If You Can't Please Everyone, Must You Only Please Yourself?

Downsian spatial models and the principal-agent frameworks that stem from them picture legislators balancing their own values against constituency preferences. The multiple-constituencies framework sees an even more complex web of interests that mostly reinforce each other, but sometimes may conflict.

How might we test these competing explanations? Ideally, we would like a "critical experiment" that would confirm one and reject the other. Yet that is doubly difficult to achieve. First, there are measurement issues. How do we get separate measures of attitudes of legislators, constituents, and elites? Even when we surmount this problem, can we estimate independent effects for each constituency? The second problem is more vexing. The principal-agent and multiple-constituency models make contradictory assumptions. The former presumes that legislator and constituency values are independent of each other — and often conflicting. The multiple-constituencies perspective assumes the contrary: The concentric circles of representation encompass a common set of beliefs. Circles can't be orthogonal to each other.

Things are not quite so bleak. The principal-agent models develop a novel measurement strategy that I first critique and then modify. In some key ways the critique hardly matters. But in others the differences matter a lot — and they suggest ways to compare the incomparable.

Representing Whom?

Picture a world in which voters are all moderates and candidates all extremists. This is the vision of principal-agent models. In the workplace, these modelers see lazy workers and angry bosses. Diligent

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voters might induce politicians to adopt centrist policies, but the public positions of officials wouldn't represent their true values. Knowing how legislators vote doesn't tell you what they really believe. Now imagine a world where politicians are a random sample of the voters. Most of the time,[1] legislators would reflect constituency preferences. There would be no dilemma, as in principal-agent models, of candidates tailoring their positions to reflect voter attitudes. There would be no problem of shirking. Instead of lazy workers and angry bosses, we would have a team of employee-owners, each of whom would be rewarded according to some weight reflecting individual and joint production. In this idealized world, legislators' roll call votes are perfect reflectors of what they (and their constituents) believe.

There are no methodological problems in the second world, since masses and elites believe the same things and elected officials have nothing to gain by voting differently from these shared preferences. The first world is fraught with methodological problems. We observe a legislator voting to increase the minimum wage. Does her vote mean that both she and her constituents favor the hike? Or might she oppose the minimum-wage increase but fear that her constituents both favor the bill and care deeply about it, so that there might be electoral consequences for voting no? Or could she favor a salary increase for working people, even in the face of contrary public opinion?

Models of representation have a hard time distinguishing among these cases. Most of the time, we implicitly assume that there is *some* tension between the legislator and the constituency. So we model the representational nexus as follows:

$$\text{Roll Call Vote} = a + b*(\text{Legislator Ideology}) + c*(\text{Constituency Ideology}) + d*(\text{Controls}) + e,$$

where a is the constant, b, c, and d are regression coefficients (or vectors), and e is the residual. Simply stated, both legislator and constituency values affect roll call votes. Typically we measure member ideology through an index of roll call votes. And we measure constituency values any way we can—most often from some combination of district traits that act as a proxy for values.

What's wrong with this scenario? This simple model may tell us the relative importance of member and constituency ideology. But it tells us nothing about motivations. We might say that most legislators who vote

for the minimum wage are liberals (positive coefficient for b) even though their constituents are conservative (negative coefficient for c). Yet we would wonder how this could occur unless voters either don't care much about the minimum wage or later would punish these legislators for their heresy.[2] We can twist around the signs of the coefficients as much as we wish and we won't be able to tease motivations out of the model.

Ironically, the greatest indeterminacy of this type of model comes when prediction should be easiest. Suppose that there are perfect sorting effects, as in our first imaginary world. Liberal constituencies select liberal legislators, who vote in favor of the minimum wage. Conservative districts choose conservative members, who vote against the wage hike. Because member and constituency ideology are highly correlated, the estimates of the regression coefficients become unreliable. So it may seem that *neither* member values nor voters' preferences drive roll call voting, when *both* play equally powerful roles in shaping legislators' behavior. What is worse, this is *not* a measurement problem. Even if we have perfect measures of both legislator and constituency attitudes, the problem would not go away.

If legislators have interests (and values) that are distinct from constituents' preferences, we need some way of measuring them. This is one of the major contributions of principal-agent models. They derive estimates of legislators' pure ideology, purging typical estimates of member ideals of constituency preferences. This is both their strength and their weakness. The upside is the theoretical leverage that we get from estimating a measure of *pure* ideology, stripped of constituency values. The downside is the statistical assumption that member values must be completely independent of constituency beliefs. Yet even the downside has a silver lining: It will suggest an alternative way of looking at legislator ideology that is not independent of constituency preferences. This way of thinking about the problem has four advantages. It will permit me to show that

1. legislators' own views reflect their (multiple) constituencies' beliefs;
2. public officials' beliefs match their reelection constituencies more than the full electorate;
3. the impact of legislators' personal beliefs on roll call voting may be exaggerated in the principal-agent literature; and

4. we need to move beyond a simple Downsian spatial model to account for how legislators represent their diverse constituencies.

My task in this chapter is both methodological and substantive. The methodological effort involves introducing a superior method of measuring what the principal-agent literature calls "personal ideology," while at the same time showing that the previous measures of shirking are strongly correlated with the new estimates. My alternative method has a stronger theoretical base and is not forced into the unrealistic assumption that legislators' personal values are independent of constituency attitudes. It shows that legislators' own values are not as strong a determinant of roll call voting as the traditional shirking studies have found.

I offer a caveat here. There is a lot about "personal ideology" in the pages to come, so much so that it will appear that I believe legislators act on it.[3] Like Antony, who came to "bury Caesar but not to praise him," my motives are not what they seem to be. I may seem to believe in personal ideology, but I seek to bury it. An ideology is a coherent belief system, so it theoretically can be "personal." Yet, ideologies gain force when they are shared. A "pure personal ideology" may be possible in a world of hermits and eccentrics. But it has little place in politics, especially in democratic politics. If issues play a key role in electing candidates, it would be difficult to imagine voters purposefully selecting someone whose "personal" values were distinctive, much less significantly different from their own. To show that there is no such thing as personal ideology (at least among politicians), I must first pretend that there is such a thing — and that we can measure it. So I propose a better measure that is free of some of the difficulties of the current indicator. I shall twist it and turn it and tease out whatever influence I can find for "personal ideology." It won't be much — because ideology in politics is only meaningful when it is shared.

Much of the prominence of principal-agent models stems from their innovative measurement strategy. Kalt and Zupan (1984, 1990) — and others (Carson and Oppenheimer 1984; Fort et al. 1993; Kau and Rubin 1979, 1982; Langbein 1990) — suggest that legislators' roll call behavior (and representation) can be expressed in a simple equation.

total ideology = constituency ideology + legislator values

Interest group ratings represent total ideology. Constituency attitudes are difficult to come by, so Kalt and Zupan employ a barrage of constituency demographics to estimate ideology. They regress the constituency demographics against the interest group scores. The predicted values from the regression represent the constituency component of a legislator's ideology. The residuals are the senators' personal values; they have a strong impact on legislators' roll call votes on a series of issues not related to the interest group ratings.

The residualization technique began as a methodological innovation to measure an elected official's pure personal ideology. It makes a rather strong prediction with less theoretical justification: Legislator's personal values are unrelated to constituency factors. The residuals must be independent of any constituency variables.[4] Principal-agent models that make such assumptions are perforce drawn to Downsian spatial models (cf. Bender and Lott 1996, 80).[5] If a legislator's ideology is distinct, even independent, from constituency preferences, then representation is a contest between a member's personal values and the electoral demands of policy-oriented voters. There is no possibility of an ideological equilibrium: Voters demand fealty to their positions, not to some conception of the public good. When legislators depart from the constituency median or mean (cf. Enelow and Hinich 1984), whether to respond to morality, their own beliefs, or the urgings of other elites, they are indulging their own preferences.

The multiple-constituencies perspective argues that legislators must pay attention to fellow partisans as well as their entire geographic constituency. Candidates, no less than voters, have preferences over policies. There are winning strategies that permit candidates to keep to their views, especially if they represent districts with a lot of their fellow partisans (Wittman 1983). Candidates respond to voters and activists in their own parties, who pull them away from centrist positions (Aldrich 1983). Legislators are more comfortable appealing to groups with whom they agree. Legislators will be closer to the preferences of their reelection constituency than to all voters (Richardson and Munger 1990, 18).

If we assume that all legislators, be they Democrats or Republicans, respond to the same constituencies, we may overestimate personal ideology. Legislators are more likely to know the issue positions of their reelection constituency than the entire geographic constituency. Incumbents must placate their fellow partisans to win or avoid a primary (Fenno 1978, 12–15). House candidates don't usually converge to the

median voter; divergent positions reflect partisan reelection constituencies (Sullivan and Uslaner 1978; G. Wright 1978b; Wright and Berkman 1986; Powell 1994). Senators respond to their electoral coalitions in their roll call voting, more so to their partisan bases than to the full electorate — at least as measured by the demographic correlates of each (Bullock and Brady 1983; Markus 1974) and direct measures of public attitudes (Shapiro et al., 1990; Langbein 1990).

Studies of shirking also find support for distinct geographic and reelection constituencies thesis. Krehbiel (1993, 34) argues that

> at worst . . . legislators shirk only with respect to their geographic constituencies. . . . At best, they do not shirk at all — they simply faithfully represent the wishes of their reelection constituents.

Peltzman (1984, 210) estimates a model of Senate voting with imputed variables for a senator's reelection constituency and concludes that liberals draw votes from different sectors of the public than conservatives: "[T]hese systematic differences prove, by and large, capable of rationalizing voting patterns without much need for relying on 'shirking' explanations." Jung, Kenny, and Lott (1994) find that same-state senators in 1977–82 had different electoral coalitions in 81 percent of the states that they studied. These electoral coalitions were largely partisan. The further a senator's voting record is from the average Americans for Democratic Action (ADA) score for the *state party,* the lower the probability of winning reelection (Schmidt, Kenny, and Morton, 1996). When Goff and Grier (1993) split a 1977–84 Senate sample by party, they find that shirking (as measured by an ADA residual) no longer predicts reelection success. They take this — quite reasonably — as evidence that the legislators are sufficiently close to partisan attitudes in a state so that they have they have little to fear from their base.

If the only problem with principal-agent models were their focus on geographic constituencies, we could resolve it simply. Without realizing it, as I shall show below, these models have measured deviations from *reelection constituencies,* not the full geographic constituencies. If the only (other) problem were the use of demographics to estimate constituency ideology, we would also have little to worry about. The residualization technique does a tolerable job of estimating constituency attitudes. Even though we can derive reasonable estimates of both legislators' own values and constituency preferences from the

principal-agent methodology, we are stuck with the assumption that these two belief systems have to be statistically independent of one another. This leads us away from the idea that multiple constituencies can *reinforce* the values of public officials, since each constituency must have values independent of the others. It sets up a Downsian contest where separate ideologies conflict with each other.[6] The residualization technique can accommodate at least two constituencies — the geographic and the reelection — but only with the assumption that their values are not reinforcing.

This is not only theoretically disquieting, but it is empirically problematic. Once we resolve the problems of getting reasonable estimates for the policy preferences of both geographic and reelection constituencies as well as a start on estimating the "pure" ideology of legislators, we find that the assumption of independence is implausible. As Fenno (1978) and Kingdon (1973) would predict, all of the components of ideology — as well as the primary and reelection constituencies (see chapter 4) — share the same core values.

Measuring Shirking

Kalt and Zupan (1984) take as their measure of ideology senators' scores in 1977–78 from the League of Conservation Voters (LCV). They estimate a "kitchen sink" model to derive predicted scores for the LCV measure. The dependent variable is a transformation of the LCV scores into a log-odds ratio called PRO-LCV (Kalt and Zupan 1984, 185). The independent variables include per capita income, average education, the share of state personal income generated by manufacturing, voter age, the urban-rural distribution of the population, the growth rate of the state economy, a dummy variable for the South, the percentage of a state's population belonging to any of the six largest environmental organizations, the 1972 McGovern vote in the state, and the senator's political party (Kalt and Zupan 1984, 293 n. 22). The predicted value is the geographic constituency ideology, the residual is the senator's personal values.

We immediately confront a problem of omission and one of commission, which turn out to be part of the same puzzle. Omitted is the role of the reelection constituency. Included without explanation is the party of the legislator in the residualization model. Kalt and Zupan recognize that inclusion of party is problematic in their residualization model.

They argue that it might reflect "senator-specific 'non-economic' factors . . . such as a senator's world view" (1984, 294). They estimate models that both include and exclude party to derive estimates of shirking. Another interpretation of the role of party seems more plausible. Party is *not* a constituency trait in the same way that other variables are.

There are two possible interpretations. First, party is an attribute of the senator, in which case it should be left out. Second, and more pertinent, including party gives us an estimate of *reelection constituency ideology.* This approach seems quite reasonable—and it gives us a basis for comparing geographic and reelection electorates. The prediction for the model including party represents the preferences of the senator's party following, while the prediction excluding party gives us the ideology of the geographic constituency. The residual excluding party represents the extent of a senator's deviation from the full electorate; when party is included, we obtain an estimate of deviation from the senator's reelection constituency.[7] The inclusion of party in the equation to estimate legislator preferences inadvertently "solves" the problem of deriving reelection constituency ideology.

How good is either set of preferences? Are demographic and political factors good substitutes for more direct estimates of constituency sentiment? Some doubt that they are (Jackson and Kingdon 1992, 813; Krehbiel 1993). There is no longer a need to rely upon imputed scores. Wright, Erikson, and McIver (1985, 471–72) have developed statewide estimates of ideology from CBS News/*New York Times* polls from 1976 to 1982 with an unweighted *N* of 76,614. The large sample size permits estimation of ideology (and partisanship) for each state except Alaska and Hawaii (which are not surveyed because of costs). I have obtained ideology estimates for both states and state parties.[8] These estimates permit direct estimation of the difference between legislator and constituency ideology. The direct approach is a variation on the simple equation[9]

personal ideology = legislator ideology − constituency attitudes.

I cannot simply subtract one measure of ideology from the other because they are measured on different scales. So I standardized each measure. The legislator ideology comes from the Kalt-Zupan (1984) PRO-LCV score from the League of Conservation Voters; in later chapters I also employ the Kalt-Zupan (1990) transformed ratings from

Americans for Democratic Action. For constituency attitudes, I standardize the state mean (with higher values indicating conservatism). For party constituency attitudes, I standardize either the proportion of party identifiers who are conservative (for either Republicans or Southern Democrats) or the proportion of identifiers who are liberals (for Northern Democrats). I then reflect the scores for conservativism in constituencies so that higher values correspond to liberal positions. I take the difference of these standardized scores and again compute z-scores. These transformations take us further away from the original data than we might wish, but without them I cannot make any comparisons.

Measuring personal ideology is important because legislators' values affect their voting behavior on a wide variety of roll calls (Kalt and Zupan 1984). A change in measurement techniques leads us to two questions. Does direct survey measurement lead to different conclusions about the effects of personal ideology on roll call voting from the estimates derived from the residualization technique? Do senators deviate more from their geographic constituencies than from their reelection constituencies?

Both the Kalt-Zupan and the direct approach rely upon roll calls to measure legislator ideology and then to predict roll call behavior based upon legislators' values. Van Doren (1990) and Jackson and Kingdon (1992) argue that such an enterprise is flawed. Van Doren argues that roll calls constitute a biased sample of all congressional decisions—and so may lead us to erroneous conclusions about the policymaking process. Yet votes constitute *the* public record. The rest of the legislative process is invisible to most constituents—and even to most activists. And my task here is not to assess the representativeness of roll calls in policymaking, but to consider the representativeness of legislators. Members could do one thing in committee and another on the floor, but this is highly unlikely if their world is really shaped by a consistent ideology.

The point raised by Jackson and Kingdon is different, if not equally problematic: If legislators are consistent enough to have an ideology, then most roll calls one would try to predict would fall along the same dimension. Using votes to predict votes makes the job too easy. Point granted, but often we have no ready outside measure of ideology.

I offer two justifications for the use of roll call–based measures *beyond* often having no other alternative. First, there is an alternative measure for 61 of the senators, a CBS News survey of incumbent (and

challenger) ideology that I examine in chapter 5. The correlation with the Kalt-Zupan PRO-LCV measure is .829; with a similarly transformed measure from the ADA, the correlation with incumbent ideology in the CBS survey is .876 (see table 13 in chapter 5). The correlations with the untransformed LCV and ADA scores are .851 and .879. It seems to make little difference whether we use a direct measure of ideology or a roll call indicator based upon these ratings.[10] I could use only the survey data, but this would restrict the size of the sample and limit comparability with previous studies. Second, the point of my analysis is not simply to relate ideology to roll call behavior, but to decompose ideology successively into its component parts and to indicate which ones matter more. By the time I am finished, there is a rather small role for personal ideology. The multiple-constituencies thesis argues that once we adopt a more inclusive approach to a legislator's following, we find that principals and agents are mostly on the same side of the ideological divide. There shouldn't be much shirking—and I don't find much. If even these modest estimates are *too generous,* this would please rather than upset adherents of the multiple-constituencies perspective.

The major contribution of the principal-agent model is *not* to demonstrate the power of shirking. Instead, it is to guide us in measuring a legislator's personal ideology. For this methodology, even as I criticize and modify it, will guide me to a measurement strategy that will show why members rarely stand alone. Without this framework to build on, we would fall back on the standard roll call models that at best predict legislative voting from demographics and others' beliefs. Looking for the impacts of different constituencies takes us further down the path of understanding how representation takes place.

I derive estimates for legislator and constituency opinion from the Kalt-Zupan data set (from the late 1970s) with and without party. Party is the best predictor of the LCV index. The model including party has an adjusted $R^2 = .710$ and a standard error of the estimate of .847; without party, adjusted $R^2 = .461$ and the SEE = 1.155. These models follow Kalt and Zupan (1984) and are presented in table A.1 of appendix A. As they found, the strongest determinant for the state party model is the senator's political party, followed by the McGovern vote in 1972. Democrats and senators from states where McGovern fared well have higher PRO-LCV scores. So do solons from states with a heavy concentration of manufacturing (indicative of a blue-collar base). High-growth states have more conservative senators.

For the direct estimates, I subtract the geographic constituency ideology mean from the LCV scores and standardize these "direct" estimates of shirking. For reelection constituency opinion, I do not use the overall state party means, since they are insensitive to the relative roles of liberals and conservatives in the two parties. I presume that liberals are the core of the reelection constituencies for Northern Democrats, while conservatives are key for Southern Democrats and Republicans. The reelection constituency estimates are derived analogously to the direct geographic measures, except that the proportion of liberals is used for Northern Democrats and the proportion of conservatives for Southern Democrats and Republicans.[11]

Positive residuals *generally* indicate that senators are more liberal than their electorates; negative scores point to personal ideologies that are *usually* more conservative than the public. The sign is not a perfect indicator of the bias of a legislator's personal ideology. The residuals must sum to zero even if every member were more liberal (conservative) than the electorate (Bender and Lott 1996, 80). But the multiple-constituencies approach would find it strange if all, or even most, legislators were to veer in one direction. Northern Democrats and Republicans have reelection bases that pull them in opposite directions. The more extreme the values, the greater the confidence that we have in individual personal-ideology scores.

I divide senators and constituencies in these ways because Southern Democrats and their constituencies in the late 1970s are more like Republicans than Northern Democrats. The mean "liberal quotient" from ratings by Americans for Democratic Action in 1977–78 is 28.0 for Republicans, 30.4 for Southern Democrats, and 72.2 for Northern Democrats. Southern Democrats represent the *most conservative geographic constituencies* of all three party blocs. Their fellow partisans are more likely to be conservative than liberal. Republican partisans are the most conservative, but Northern Democrats are more liberal than conservative.[12]

The geographic and reelection constituency models suggest different shirkers. I define a shirker as someone with an absolute value of the "residual" of 1.96 or greater, indicating $p < .05$ for a two-tailed test. The Kalt-Zupan geographic constituency model produces seven senators with pronounced personal ideologies (Democrats Dale Bumpers, AK; John Culver, IA; and Gary Hart, CO; and Republicans Carl Curtis, NE; S. I. Hayakawa, CA; William Scott, VA; and John Tower, TX). The direct

geographic constituency estimate yields three: Culver, Tower, and Edward M. Kennedy, D-MA). For the reelection-constituency models, Kalt-Zupan produces just two senators who deviate a lot (Culver and Tower), while the direct-survey measure yields four (Kennedy; Edward Brooke, R-MA; Culver; and Tower). All Democrats veer to the left of their constituents, and all Republicans except Brooke deviate to the right.

If my presumption that legislators should be closer to their reelection constituency than to geographic opinion is correct, senators should have smaller absolute residuals for their reelection constituencies than for geographic constituency opinion. For Kalt-Zupan, 66 of 100 estimates fit this prediction; so do 65 of 96 (67.7 percent) for the direct estimates. The correlations between the two methods are .789 for the geographic constituency estimates and .728 for the reelection constituency models. The two methods produce quite similar results, whatever the base.

Northern Democrats tilt leftward from their geographic constituencies, with a standardized score of .714, compared to −.413 for Southern Democrats and −.621 for GOP solons.[13] Once we control for party, the three partisan blocs have almost identical personal ideologies (.032, −.046, and −.015, respectively). We see a similar dynamic for geographic-constituency opinion: Senators from states with centrist ideologies have liberal personal ideologies (mean = .550), while legislators from conservative states tilt rightward (mean = −.650). When we shift our base to the distribution of *reelection constituency ideology,* we see few differences. Senators from conservative, moderate, and liberal *state parties* deviate little from their reelection constituencies.[14] Legislators may seem to ignore their geographic constituencies, but they are faithful representatives of their reelection constituencies. *When legislators go against their geographic constituencies, they almost always tilt toward their reelection supporters, just as the multiple-constituencies thesis would predict.* The case is not yet closed, and the choice of a base is critical. It forms the core of my argument.

Do Senators Indulge?

Does a senator's personal ideology affect roll call voting? What is the relative impact of constituency? Kalt and Zupan (1984) focus on a set of 27 roll calls in the Senate in 1977–78 on strip mining and develop a measure of ANTISTRIP voting across these issues.[15] What is the relative

impact of senators' personal ideology, the opinions of diverse constituencies, and constituents' interests as reflected in a battery of predictors of environmental concerns and coal consumption and production? They extend their analysis to a series of other roll calls from the 95th Congress to see whether personal ideology has systematic impacts in Senate voting. How well does their analysis stand up to my two challenges? Does direct measurement of public opinion lead to different conclusions? What about the shift from geographic to reelection constituencies?

Table 1 presents the results of the estimation for ANTISTRIP for the party and nonparty scenarios.[16] I restrict the analysis for the Kalt-Zupan models to the 96 senators for whom Wright et al. could generate constituency estimates. The predictors reflecting constituency interests include *long-run surface mining costs* in a state; *surface coal reserves* and *underground coal reserves* in a state, reflecting differing producer interests; *agriculture and timber revenue* on strip-mined land, indicating "the support of ranchers, farmers, lumberers, and other noncoal business interests" for legislation that would preserve their preferential rights to strip-mined land (Kalt and Zupan 1984, 287); *environmentalism,* the share of a state's population belonging to six major environmental groups; *coal share of electricity,* reflecting consumer interests; *unreclaimed land value,* the prospective value of mined but unrestored land; and Herfindahl indices for underground reserves, environmentalism, and coal share.[17]

Senators from states with high mining costs and large surface reserves should vote against ANTISTRIP provisions (negative signs). Since underground coal producers compete with strip miners, large underground reserves should induce a senator to back ANTISTRIP votes. Environmentalists, noncoal interests, and high unreclaimed land value should all press senators to back restrictions on strip mining. Consumers, recognizing that increased regulation would lead to higher coal prices, should press their senators to vote no. High values on the Herfindahl indices indicate the domination of larger interests; the measures for surface coal and consumers should have negative impacts, the others positive effects (Kalt and Zupan 1984, 285–87). The coefficients for personal ideology should all be positive.

Senators with liberal constituents should support ANTISTRIP legislation. For both Kalt-Zupan measures (for both geographic and reelection constituencies) and for the state party direct measure, higher scores indicate *more liberal constituents.* The sole exception is for the direct

measures for geographic-constituency attitudes, where higher scores mean more conservative citizens. For the two Kalt-Zupan models and the direct reelection constituency estimates, I expect positive coefficients between ANTISTRIP voting and public ideology. For the direct

TABLE 1. Determinants of Antistrip Voting in the United States Senate

	Geographic Constituency		Reelection Constituency	
	K-Z Model	Direct Estimate	K-Z Model	Direct Estimate
Personal ideology	1.440*	.744***	.402***	.444***
	(2.200)	(6.636)	(4.029)	(5.001)
Constituency ideology	.452***	1.558	.457***	−.470***
	(6.097)	(.963)	(6.741)	(−5.529)
Long-run surface mining costs	−.421**	−.410**	−.424**	−.485***
	(−2.741)	(−2.675)	(−2.812)	(−3.277)
Surface coal reserves	−.522	−.650	.447	−.364
	(−.407)	(−.505)	(−.356)	(−.294)
Underground coal reserves	4.63**	4.220**	4.044**	3.539*
	(2.525)	(2.603)	(2.530)	(2.232)
Agriculture/timber revenue	.132	−.595	.417	−3.151
	(.019)	(−.084)	(.061)	(−.468)
Environmentalism	37.629	37.304	19.189	73.434**
	(1.207)	(1.244)	(.746)	(2.789)
Unreclaimed land value	.015*	.014*	.014**	.015**
	(2.284)	(2.256)	(2.293)	(2.472)
Coal share of electricity	−.004	−.003	−.003	−.003
	(−1.243)	(−1.091)	(−1.221)	(−.971)
Herfindahl: surface reserves	.319	.354	.232	.362
	(1.138)	(1.247)	(.889)	(1.339)
Herfindahl: underground reserves	−.070	−.092	.060	−.018
	(−.183)	(−.238)	(.160)	(−.049)
Herfindahl: environmentalism	−1.048	−1.609	−1.056	−1.724
	(−.707)	(−.977)	(−.748)	(−1.188)
Herfindahl: coal share	−.795**	−.808**	−.666**	−.789***
	(−2.842)	(−2.911)	(−2.527)	(−3.120)
Constant	1.440*	−1.647	1.480**	1.476**
	(2.200)	(−.501)	(2.479)	(2.348)
Adjusted R^2	.551	.553	.549	.585

Note: Entries are regression coefficients; *t*-ratios are in parentheses.
*$p < .05$.   **$p < .01$.   ***$p < .001$.

measure for geographic constituency, the coefficients should be negative, reflecting coding differences among the publics. For all four indicators of legislators' personal ideology—deviations from geographic and reelection constituency attitudes for both the Kalt-Zupan and direct estimates—personal ideologies are positive. So senators with liberal personal values (positive scores) should back environmental legislation.

The four models show considerable similarities in terms of both the magnitude of coefficients and their t-ratios.[18] The constituency interest variables that are significant in one model usually have high t-ratios in others. Personal ideology is significant in all models. The direct survey estimates of personal ideology are stronger than the Kalt-Zupan measures. Geographic-constituency opinion in the direct estimation does not have a significant impact on senators' roll call voting because geographic constituency opinion is highly correlated with both personal ideology and environmentalism—just as we would expect from the multiple-constituencies perspective. Personal ideology has a smaller coefficient for reelection constituencies than for geographic followers (the b is reduced by 25 percent). The impact of geographic constituency ideology is not significant for the direct estimates. But the reelection followers' ideology dwarfs all factors other than personal ideology in the direct-estimate model.

Legislators both indulge their own views *and* represent their constituents (especially those in their party coalitions). They also represent economic interests. Long-run surface-mining costs, the unreclaimed land value, and the Herfindahl index of coal's share of electricity production are significant in all four estimations. Underground coal reserves matter in all but one equation, while membership in environmental groups has a big impact in the direct party estimations. Legislators who base their votes on personal ideology also pay attention to their larger constituents and to economic interests. It is not a simple question of one or the other.

Kalt and Zupan consider other 13 other issues. I replicate their results. Since all but the Panama Canal index are single roll call votes, I employ logit analysis rather than ordinary least squares.[19] Tables 2 and 3 present the results for the models without party and with party respectively. Table A.2 of appendix A presents the percent correctly predicted for each of the logits and R^2 measures for the regressions. For each issue in table 2 personal ideology is significant at least at $p < .05$. Moreover, the t-ratios are similar across both estimation procedures.

TABLE 2.   Models for Geographic Constituency

	Kalt-Zupan		Direct Estimates	
	Legislators	Constituency	Legislators	Constituency
Communist immigration	2.138***	1.179***	2.678***	4.207
	(4.075)	(3.297)	(4.076)	(.731)
	.356	**.175**	**.488**	**.039**
Death penalty	2.426***	2.420***	3.516***	−13.849
	(3.616)	(3.473)	(2.695)	(−1.230)
	.213	**.141**	**.114**	**−.100**
Draft	1.279***	1.364***	2.230***	1.005
	(3.624)	(4.001)	(3.993)	(.193)
	.224	**.224**	**.372**	**.011**
Sex education	2.463***	1.424**	3.212***	−5.621
	(3.702)	(2.856)	(3.547)	(−.712)
	.222	**.113**	**.189**	**−.036**
Neutron bomb	2.309***	1.904***	3.625***	1.855
	(3.787)	(4.119)	(3.965)	(.293)
	.288	**.265**	**.635**	**.013**
Desegregation	3.309***	3.389***	2.871**	12.679
	(3.438)	(3.415)	(2.661)	(1.184)
	.213	**.146**	**.080**	**.053**
Abortion	.501*	.744**	1.169**	−5.719
	(2.138)	(2.722)	(2.929)	(−1.336)
	.112	**.160**	**.191**	**−.093**
Pornography	.788**	.821**	.840*	.860
	(2.627)	(2.665)	(1.809)	(.164)
	.140	**.160**	**.270**	**.009**
Pregnancy disability	1.407**	1.337*	1.609*	−1.164
	(2.835)	(2.101)	(2.132)	(−.164)
	.073	**.062**	**.061**	**−.006**
Pregnancy discrimination	2.945**	2.669**	3.609**	−5.313
	(3.011)	(2.410)	(2.378)	(−.523)
	.110	**.074**	**.025**	**−.018**
Cuba	2.441***	2.422***	3.801***	.828
	(3.540)	(3.236)	(3.597)	(.106)
	.305	**.200**	**.432**	**.006**
Communist loans	1.435***	.780**	1.011*	.957
	(3.895)	(2.572)	(2.129)	(.176)
	.233	**.120**	**.239**	**.011**
Panama Canal index	1.446***	1.281***	1.444***	−.022
	(7.947)	(4.523)	(5.106)	(−.006)

Note: Entries are logit coefficients, except for the Panama Canal index and the social index, where they are regression coefficients; maximum likelihood estimates/standard errors (or *t*-ratios) are in parentheses. Bold numbers represent logit effects.

*$p < .05$.   **$p < .01$.   ***$p < .001$.

TABLE 3. Models for Reelection Constituency

	Kalt-Zupan		Direct Estimates	
	Legislators	Constituency	Legislators	Constituency
Communist	1.305**	1.478***	1.061**	−2.124***
immigration	(2.642)	(4.303)	(2.622)	(−3.965)
	.147	**.368**	**.149**	**−.269**
Death penalty	1.804*	2.592***	1.695**	−1.816***
	(2.281)	(3.868)	(2.680)	(−3.318)
	.115	**.115**	**.171**	**−.342**
Draft	1.068**	1.389***	1.225***	−1.221***
	(2.493)	(4.541)	(3.266)	(−3.396)
	.125	**.303**	**.223**	**−.216**
Sex education	1.725**	1.812***	.710	−2.870***
	(2.386)	(3.839)	(1.390)	(−3.265)
	.114	**.177**	**.100**	**−.374**
Neutron bomb	3.228***	1.955***	2.372***	−1.235**
	(3.796)	(4.009)	(4.351)	(−2.566)
	.358	**.326**	**.447**	**−.109**
Desegregation	4.852**	3.542***	3.995***	−1.479**
	(2.923)	(3.451)	(3.232)	(−2.677)
	.180	**.166**	**.194**	**−.216**
Abortion	.825**	.541**	1.076***	−.133
	(2.375)	(2.585)	(3.296)	(−.495)
	.134	**.144**	**.216**	**−.111**
Pornography	1.585***	.577**	1.617***	−.464
	(3.160)	(2.246)	(3.519)	(−1.155)
	.209	**.120**	**.302**	**−.006**
Pregnancy disability	.847	1.650**	.549	−1.517*
	(1.222)	(2.824)	(1.053)	(−2.332)
	.041	**.059**	**.049**	**−.206**
Pregnancy	2.014*	3.306**	1.623*	−20.975*
discrimination	(1.707)	(2.872)	(1.665)	(−1.707)
	.065	**.038**	**.047**	**−.360**
Cuba	2.307**	2.484***	1.702***	−1.728**
	(2.734)	(3.664)	(3.270)	(−2.962)
	.181	**.359**	**.251**	**−.242**
Communist loans	1.111**	1.055***	.525	−.892**
	(2.456)	(4.031)	(1.593)	(−2.972)
	.130	**.207**	**.100**	**−.264**
Panama Canal	1.081***	1.473***	1.103***	−1.449***
index	(4.164)	(9.441)	(4.621)	(−6.613)

Note: Entries are logit coefficients, except for the Panama Canal index, where they are regression coefficients; maximum likelihood estimates/standard errors (or *t*-ratios) are in parentheses. Bold numbers represent logit effects.

   *$p < .05$.   **$p < .01$.   ***$p < .001$.

We can't directly compare logit coefficients. But I can estimate the probability that a member will vote yea or nay based upon the values of the independent variables. Rosenstone and Hansen (1993) propose a method of examining the *effect* of a variable, *Z:* Let all of the predictors except *Z* take on their "natural" values. Then assign all cases a low value of *Z* and estimate the probability that a member will vote yea (or nay). Next recode *Z* to a higher value and reestimate the probability of voting yea (nay). The difference in average probabilities is the effect. It tells us how much more likely a senator would be to vote yea (or nay) if we changed the independent variable by a standard deviation. One can select any meaningful "high" and "low" values of *Z*. Here I use one standard deviation above the mean and one standard deviation below the mean, as is common. The effects for the logit estimates are presented in bold in tables 2 through 4.

The choice of estimation method seems to make little difference, except for the failure of geographic-constituency opinion to affect roll calls for the direct method. Both personal and constituency ideology affect roll call voting in the state party models (table 3). Twelve of the Kalt-Zupan estimates of personal ideology are significant at $p < .05$ or better, compared to 10 for the direct method. All 13 Kalt-Zupan estimates and 11 of the direct coefficients for constituency opinion are significant. The effects suggest modest impacts for personal ideology. A standard-deviation change in personal ideology changes the probability of voting yea or nay by approximately 20 percent across the measures. The average effect is slightly greater for the direct estimates (.258 compared to .207 for the geographic-constituency models and .187 compared to .150 for the reelection constituency models).

For both methods the *t*-ratios for personal ideology are lower for reelection than for geographic-constituency estimates. The average *t*-ratio for the geographic-constituency model is 3.812; for the reelection constituency it is 2.855. Senators deviate less from their reelection constituencies. The impact of personal ideology on roll calls is smaller than departures from reelection constituency attitudes. While this could be an artifact of the residualization method for the Kalt-Zupan estimates,[20] there is no reason to expect a similar result to occur for the direct method. We see the same pattern for the effects. For both the Kalt-Zupan and direct estimates, the reelection constituency effects are about three-quarters as large as the geographical constituency models. *Legislators respond more faithfully to their partisan reelection constituencies than to the geographic constituency.*

The biggest effects for personal ideology in both the geographic- and reelection constituency models come on foreign-policy issues. The seven domestic-policy issues in tables 2 and 3 have average *t*-ratios that are two-thirds of those for foreign policy for the no-party models and three-quarters of those for the reelection follower estimates. The mean effects for domestic policy are between 30 percent as great as the foreign-policy impacts (for the Kalt-Zupan geographic-constituency estimates) to two-thirds for both reelection constituency models. Such issues often are of lesser concern to voters than domestic concerns (Fenno 1973, 141; Burgin 1991). Senators have greater freedom to follow their own ideology—or presidential dictates—on international issues (Wildavsky 1966; Langbein 1993). The thesis of two presidencies—a domestic leader who has to struggle for political support and a foreign-policy chief executive who rallies the nation around the flag—is controversial (Sigelman 1979; Edwards 1986). The most comprehensive treatment finds at least partial support on the lower-profile issues encompassed in these votes (Bond and Fleisher 1990, chap. 6).

Some of the initial shirking models were developed to explain an apparent anomaly. Democratic legislators voted for energy price regulation even though economists know that restrictions on the market lead to inefficiencies. Maybe they did so out of constituency interests, but these variables (as in the ANTISTRIP equations above) left much to be explained. The only reason Democrats could vote against economic sense, wrote Mitchell (1977), is if they are tied to an ideology that leads them astray. He refers to support for regulation as "ideologically chic" (Mitchell 1977, 6). Both Mitchell (1977, 1979) and Kalt (1981) report strong support for this thesis. Kalt employed a measure of ideology based upon residualization from interest group (Americans for Democratic Action) scores.

Are liberals more likely to cast votes on the basis of their personal ideology? I estimate regressions or logits for each roll call (index) with separate measures of personal and constituency ideology for two groups of legislators (see table 4). Each equation contains all of the demographic and constituency interest variables and indicators of personal state party ideology and state party constituency attitudes for liberals (Northern Democrats) and conservatives (Republicans and Southern Democrats).[21]

Personal ideology doesn't matter much for liberals. It counts for a lot among conservatives. Northern Democrats' personal ideology is

TABLE 4.   Estimates of Legislator and Reelection Constituency Ideologies by Party Blocs

Vote	Northern Democrats		Southern Democrats + Republicans	
	Senator	Constituency	Senator	Constituency
Anti–strip mining	−.265*	−.733****	.583****	−.316**
	(−1.591)	(−3.627)	(5.154)	(−2.555)
Communist	.261	−3.184***	1.028**	−1.447**
immigration	(.855)	(−3.081)	(1.970)	(−2.100)
	.108	**−.001**	**.106**	**−.049**
Death penalty	−.370	−1.055	1.789**	−2.172***
	(−.271)	(−1.037)	(1.924)	(−2.449)
	.054	**−.0001**	**.239**	**−.197**
Draft	−.083	−2.431***	1.404***	−.556
	(−.112)	(−2.749)	(2.985)	(−1.085)
	.119	**−.015**	**.339**	**.042**
Sex education	−5.699***	−8.827***	3.106**	−3.717**
	(−2.658)	(−2.563)	(2.267)	(−2.376)
	−.158	**.102**	**.300**	**.042**
Neutron bomb	−.160	−4.328***	3.005****	.809
	(−.134)	(−3.313)	(3.648)	(1.089)
	.236	**−.007**	**.339**	**−.016**
Desegregation	−7.161**	−2.379*	10.236***	−.262
	(−1.974)	(−1.301)	(2.938)	(−.386)
	.026	**−.001**	**.451**	**−.031**
Abortion	.925	−10.752	1.245***	−.315
	(.615)	(−1.468)	(2.573)	(−.766)
	.119	**−.310**	**.274**	**−.004**
Pornography	−.028	−2.022**	1.864***	1.004*
	(−.037)	(−2.238)	(2.965)	(1.295)
			.183	.051
Pregnancy	—[a]	—[a]	.788	−1.420**
disability			(1.098)	(−1.775)
			.099	**−.013**
Pregnancy	—[a]	—[a]	22.676**	[a]
discrimination			(13.157)	
			.119	[a]
Cuba	−.462	−2.852**	2.032***	−1.205*
	(−.397)	(−2.248)	(2.718)	(−1.568)
	−.028	**−.006**	**.531**	**.019**
Communist loans[b]	.446	−7.360	.808**	−.443
	(.770)	(−1.286)	(1.832)	(−1.036)
	.039	**−.193**	**.258**	**−.105**
Panama Canal index	−.771**	−1.855****	1.475****	−1.162****
	(−1.738)	(−3.899)	(4.738)	(−3.429)

Note: Entries are logit coefficients (regression coefficients for anti–strip mining and the Panama Canal index); maximum likelihood estimates/standard errors (or *t*-ratios) are in parentheses. Bold numbers represent logit effects.

[a] Insufficient variation in dependent variable for estimation for Northern Democrats.

[b] Predictors limited to ideology measures for Northern Democrats.

*p < .10.   **p < .05.   ***p < .01.   ****p < .0001.

significant on just 3 of 12 roll call measures. On only 1 (sex education) is it significant at $p < .01$. Liberals are more affected by their reelection constituencies (significant in 9 of 12 comparisons)[22] than by their own views. Republicans and Southern Democrats are more affected by their personal ideologies (significant in 13 of 14 comparisons at $p < .05$ or better, in 8 cases at $p < .01$ or better) than by their fellow partisans ($p < .10$ in 8 of 13 cases, $p < .05$ less than half the time). These results are *not* an artifact of lumping Southern Democrats together with Republicans. The personal-ideology results for the GOP alone are only marginally weaker than for the combined group of conservatives. The average effect for personal ideology, based upon the 10 roll calls estimated by logit, is .076 for Northern Democrats and .269 for Southern Democrats and Republicans. Personal ideology has an impact more than 3.5 times as great for conservatives as for liberals.

If liberal Democrats are tied to an ideology, it is to their state party attitudes. There are only modest differences between the share of liberals and conservatives in the geographic constituencies of Northern Democrats, Southern Democrats, and Republicans (see table 5). But there are big differences in these percentages for reelection constituency attitudes. Northern Democrats have more than twice as many liberal partisans as do Republicans (with Southern Democrats in between). Republican senators have twice as many conservative identifiers as Northern Democrats do (again with Southern Democrats in the middle). All states have considerably more conservatives than liberals, but only constituencies represented by Northern Democrats have many progressive partisans. Approximately one-third of all Northern Democratic senators have predominantly liberal reelection constituencies; under 15 percent have largely conservative fellow partisans.[23] Every Republican

TABLE 5.   Distribution of Ideology among Senators' Constituencies

Senator Party	Geographic Constituency		Reelection Constituency	
	Liberal	Conservative	Liberal	Conservative
Republicans	20.9	35.9	12.3	48.3
Southern Democrats	18.1	38.6	21.6	32.3
Northern Democrats	21.4	33.7	28.5	24.4
Average: All senators	20.6	35.4	35.1	21.0

senator (and two-thirds of Southern Democrats) has a reelection constituency that is predominantly conservative.

The multiple-constituencies perspective suggests that legislators are closer to geographic than to reelection constituents. But otherwise the residualization method fares reasonably well. The Kalt-Zupan method yields estimates of personal ideology that barely differ from those of the direct method. The logit effects for the Kalt-Zupan and direct methods correlate at .758 for the geographic-constituencies estimates and .933 for the reelection-following models.[24] When public surveys are not available, the residualization approach is quite serviceable.

The reasonable performance of residualization models is a positive sign for a different reason. So far I have examined only the beliefs of geographic and reelection followers. When I move further inside the concentric circles, to the primary and personal constituencies (chapter 4), I cannot simply subtract elite views from what we now call personal ideology. Residualization will offer a positive solution to getting to the "core" of personal ideology, but only once we are sure we have taken account of virtually all of the systematic components of constituency values.

The similarities between the two methods is only surface deep. Residualization cannot account for how personal ideology develops. Senators appear unrepresentative because the distribution of public attitudes pushes them toward the poles of their parties. The next chapter shows why the direct method is superior: Unlike the personal ideology of the Kalt-Zupan method, the values obtained by the direct method are linked to legislators' constituency dynamics. These, in turn, have electoral consequences. This next step in the representational linkage will begin to show why primary and personal constituents matter, how they are linked to reelection (and geographic) followers—as ideological equilibrium models imply—but why, after all, going too far away from your ultimate constituents (the full electorate) is risky. Were we to rely on measures that force statistical independence on the beliefs of diverse constituencies, we could not disentangle these relationships.