Ideology and interests in congressional voting: The politics of abortion in the U.S. Senate*

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Abstract. Many studies suggest that personal ideology accounts for much more of congressional voting behavior than does attention to the desires of the electorate. There are two main explanations given for this seemingly robust conclusion: 1) poor measures of constituency preferences compared to those for ideology or behavior, and 2) representatives "shirk" on an inattentive electorate. We argue that existing studies have been biased against the "interest" explanation by ignoring the structure of American Congressional elections, in particular the party primary process. Correcting for the party primary effect, we show, within the context of abortion politics, that constituency interests possess greater explanatory power than previous models would suggest.

1. Introduction

Are politicians simply vote maximizers aggregating the interests of their constituencies to ensure election or are they ideologues voting for their view of what government and society should be? Political scientists since at least the 1950s have been divided into two schools. One school led by E.E. Schattschneider (1935) argued that congressmen and women in order to stay in office respond positively to powerful organized interest groups. Thus congressional policy for Schattschneider is class based with organized middle and upper class interests dominating the process. A second school led by Bauer, Pool and Dexter (1972) argued that because there are so many pressures on members of Congress they are essentially free to do as they wish by playing off one interest against another. In short, a member's personal view of what should be done affected public policy.

In the 1970s and 1980s this question, interest or ideology as determinative

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of members' behavior, focused on the analysis of roll call votes. Clausen's (1973) and Sinclair's (1982) analyses of congressional voting show that there are different dimensions to roll call voting (Social welfare, Agricultural Assistance, Government Management etc.) and different coalitions dominate voting across these various dimensions, thus implying interest explanations. Schneider (1979) and more recently Poole and Daniels (1985) and Poole and Rosenthal (1985, 1991) use different analytic techniques to show that, since the second World War (and back to 1800 for Poole and Rosenthal), members' voting scores can be viewed as points along a single liberal-conservative dimension, implying that general ideology determines policy.

Economists have joined this debate and have, like the Political Scientists before them, separated into two schools. The first, led by Stigler (1971) and Becker (1983), argues that politicians respond to organized interests to the detriment of economic efficiency. The other, led by among others Kalt and Zupan (1984, 1990), argue that ideology dominates interest in determining congressmen and congresswomen's policy positions. The breadth of participants and the longevity of the dispute is attributable to the importance of the question.

The interest group school treats politicians as vote maximizers who supply organized interests within their geographical constituency with what the interests demand, making politicians at best readers of interest group tea leaves. Stigler's (1971) seminal study of various forms of regulation is a classic example of this view. Kalt, Zupan (1984), North (1981: 7–12) and others see politicians as having the ability to vote their preferences over constituents' interests with little threat of not being reelected. Kalt and Zupan refer to this freedom to ignore constituency preferences as "ideological shirking." Thus, members have control over decisions independent of interests and are more than readers of interest group intentions. There are, of course, hybrid versions which seek to combine the interest and ideology schools, making members of Congress both responders to interests and purveyors of visions of good government (Hanson, 1991).

Before pursuing the empirical work in this paper, a brief discussion of the uses of the word ideology is in order. Ideology was first used by Antoine de Tracy during the French Revolution and means "the science of ideas." Shortly thereafter Napoleon Bonaparte used ideologue as a derogative to describe his opponents. A common use of the word in Sociology stems from Marx (1854, 1970) and later Mannheim (1936) who use the word to define the conservative interest-based ideas of the dominant class in society. In this sense, ideology continues to be used by scholars proclaiming its end (Bell, 1961) and by various deconstructionist schools.

A second sense of the word, and one closer to our use is Anthony Downs' (1957) definition "a verbal image of the good society and the chief means of

constructing such a society.'' In this sense, ideology entails both a sense of which policies should be pursued and the institutional arrangements most likely to bring about "good policy." In this paper we deal with ideology as a coherent set of beliefs about the political world which allows one to evaluate and choose policies. This view is consistent with Converse's (1964) definition of liberal-conservative ideology. In this paper we deal with ideology as "a legislator's general ideological orientation on a liberal-conservative dimension." (Poole and Rosenthal, 1991).

Economic or interest voting occurs when a legislator's personal preference is for policy A and her constituents favor policy B and she votes B. In the case of ideology as the basis of choice, if we do not clearly measure the relevant constituencies, e.g., geographic versus electoral, then we may attribute explanatory power to ideology when interest is actually motivating behavior. Pelzman (1984), has, for example, shown that the more important (salient) the vote the greater the power of interest variables. In the case of economic or interest models, in order to get it right, we have to know or properly estimate the legislator's preferences. This is, of course, no easy task. Jackson and King (1989) have recently shown the difficulty of determining whether interests or ideology dominate voting.

One matter on which there is agreement is that empirical work clearly shows that a legislator's past voting record can predict future voting. Poole and Rosenthal (1985, 1991) and Krehbiel (1992) use different measures of ideology − nominate scores and ADA respectively − and successfully predict over 80 percent of legislators' votes on subsequent roll calls. Moreover, these "ideological" right hand side variables predict votes even after interest variables have been controlled for. We do not disagree with these results, especially the Poole-Rosenthal (1985, 1991) findings. The important question is "what do such variables measure?" One interpretation, as we have seen, is that these variables measure the legislator's liberal-conservative orientation and in the strong claim case (Kalt and Zupan, 1984, 1990) that ideology accounts for most voting decisions.[1] Those favoring the strong case use terms like shirking or consuming to account for the decision to vote ideology over interest. Roughly the idea is that the legislator is either shirking his duty to constituents or consuming the good will built up over time when he votes his preferences. In both the strong and weak case the legislator is not voting constituent interests.

An alternative view of these right hand side variables is that they are indeed preferences. That is, legislators know their constituents' preferences far better than social scientists' feeble measures of such preferences and thus the ideology scores are simply the legislators' response to constituents' desires. Legislators might achieve their reelection by supplying the right votes given a fixed constituency or they might court flexible reelection majorities across different groups in the geographic constituency. At this point in the paper we prefer to remain

agnostic about the "meaning" of these right hand side variables, and conduct our analysis using a standard ideology measure — ADA scores. We should note, however, that our intention is to show that refined constituency variables increase the explanatory power of interest variables.

In this paper we hope to shed some light on the ideology-interest question by examining U.S. Senators' voting records on abortion related issues. Much of the previous work on the interest-ideology dispute has been limited by researchers' inability to determine constituents' interest and by the fact that most research in this area uses multiple indicators of voting over issues. Fiorina (1974) and Fenno (1978) have both shown that within members' districts there are different constituencies. Fiorina notes that existing measures of constituent interests are crude in contrast to measures of senators' voting behavior. Dealing with abortion related roll calls yields the following advantages for testing ideology versus interests: 1) the issue is salient to constituents and has been for the past decade, or so 2) the political parties have taken clear positions on the issue, and 3) liberals are generally pro-choice while conservatives tend to be more pro-life. Thus we have an important issue with a strong ideological component where constituent opinion is relevant to Senators' reelection prospects.

Another advantage to studying the abortion issue is that the 1988 National Election Study asked random samples of voters in each of the 50 states their opinion regarding abortion. The question asked was the same as the non-state based NES studies have asked since 1972, allowing us to guage the state distributions used here by the national survey results. The advantage then is that we have a reasonably accurate measure of opinion within and across states with which to assess the effect of constituents' interests on Senators' voting decisions.

Given that we have the distribution of state opinion regarding abortion we can more readily ascertain the effects of voters' interests on Senators' voting records. For many Senators, voting on abortion measures does not present a problem. Liberal Democratic Senators representing states where the mean voter in their party and the state mean voter are pro-choice will have a high pro-choice voting score. Conservative Republicans in a strong pro-life state will have little difficulty deciding how to vote. The interesting cases, and the test for an ideological effect, are those in which the Senator is pro-choice and the state is anti-abortion, or the Senator is pro-life and the state is pro-choice. Will such Senators vote the interest or the party/ideology? We assume that a more accurate measure of constituent opinion and an analysis of how Senators respond to distributions of voters will yield results more favorable to the interests theory camp.

Most importantly, our contribution to this literature is that we refine the concept of interests to include the institutional arrangement of party primaries

and interest group strategies given primaries and use these variables to increase the variance explained by interest variables. The ideological variable in the literature is normally either a group-related score such as Americans for Democratic Action (ADA) or the residual for ADA scores after controlling for interest effects (Kalt and Zupan, 1984). None of these studies distinguish the primary electorate's preferences from the November electorate's preferences and the consequences of this difference for Senator's voting records. This is somewhat surprising given the attention paid to this phenomenon in presidential elections (Polsby, 1978; Norrander, 1989). In sum, we shall show that variance in abortion scores is largely determined by Senators' responses to a combination of primary and general election voter distribution. Our strategy is to begin by reporting a Kalt-Zupan-like ideology-interest analysis of Senators voting on abortion roll calls. Then we rerun the analysis, after refining the interest variables in light of the primary election process, showing that interests account for more variance.

2. Roll-call data

Every Senate roll-call vote on abortion was collected from Congressional Quarterly Almanac for the years 1974–1989. This corresponds to the ninety-third through the one-hundred and first Congress. This is also roughly the period between the *Roe* v. *Wade* case and the *Webster* case. Table 1 lists the number of votes included for each Congress. Since it was desirable to capture the changing preferences of the senators for the single issue of abortion, any votes that included measures on subjects other than abortion in conjunction with an abortion question were omitted. Therefore, a vote on final passage of an appropriations bill, in which there happened to be an abortion provision, would not be considered appropriate for this analysis.

In the Senate, by a three-fifths vote, the Senators can elect to invoke cloture. By doing so, no further debate is allowed on the measure under consideration. If a vote to invoke cloture on an abortion amendment was taken, it is included here. Similarly, any attempt to prevent the introduction of an abortion amendment by invoking cloture on the bill to be amended resulted in a vote that is included in our sample.[2]

During each Congress after 1974, at least four votes were taken in the Senate pertaining to the abortion issue. The multiple votes for each congress adds confidence that the data indeed reflect the preferences of Senators. One vote, in which strategic considerations or poor information might induce legislators to vote against their true preferences, will not significantly affect the results in the presence of so many other votes.

We are not interested here in the strategic significance of a senator choosing

Table 1. Number of votes included in sample

Congress	Senate votes
93	1
94	7
95	18
96	15
97	5
98	8
99	7
100	12
101	4

to pair for, announce for, or be polled for a position as opposed to just voting that way. We take any of these forms of preference revelation to be equivalent. Therefore, the only way for a senator to be excluded for a particular roll-call vote is if she in no way made her position known.

In all cases, it was a simple matter to identify whether the pro-choice position corresponded to a vote for or against the measure before the Senate. Therefore, a pro-choice vote was coded 1 and a pro-life vote was coded 0. Each individual vote was considered an observation. For each, it was noted who the senator was casting the vote and on which roll-call it was cast. A dummy variable was created for every senator and one for each roll-call. If an observation corresponded to that particular senator, it was coded 1; otherwise it received a 0. Eliminating observations with missing data, we were left with just under 7,000 observations, dummy variables for 76 roll-call votes, and an additional 186 dummies for the senators who were in the Senate during this period.

3. Computing scale scores

The proposals being voted on in any particular congress never match exactly those voted on in any previous congress. Therefore, it is inappropriate to use raw percentages of pro-choice or pro-life votes as measures for senators' revealed preferences on the issue of abortion. A 65% pro-life voting rate in the 93rd Congress may imply a very different view on abortion than would a 65% pro-life voting rate in the 99th Congress. Therefore, when calculating how pro-choice a position a Senator has taken, it is necessary to correct for the proposals on which she has had the opportunity to vote. While all members of the 101st Congress (the focus of our primary analysis) shared some period together in the Senate, they had been there for varying periods of time, thereby voting on different sets of proposals.

We corrected for this proposal bias by computing our own abortion scale scores. We ran a logit regression with every available individual Senator vote as the dependent variable. We regressed these 7,000 or so cases on the roll-call dummies discussed above. The coefficient for each Senator's dummy informs us how likely she is to vote in the pro-choice direction, *correcting for the roll-call votes she has participated in*. A higher coefficient indicates a higher propensity to vote pro-choice. The coefficients for members of the 101st Senate are presented in Table A1 in Appendix.[3] The coefficient for each roll-call vote indicates how likely that proposal was to induce a pro-choice from an average Senator. Note that a roll-call with a high coefficient elicited many pro-choice votes, thereby indicating that the proposal corresponding to that roll-call must have itself been very pro-life. Therefore, a higher coefficient indicates a more pro-life proposal.

In regard to our scale scores and specific votes on abortion during the 101st Congress the scores predict specific votes quite well. Senate Bill 557, for example, amended Title IX of the 1972 Education Act which required treating abortion the same way that pregnancy and childbirth are treated in regard to health services, insurance and leave policies. Our scores correctly predicted 53 of 56 pro-life votes and 37 of 39 pro-choice votes. Thus we are confident that these scale scores accurately measure the dimensionality of Senators' abortion voting scores.

4. Preliminary regression analysis

The regression analysis was performed on all senators serving in 1988. This paper seeks to determine the role of ideology, party and interest in determining Senators' votes on abortion related issues. Thus we use Americans for Democratic Action (ADA) scores for 1987 for our measure of ideology,[4] senators' party identification for party, and a mean measure of respondents within a state as the interest variable.[5] ADA scores are the standard score used as a right hand side variable to measure a senator's ideology − the higher the score the more liberal the Senator. We code Democratic Senators = 1 and Republican Senators = 0. The interest variable comes from the state sample of the 1988 National Election Study where a sample of each state was asked their position on abortion. A response of "never legal" was coded 1, to save the mother's life was coded 2, while "legal under certain conditions" was coded 3 and "abortion on demand" was coded 4. The original state score was normalized so that the national mean response would be 0, with a standard deviation of 1.

Stimulating Kalt and Zupan's analysis entails regressing the abortion voting scores on ideology, interest and party variables. The ideology variable represents the effect of ADA scores on abortion related voting when the state's

Table 2. Regression models of Senator voting on abortion: 101st Senate

Variable	Party/interest model	Ideology/ interest model	Party/interest/ ideology model
Constant	−1.339	−2.214	−2.218
	(−6.76)	(−10.57)	(−10.47)
Party	1.724		−0.075
	(6.41)		(−0.21)
Ideology		0.035	0.035
(ADA)		(10.20)	(6.61)
Interest	1.754	1.273	1.257
	(3.00)	(2.60)	(2.52)
Corrected R^2	0.316	0.530	0.525

Dependent variable: Senators' scale score (t-statistics in parentheses).

mean voter position on abortion and the effect of party is controlled for. Likewise the interest scores represent their effect when ideology and party are taken into account. The three models tested are a party/interest model and ideology/ interest model and a party/interest/ideology model. The higher the ideology, interest and party score the more pro-choice the Senator's voting record is expected to be. Therefore, all coefficients are expected to be positive if significant. Table 2 shows the results.

The results are consistent with other ideology studies. Ideology and interest have explanatory power while party falls out. The disappearance of party is not surprising given that the ADA ideology variable absorbs the party variance. Interest, as defined by the distribution of opinion on abortion within a state, remains in the equation but does not appear to be as important a factor as does ideology.

Kalt and Zupan change their measure of ideology from ADA residuals to League of Conservation Voters Scores and rerun the regression to show that ideological predisposition is robust regardless of the measure used. In Table 3 we repeat the regression shown in Table 2 substituting Chamber of Commerce (C of C) scores in an attempt to duplicate the robustness of their findings. We chose C of C scores because they presumably measure a Senator's support for or opposition to legislation favoring business, which on the face of it is not directly related to abortion. If C of C scores explain variance, a la Kalt and Zupan's analysis, the conclusion should be that a Senator's general liberalness or conservativeness disposes them to vote for or against choice issues.

The results again support the ideological hypothesis. While the total variance explained drops, the ideology variable explains more variance than the interest

Table 3. Regression models of Senator voting on abortion with Chamber of Commerce scores as ideology measure

Variable	Party/interest model	Ideology/ interest model	Party/interest/ ideology model
Constant	1.865	1.889	1.586
	(2.76)	(6.33)	(2.39)
Party	0.048		0.209
	(0.12)		(0.50)
Ideology	−0.042	−0.042	−0.039
(CoC)	(−4.85)	(−8.41)	(−4.57)
Interest		1.355	1.397
		(2.53)	(2.57)
Corrected R^2	0.400	0.437	0.432

Dependent variable: Senators' scale score (t-statistics in parentheses).

variable. We can conclude that different measures of ideology explain variance in Senators' abortion voting records. Should we conclude that ideology dominates voting behavior even when interest is controlled for? We think that an analysis of the institution of primaries and the behavior of pro-life groups in primaries can account for more Senators' voting behavior, thus making interests more important than the present analysis suggests.

5. Party difference

The abortion issue affects the two parties in different ways. This ultimately forces Republican Senator's further right or pro-life and allows Democratic Senators to appeal to their states' median voters. Primary elections differ from November elections in two fundamental ways: 1) members of the same party compete against each other to be the party's candidate in November (thus party can not serve as a cue in voting); and 2) voter turnout in primaries is much lower than the general election turnout and primary voters tend to have more strident and articulated views. Therefore, liberals tend to dominate Democratic primaries, while conservatives dominate Republican primaries and moderates determine November results. Depending on the distribution of party primary voters and November voters, a party may be advantaged or disadvantaged by the primary process. If the November voters in a given state are closer to the primary voters in one of the two parties, that party's nominee can be said to be advantaged because she will not have to change positions between the

primary and the general election. The opponent, however, will have to move further spatially from the primary to the November election in an attempt to capture November votes.

Such interpretations are clearly given by analysts of recent presidential elections. Democratic Presidential hopefuls, campaigning in different primaries, make so many promises to the special interests who dominate low turnout elections that they can not move to the middle credibly in time for November. Republican presidential hopefuls, given the homogeneous nature of the party, make fewer promises and winners are chosen earlier than for their Democratic counterparts. This allows Republican presidential candidates time and room to court the moderate November electorate.

This story assumes a bimodel distribution of primary party voters with a large central tendency composed of November voters. If we assume a distribution of voters where the November electorate is closer to or coterminous with one of the party's primary voters, then clearly that party's candidates have the advantage. The advantage is that the position they take to win the primary will not hurt them in the general election whereas the candidate of the other party will, given opposition or the threat of opposition in the primary, take a position likely to hurt them in the general election. Specifically, such a candidate will either have to maintain their primary position (a decision unpopular with the November electorate) or change their position toward the November electorate's position and generate the traditional flip-flop campaign issue.

In the sections that follow, we demonstrate that exactly these features characterize the present party primary and general election constituencies with regard to the abortion issue. Specifically we show that over the 1972 to 1988 time period the change in constituents' preferences made the November electorate's position on abortion issues almost the equivalent of the Democratic Party's primary electorate while the Republican primary electorate became more pro-life and thus further from the November electorate. Given these distributions, Republican candidates were forced to take strong pro-life positions or face a pro-life challenger in the primary. However, even a pro-choice candidate who won in the primary went into the general election with a divided party and a smaller chance of success.

The likelihood of a primary opponent for pro-choice Republican candidates is not easy to measure since the very threat of such an opponent can make a Senator behave in a pro-life fashion so as to avert a challenge. Our strategy was to interview members of the Republican National Committee and members of Republican polling companies who were active in campaigns during the 1978–1990 period. The interview results were impressive. Each respondent said that pro-choice positions, especially in the 1981–1986 period of Republican control of Senate, were guaranteed to generate pro-life primary movement. One California pollster, who was asked by his party to determine a Republican

position on abortion in 1985 which would place the Republicans close to the November electorate, said there was no trouble finding such a position. Such a position featured abortion in at least the first trimester with conditions such as at least one parent's consent and no federal funding. Such a position would, by his polling results, have moved Republican candidates in line with November electorate. However, he said each time these results were even broached to party groups, the pro-life Republicans hit the ceiling and threatened party mayhem. The project was finally dropped when it became clear that the right-to-life Republicans were not willing to compromise on the abortion issue.

In a recent article, W.D. McInturff, a Republican pollster, says, "As of today, (1989) pro-life elements remain more active than their pro-choice opponents. In a special program created by the Republican Party to monitor the organizational contact by different special interest groups, "the pro-choice community only out contacted right-to-life groups in one of six states tested." Right-to-life groups are still quite active and affect Republican politicians ability to move toward November electorates' preferences. In the same piece, McInturff points to evidence of voters being "particularly wary of politicians who flip-flop on this (abortion) issue." In sum, our interview evidence clearly points out the fact that pro-choice Republican Senators are likely to generate primary opponents and that Senators who voted pro-life in the past must fear flip-flopping on the issue. In addition to this evidence, there have been numerous instances of pro-life challenges to pro-choice candidates. The 1992 challenge in California to Senator Seymour by a pro-life House member being precisely such an instance.

6. Public opinion on abortion

Having established the legitimate fear of pro-life primary opponents we now turn to an analysis of the distribution of opinion regarding abortion over the 1972–1988 time period. Beginning in 1972, and then (every two years) from 1976 on, the National Election Study has asked random samples of American voters the same question regarding their views on abortion. Respondents were asked their position on abortion given four choices 1 = never; 2 = save life of mother; 3 = sometimes; 4 = always. Given the same question over time, we can track public opinion regarding abortion for both likely primary voters and for November voters. Our claim is that over this time period Democratic primary voters' abortion views will closely resemble November voters' view while Republican primary voters will move away from November voters' views.

In 1972 18 percent of Democratic primary voters said abortion should never be permitted while 18.8 percent took the most pro-choice position. In contrast less than 13 percent of Republican primary voters said never; while a full

Table 4. Opinion change ratios for Primary and General Election voters: 1972–1988[a]

Pro-life

Sample	Whole country	North only	South only
November Electorate	0.85	0.77	0.89
Primary Democrats	0.81	0.64	1.14
Primary Republicans	1.40	1.22	2.72

Pro-choice

Sample	Whole country	North only	South only
November Electorate	1.65	1.34	3.60
Primary Democrats	1.80	1.62	2.61
Primary Republicans	1.18	1.20	2.36

[a]Each pro-life ratio is calculated by dividing the percentage of the relevant population that expressed the most pro-life position in 1988 by the pro-life percentage in 1972. As an example, if 17% of the 1972 sample had expressed the opinion that abortion should never be legal and 34% of the 1988 sample had expressed such an opinion, the pro-life opinion change ratio for that sample would be 2.0. Pro-choice ratios were calculated in an analogous manner.

21.1 percent took the most pro-choice position. Slightly over 11 percent (of the November electorate responded never while 23.4 percent took the most pro-choice position. Thus in 1972 Republican primary voters looked like the November electorate and Democratic primary voters were out of sync with the November electorate. The change over the next 16 years is quite dramatic. Table 4 shows the *ratio of change* in the pro-life and pro-choice positions over the 1977–1988 period by primary voters versus the November electorate, and by North-South divisions, as well as the whole country.

The proportion of general election voters taking the "abortion is never all right position" declined with the ratio being .85. Democratic primary voters moved in the same direction with the change ratio being .81. However, Republican primary voters favoring anti-abortion policies increased with the ratio being 1.4. The breakdown by region is revealing in that Northern general election and Democratic primary voters had ratios of .77 and .64 respectively, while Northern Republicans increased to a 1.22 ratio. In the South, the

November electorate favoring the anti-abortion position declined (.89) while Democrats went up slightly (1.14) and Republicans went up 2.72. Not only is the ratio of change in opinion for Southern Republicans dramatic, so too is their rise in number, with strong identifiers more than doubling from 6.3 percent of the sample in 1972 to 13 percent in 1988. In sum, during this period the November electorate across the country and in both regions became increasingly less pro-life. Democratic primary voters also became less pro-life with the exception of Southern Democrats who were about the same over the time period. Republican primary voters clearly became more pro-life thus placing themselves at a distance from both Democrats and more importantly the November electorate.

On the pro-choice side of coin, the November electorate became decidedly more pro-choice. Over the whole country, the ratio of change was 1.65 while in the South, the change was a dramatic 3.60 ratio. Primary Democrats across the country and by region also moved decidedly into a pro-choice posture, with the lowest ratio being 1.62 for Northern Democrats (who started off rather pro-choice to begin with). Primary Republicans also became more pro-choice, but much less so than their Democrat counterparts, 1.18 to 1.80 respectively. Interestingly, Southern Republicans favoring the most pro-choice position more than doubled − a ratio of 2.36. Here again, as was the case for the pro-life position, Democratic primary voters are closer to the November electorate than are Republican primary voters.

Putting the pro-life and pro-choice results together yields the conclusion that Democratic Senatorial candidates need not take positions in the primary on abortion which differ from the November electorate's views. Republican Senatorial candidates have a real dilemma; their primaries are characterized by both sizable increases in the pro-life position and some increase in the pro-choice position, 1.40 to 1.18 respectively. The dilemma is that if they take a pro-choice position in accord with the November electorate, they will generate a pro-life primary opponent, and even if they win the primary, they will have the traditional disadvantage of a divided party. Their Democratic opponents do not face this dilemma since their primary voters and the November electorate hold the same views − relatively speaking. This conclusion is in accord with an analysis written in November of 1990 by Fred Yang of Peter Hart Research. "The Republican Party would seem to find itself at a disadvantage with regard to choice. Its Pro-Life candidates risk alienating nominal members it has attracted by the Party's record on economic issues (suburbanites and young voters), while a Pro-Choice GOP candidate risks the ire of the core elements of the Party, the "big tent" theory not withstanding" (Yang, 1991: 11).

Another way to illustrate the extent of change in positions on abortion is to show means and modes by category of voter (see Figure 1). In 1972, Northern Primary Republicans (x = 2.51) were closer to November voters (2.65) than
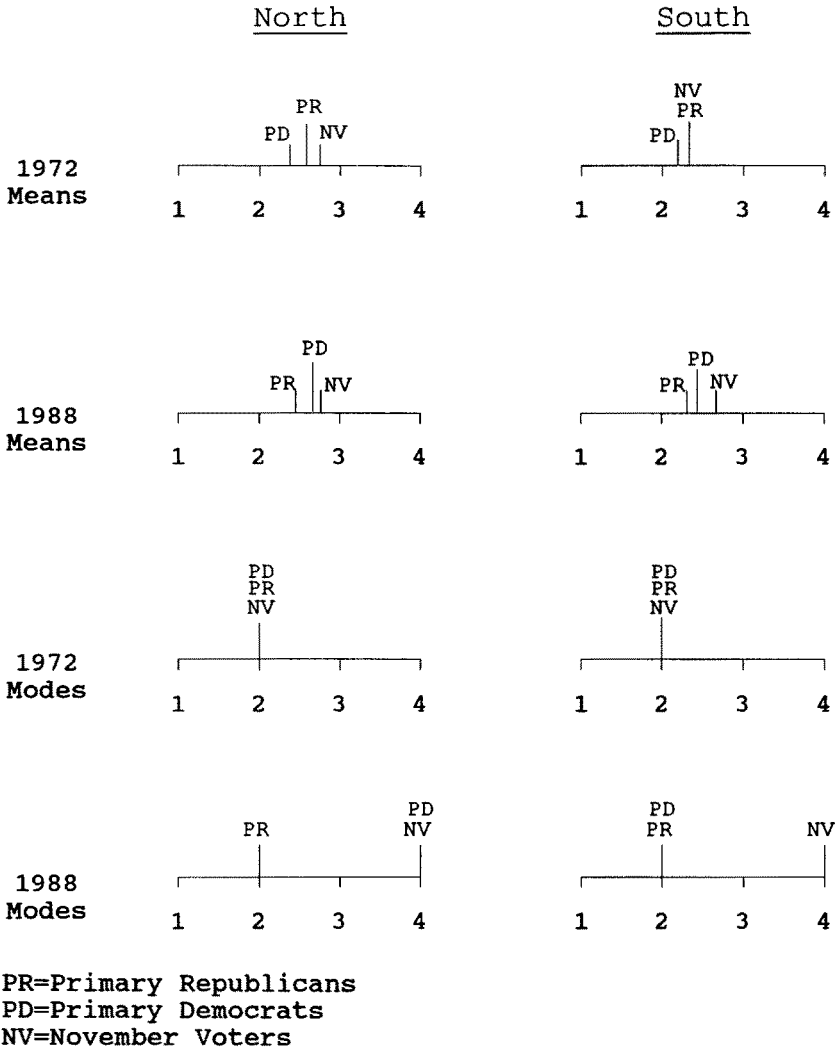
North   South

1972
Means

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          1    2    3    4          1    2    3    4
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1988
Means

1972
Modes

1988
Modes

PR=Primary Republicans
PD=Primary Democrats
NV=November Voters

Figure 1. Electorate position on abortion – 1972–1988 by region and type of voter.

were Primary Democrats (2.41). The modal position in 1972 was 2.0 for each voter group. By 1988 Northern Primary Democrats (x = 2.83) were in almost the same position as November voters (x = 2.88) while Primary Republicans were at 2.64. More interestingly, the modal position for Primary Democrats and November voters was 4.0, while for Primary Republicans it was 2.0.

The same basic pattern holds for the South. In 1972, mean Primary Republicans and November voters were both at x = 2.18 while Primary Democrats

were at x = 2.12. The modal position for all three groups was 2.0. By 1988 Primary Democrats were at x = 2.40; primary Republicans at x = 2.31 and November voters were at x = 2.64. In short, Democratic primary voters were closer to the electorate on abortion than were their Republican counterparts. Over the 1972–1988 time period, the country as a whole moved toward a pro-choice position and primary Democratic voters replaced primary Republicans in the policy space closest to the general electorate. The analysis also shows that the model Republican primary voter favors abortion only to save the life of the mother while for both Democratic primary voters and the general electorate the modal position is that abortion is OK.

Thus, however analyzed (means, modes, or ratios), by 1988 Democratic primary voters were closer to the general electorate than were their Republican counterparts. The 1988 NES Senate Election Study asked the same question in regard to abortion and the aggregate results show Democratic primary voters closer to the November electorate than are their Republican counterparts. We standardized the state scores making the mean zero and the standard deviation one. The results show that, for the country as a whole, the mean Democratic primary voters position and the mean November electorate position were positive, with Democratic voters being about one-half a standard deviation more liberal, while Republican primary voters were on average slightly anti-abortion and almost a standard deviation away from the November electorate. Dividing the country into North and South does not change this basic result. In the South all voters are slightly less pro-choice, but Democrats are closer to the November voter. In the North, all voters are slightly more pro-choice, but again, Republican primary voters are further from the November electorate. In short, the NES state study results are consistent with the findings from national survey results shown above.

7. Primary-corrected regresson analysis

Given that Republican Senators on average face primary electorates that are more pro-life than are the November electorates, we would expect Republican Senators voting scores on abortion to be unrelated to the state mean voter. If we rerun the Kalt-Zupan type regression separately for each party, we expect Republican Senators' abortion scores to be explained by "ideology." Since Democratic Senators have, on average, primary electorates closer to November voters, we expect that the state mean on abortion policy will explain a good portion of the variance in their abortion voting record. Table 5 shows the results.

The regression run on the 46 Republican Senators show ideology to be the sole significant explanatory variable with a coefficient of .041. Interest, as

Table 5. Regression model of Senator voting on abortion by party

Variable	Republicans	Democrats
Constant	− 2.349*	− 1.639*
	(0.223)	(0.706)
Ideology	0.041*	0.027*
(ADA)	(0.006)	(0.009)
Interest	0.977	1.483*
	(0.707)	(0.599)
Corrected		
R^2	0.526	0.200

Dependent variable: Senators's scale score (standard errors in parentheses).
* Significant at 0.05.

measured by the state mean position on abortion, is insignificant. The analysis for the 54 Democratic Senators shows that interest is significant and that interest has a relatively larger impact than ideology for Democrats compared to Republicans.[6] In general, this result is not surprising given the Republican Senators' dilemma. Our claim is that the primary nominating institution and the strong likelihood of pro-life primary challengers to Republicans who vote pro-choice ensures that in a Kalt-Zupan type regression, ideology will dominate interests for Republican Senators. Democratic senators do not face pro-life challenges and their primary voters are closer to the state mean position on abortion. Thus they can take pro-choice positions roughly consistent with the mean state position. The overall abortion voting scores by party verify this finding. Democratic Senators mean abortion score is .40 (pro-choice) while for Republicans, the mean is − 1.28. Norther Republicans are slightly less pro-life than Southern Republican Senators (− 1.20 to − 1.84) while Northern Democrats are much more pro-choice (.54) than are their Southern counterparts (.02).

We then took steps to examine the effects of the potential Republican dilemma on our regression analysis. Each Republican senator in our sample was coded 1 if she represented a state whose mean Republican respondent revealed a more pro-life position than its mean respondent for the whole state.[7] Otherwise, the senator was coded as 0. Table 6 clearly illustrates two points: 1) when correcting for those senators facing an electoral dilemma, Republican senators votes their states' interests in much the same way as their Democratic colleagues, and 2) those Republican senators facing such an electoral dilemma exhibited more pro-life behavior in Congress than did their colleagues without such pressures.

Table 6. Regression model of senator voting on abortion: Republicans only

Variable	Coefficient (Stnd. Err.)
Constant	−1.918*
	(0.333)
Ideology	0.039*
(ADA)	(0.006)
Interest	1.679*
	(0.803)
Dilemma	−0.635**
	(0.370)
Corrected R^2	0.521

  * Significant at 0.05.
** Significant at 0.10.

8. Electoral dilemmas and reelection success

These results indicate that measures of interests within states must be expanded to include the effect of primaries and the threat of opposition to account more fully for Senators' voting records on abortion. Republican Senators who face pro-life primary challenges and November electorates which are pro-choice, face a truly difficult choice. Those elected in the heyday of the Reagan ''Revolution'' voted pro-life on a wide series of abortion related issues. As public opinion changed and the Court came closer to overturning *Roe* v. *Wade*, prochoice forces came to life, leaving these Senators in a delicate position. They could not switch from pro-life to pro-choice, since polls revealed strong voter distrust of such behavior. Preserving their pro-life voting scores could help assure them renomination, but they faced increasingly difficult opponents in the general election. On the other hand, switching to a pro-choice position meant enduring strong pro-life primary challenges. In short, these Senators faced an insolvable electoral dilemma.

Our prediction is that the re-election record of pro-life Senators past the 101st Congress will not be good. In contrast, consistently pro-choice Senators will have a relatively good reelection record. We recognize that abortion is not the only issue confronting voters when they choose between Senators in an election, however, our view is that all other things being equal, we should observe that pro-life Senators since 1986 have been defeated and have retired at rates significantly higher than those found for their pro-choice counterparts. In the analysis that follows, we treat the decision to retire as endogenous, but conditioned by the dilemma described above. The specific prediction is that pro-life

Senators will have retired or been defeated in elections at much higher rates than pro-choice Senators.

We choose to analyze pro-life supporters who had scores of -2.0 or lower (-2.5 a being the limit) and pro-choice Senators who had scores of 1.0 or greater. The choice of these cut points was dictated by our desire to analyze Senators whose positions on the issue were clear to voters. Senators with scores at or outside these cut points had taken clear stands on the issue and thus voters could clearly classify them correctly. Senators with scores outside these cut points number 58 with 31 being pro-choice and 28 being pro-life. Of the 28 pro-life Senators, *10* (36%) have either retired or been defeated in elections, while of the pro-choice Senators, only 4 (13%) have retired or been defeated. Lest this be thought of as simply a result of chance or broad electoral trends in the 1988 and 1990 elections, we analyzed the NES Senate Election survey results by state.

The argument is that a candidate who faced an electorate, primary, general, or both which differed from her position on abortion would have the greater likelihood or either losing or retiring. There are three ways in which candidates could have an electoral dilemma. First, the general electorate and the primary electorate could have a position on abortion which differed from the candidate's. Second, the general electorate and the candidate's primary electorate could differ on abortion. Third, the candidate's primary electorate could agree with the candidate's position and the general electorate agree with the direction of the candidate's views, but the other party's primary voters could be closer to the general electorate. These three dilemmas are listed in order of severity. Obviously, if both sets of voters differ from the Senator's position, the Senator is in greater difficulty than the case where the primary and general electorate differ with the primary in favor of the Senator. The third case obviously presents less of a difficulty since it is no longer a directional difference rather one of fit. If the ten losing or retiring pro-life Senators face these dilemmas at a higher rate than their pro-choice counterparts, we have further evidence that the distribution of preferences or the interests of voters dictates results. Senators faced with these dilemmas either have difficulty in supplying the right roll call votes or they supply the wrong votes and thus pay the electoral price.

Of the ten pro-life Senators who have retired or lost eight fit into one of these three dilemmas. Three of the ten found themselves in Senator Humphrey's (R, N.H.) shoes, facing a primary electorate that was pro-life and a pro-choice November electorate. Three found themselves in senator Armstrong's (R, Col.) position facing a primary and general electorate that was pro-choice. Two were in the position of being on the right side of the issue with both their primary voters and the general electorate, but their party's position was further away from the general electorate than that of the other party. The results for the pro-choice Senators are decidedly different. Only one retiring or losing

Senator, John Melcher (D, Mont.), faced an electoral dilemma. The general electorate was pro-life while the Democrats were pro-choice. The other three pro-choice Senators in this category did not face any abortion issue related dilemma. In sum, 80 percent of the losing or retiring pro-life Senators faced electorates whose preferences caused problems, while only 25 percent of pro-choice counterparts faced such a dilemma. Not only were more pro-life Senators losing or choosing retirement, but they clearly faced electorates with abortion related preferences which caused them problems.

9. Discussion

We began this paper in an attempt to increase understanding of the role of ideology and interest in determining representatives' voting behavior. The central question was: To what extent are representatives free to vote their ideological preferences? One school of thought argues that elected representatives simply respond to organized interests by voting for policies advocated by such groups in their constituencies. Another group argues that such interests explain little; rather, elected representatives vote their own ideological preferences. By examining U.S. Senators voting records on abortion related votes, we showed that standard regression analyses demonstrated ideological dominance over interests. Jackson and Kingdon (1992) and Goff and Grier (1993) have clearly demonstrated that there are flaws associated with existing measures of both interest and ideology. While we have no doubt that these criticisms are valid, by taking seriously the impact of electoral structure, we believe that we have shown that such measures may be more valuable than these critiques would suggest. That is, how these numbers are used is as important as from whence they came.

When we added the institutional feature of primary elections and the behavioral feature of unrepresentative voter turnout in primaries, we found a distinct partisan difference. Shifts in public opinion over the 1972–1988 period affected the two parties differentially. Democratic Party Senate candidates faced primary electorates that were closer to the November electorate's abortion views, thus they could vote their states mean position without fear of an abortion related primary challenge. Many Republican Senators faced a pro-life primary electorate and a pro-choice November electorate. Thus, in order to assure themselves of nomination of renomination, they voted pro-life. Thus, rerunning the original regression showed significant differences between parties. Further analysis showed that Republican Senators facing the two differing constituencies (primary = pro-life; general election = pro-choice) were retiring or being defeated at a much higher rate that were their colleagues not facing divided primary and general election constituencies. Again, this higher rate is an interest effect that does not show up in Kalt-Zupan style analyses.

What generalizations can be drawn from these results? The first is methodological. Measuring constituent characteristics is *not* a straightforward task. A Senator's constituency is multi-faceted. Geographic (state) characteristics are not good measures of a Senator's constituency because one must distinguish an electoral constituency from a geographic constituency (i.e., Senators Cranston (D, Cal.) and Senator Seymour (R, Cal.) share the same state, but their electoral constituencies differ). Similarly, one must distinguish primary electorate from November electorates and factor in the likelihood of certain votes generating primary opponents in order to more completely estimate interests. In addition, interest effects can be felt beyond roll call voting records as attested to by the high rate of pro-life Republican retirements and defeats. This high retirement-defeat level occurs in spite of the fact that abortion policy is not the sole factor determining election results.

The second generalization is that the broad shifts in American public opinion in regard to abortion are clearly related to election results. Pro-choice Senators are being returned to the Senate at much higher rates than are pro-life Senators. Moreover, this general result aids one party while damaging the other. The movement of pro-life interests into the Republican Party increases the probability that Republican Senators who vote pro-choice will generate pro-life primary opponents. Thus, in order to win primaries, Republican Senators vote pro-life positions which cause them trouble with November electorates. The 1992 primary campaigns for the two Republican nominations for U.S. Senate from California are cases in point. The two pro-choice candidates, Tom Campbell (Republican House member) and Senator Seymour, faced very strong pro-life opponents, who were counting on a pro-life vote in the June primary. Both Campbell and Seymour attempted to circumvent the pro-life primary vote by arguing or advertising that unlike their opponents, they could win in November because their views correspond closely to the mean voter in the November elections.

In short, the institution of primaries, or the nominating mechanism and the behavioral features of voters in primaries, hurts the Republicans on abortion related issues. The more general point is that special interests have differential effects depending upon electoral institutions, and unless we take these into account, we will underestimate interest effects and continue to overestimate the effects of ideology.

Notes

1. Many scholars take exception to Kalt and Zupan's methods. For an especially incisive and comprehensive critique see Goff and Grier (1993). See also Krehbiel (1993) for a discussion of the relative merits of constituency characteristic-based versus roll call vote-based methods of inferring legislators' preferences.

2. *Congressional Quarterly Almanac* is very thorough in indicating when a cloture vote served either of these two purposes.

3. Some Senators voted exclusively in either the pro-life or pro-choice direction during their tenure in the Senate. For these Senators, the logit procedure is unable to determine coefficients due to the lack of variation in their behavior. Therefore, we assumed that these Senators lay at the extremes of our scale. Each Senator who voted exclusively pro-life was assigned a score of -2.5; each Senator who voted exclusively pro-choice was assigned a score of 2.5. This technique, using a Senator's full voting record on abortion over time, in effect pools the data to allow for time series as well as cross-sectional analysis. Thus, we conform to Vandaren's (1990) critique of roll call studies. However, in this paper we only do cross-sectional analysis.

4. Any roll calls dealing with abortion have been removed from the ADA scores.

5. Since respondents could choose from among only four possible answers, median responses varied little across states. Therefore, mean responses are likely to reflect better the "average" views within a state.

6. We performed an F-test to make sure that it was appropriate to examine the two parties separately. As expected, the difference was statistically significant. This comports well with the results found in Goff and Grier (1993). They find a difference between the behavioral responses of Democratic and Republican Senators to the same geograpic constituencies; however, they are content to conclude that the two parties must appeal to different constituencies. There is no attempt to explain why this might be. Our study begins to offer an explanation.

7. We used strong party identifiers as a proxy for likely primary voters. This significantly reduced the sample size for each state. As such, we are not especially confident of the mean Republican response values for each state. We are more confident, however, that such a number's relationship to that of the November electorate is probably correct in most instances, in terms of being to the left or to the right. The relationship we find is probably even more striking in reality, as primary voters have been shown to hold even more extreme views on issues like abortion than even strong party identifiers.

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Appendix

Table A1. Brady-Schwartz scale scores for members of the 101st Senate

Senator	State	Party	Scale score	ADA
Dodd	CT	D	1.086	65
Weiker	CT	R	1.348	85
Mitchell	ME	D	−0.146	95
Cohen	ME	R	1.119	55
Kennedy	MA	D	1.194	90
Kerry	MA	D	1.366	85
Humphrey	NH	R	−2.500	5
Rudman	NH	R	1.134	25
Pell	RI	D	0.375	90
Chaffee	RI	R	1.259	80
Leahy	VT	D	0.980	90

Table A1. Continued

Senator	State	Party	Scale score	ADA
Stafford	VT	R	1.350	75
Biden	DE	D	−1.184	70
Roth	DE	R	−0.879	20
Bradley	NJ	D	1.097	80
Lautenberg	NJ	D	2.500	85
Moynihan	NY	D	1.461	95
D'Amato	NY	R	−2.449	30
Heinz	PA	R	0.554	70
Specter	PA	R	1.134	80
Dixon	IL	D	−0.605	60
Simon	IL	D	1.344	35
Lugar	IN	R	−2.074	5
Quayle	IN	R	−2.500	5
Levin	MI	D	1.347	90
Riegal	MI	D	1.471	90
Glenn	OH	D	1.598	80
Metzenbaum	OH	D	1.302	100
Proxmire	WI	D	−2.098	80
Kasten	WI	R	−2.500	20
Harken	IA	D	0.591	95
Grassley	IA	R	−2.500	25
Dole	KS	R	−1.940	5
Kasslebaum	KS	R	0.554	30
Boschewitz	MN	R	−2.172	25
Durenburger	MN	R	−2.500	55
Bond	MO	R	−2.500	10
Danforth	MO	R	−2.228	35
Exan	NB	D	−1.576	65
Karnes	NB	R	−2.500	0
Burdick	ND	D	0.885	95
Conrad	ND	D	−1.036	85
Daschle	SD	D	0.932	85
Pressler	SD	R	−2.500	25
Trible	VA	R	−2.500	15
Warner	VA	R	−0.738	25
Heflin	AL	D	−1.088	35
Shelby	AL	D	−1.201	50
Bupers	AR	D	1.269	85
Pryor	AR	D	0.829	75
Chiles	FL	D	0.115	55
Graham	FL	D	0.246	60
Fowler	GA	D	0.518	90
Nunn	GA	D	0.169	55
Breaux	LA	D	−1.201	70
Johnson	LA	D	−1.941	70
Stennis	MS	D	−1.053	50

Table A1. Continued

Senator	State	Party	Scale score	ADA
Cochran	MS	R	−0.926	20
Sanford	NC	D	0.469	85
Helms	NC	R	−2.416	10
Hollings	SC	D	1.566	40
Thurmond	SC	R	−1.974	15
Bensten	TX	D	0.988	60
Gramm	TX	R	−2.500	5
Ford	KY	D	−2.263	75
McConnel	KY	R	−2.299	10
Milkulski	MD	D	1.318	100
Sarbanes	MD	D	1.268	100
Boren	OK	D	−0.952	35
Nickels	OK	R	−2.500	5
Gore	TN	D	0.559	60
Sasser	TN	D	0.471	80
Byrd	WV	D	0.313	70
Rockefeller	WV	D	0.893	90
Deconcini	AZ	D	−1.724	60
McCantz	AZ	R	−1.873	15
Wirth	CO	D	2.500	85
Armstrong	CO	R	−2.500	0
McClure	ID	R	−2.392	0
Symms	ID	R	−2.500	0
Baucus	MT	D	1.119	75
Melcher	MT	D	−2.019	70
Reid	NV	D	−1.873	80
Hecht	NV	R	−2.500	10
Binghaman	NM	D	1.480	65
Domenici	NM	R	−2.247	20
Garn	UT	R	−2.412	5
Hatch	UT	R	−2.451	5
Simpson	WY	R	0.371	10
Wallop	WY	R	−0.405	0
Cranston	CA	D	1.527	75
Wilson	CA	R	−0.340	30
Hatfield	OR	R	−1.385	65
Packwood	OR	R	0.953	60
Adams	WA	D	2.500	95
Evans	WA	R	1.346	45
Murkowski	AK	R	−2.313	5
Stevens	AK	R	0.775	25
Innouye	HI	D	1.595	95
Matsunaga	HI	D	1.843	90