a detailed analysis, see Loomis and Poole (1992).

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