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Reviewed work(s):

Source: *The American Political Science Review*, Vol. 85, No. 2 (Jun., 1991), pp. 457-474

Published by: [American Political Science Association](#)

Stable URL: <http://www.jstor.org/stable/1963169>

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CONSTITUENCY OPINION AND CONGRESSIONAL POLICY MAKING: THE REAGAN DEFENSE BUILDUP

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Representatives' votes on a series of defense budget roll calls in the first year of the Reagan administration's Pentagon buildup are related to constituency opinions on defense spending during the 1980 election campaign. The strong aggregate constituency demand for increased defense spending in 1980 is estimated to have added almost \$17 billion (about 10%) to the total fiscal year 1982 Pentagon appropriation. The impact of constituency opinion was largely independent of specific political circumstances: differential responsiveness in districts with partisan turnover, intense district-level competition, and strong presidential coattails together accounted for less than \$1 billion in additional appropriations, with the remaining \$16 billion attributable to across-the-board responsiveness by even the most safely incumbent representatives.

The appeal of representative democracy hinges on the responsiveness of elected politicians to the preferences and interests of their constituents. Given the theoretical and practical significance of the connection between constituents' opinions and their representatives' legislative activities, it is remarkable that the large and in some ways quite sophisticated empirical literature addressing this connection includes so few direct estimates of the relationship between constituency opinion and specific legislative outcomes.¹ My aim here is to provide one such estimate.

The policy issue I have chosen to examine is the level of total Pentagon spending in the first (FY 1982) defense appropriations bill of the Reagan administration. That bill, the first in a series of annual appropriations resulting in a 40% real increase in defense spending during Reagan's first five years in office, is of obvious political significance. But the issue of defense spending is also especially interesting from a broader theoretical per-

spective because the strong public demand for a defense spending increase at the beginning of the Reagan era provides unusual analytical leverage for assessing the potential impact of public opinion on the making of public policy.

I shall describe some alternative mechanisms of congressional responsiveness to constituency opinion; briefly characterize the politics of defense at the beginning of the Reagan era; present my analysis of representatives' preferences regarding FY 1982 defense appropriations, relating those preferences to constituency opinions on the defense spending issue and to other political characteristics of the representatives and their districts; extend the analysis of FY 1982 defense appropriations from the individual to the aggregate level in an attempt to estimate the impact of congressional responsiveness on the total level of Pentagon appropriations; and finally, touch upon some of the implications of my analysis for the study of linkages between public opinion and public policy.

Parties, Elections, and Congressional Responsiveness

How does constituency opinion get translated into public policy? The emphasis in the modern tradition of democratic thought variously encompassed by "rational choice," "responsible party," and "realist" theories has been upon the importance of electoral competition for inducing political responsiveness, either through actual partisan turnover or through anticipation by incumbents of constituents' policy demands (Downs 1957; Schattschneider 1942; Schumpeter 1950). But for observers of the contemporary U.S. Congress, both the steady pull of prospective electoral competition and the occasional push of widespread partisan turnover have seemed tenuous mechanisms for ensuring democratic accountability. Increasingly, incumbent representatives have been returned to office reliably, overwhelmingly, and independently of broad national political currents.² Presidential landslides have been common enough; but instead of signaling major and enduring "party realignments," those shifts at the presidential level have increasingly left Congress essentially untouched.³

The significance of this historical trend has been stressed most forcefully by political historians raised on the major party realignments—and subsequent policy shifts—of earlier eras. Thus, Brady (1988, 181) argued that:

given the noncompetitive nature of contemporary House elections, two conditions of responsible government are difficult to meet. Presidents will not carry majorities into office with them, and there will be little alternation of or undivided control of the government. Under these conditions American government will continue to be characterized by drift rather than mastery, and by fragmentation rather than coherence.

Of the Reagan era in particular, Brady (p. 164) argued that "there was not enough turnover to create the conditions (com-

mittee changes and other shifts discussed in chapters 2-4) to change policy in a significant or permanent manner."

If Brady is right—if large-scale turnover in Congress is a necessary precondition for significant policy change—then the prospects for such change do appear bleak.⁴ It has become increasingly difficult to envision an electoral upheaval of sufficient magnitude to produce congressional turnover on the scale of the classic "critical elections" of earlier eras.

On the other hand, perhaps we should expect incumbent representatives, both individually and collectively, to respond to significant changes in constituency opinion even when they face little real danger of being voted out of office. Within the "realist" model such behavior could be rationalized as evidence of extreme risk aversion: if representatives care *only* about reelection, they may be happy to bend in any breeze rather than risk a revolt in the district, however unlikely it may be. More realistically, even representatives who realize that their seats are quite safe may feel bound as a matter of duty to give some independent weight to their constituents' more fervent opinions when those opinions conflict with the representatives' own. Finally, and perhaps most importantly, the same objective events that influence constituents' opinions may also influence representatives' own opinions about good policy, producing, if not responsiveness, at least congruence between the views of representatives and the views of their constituents.

My argument here is that for one or more of these reasons, even securely incumbent representatives did vigorously represent their constituents' desires for increases in defense spending in 1981. Thus, it appears that important policy changes can and do occur even in the absence of significant congressional turnover. Under current circumstances, elections seem like blunt instruments at best for ensuring congressional responsiveness; but Con-

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gress seems responsive nevertheless, and that fact is sufficiently important and intriguing to warrant sustained attention.

The Politics of Defense, 1981

"The *prevailing* consensus," one recent scholarly study reported, "is that the public possesses little information and only few, ill-formed attitudes" about defense and foreign affairs and thus that "such concerns are not terribly consequential in the voting booth" (Aldrich, Sullivan, and Borgida 1989, 125). That consensus, however accurate it may once have been, appears since the late 1970s to have become increasingly untenable. In 1980 about one third of the public mentioned defense and foreign policy issues as the nation's most important problem, and more people correctly characterized the relative positions of Reagan and Carter on the issue of defense spending than on any other issue (Aldrich, Sullivan, and Borgida 1989, 130, 137).

Two events made the issue of national defense especially salient in the 1980 campaign. First, in November 1979 Iranian militants seized the U.S. Embassy in Tehran. The U.S. occupants of the embassy compound were paraded across the world's television screens as hostages, while President Carter was taunted and burned in effigy; five months later a hostage rescue effort collapsed when helicopters needed to ferry a U.S. strike force to Tehran broke down in the Iranian desert, and the hostage crisis dragged on until the day Carter left office. Second, in December 1979 the Soviet Union invaded Afghanistan. As it turned out, that invasion represented the beginning of a long, costly, and (eventually) formally repudiated Soviet attempt to prop up a failing client regime; but at the time—especially in the aftermath of previous communist thrusts in Cuba, Nicaragua, Angola, and Ethiopia—it seemed to many in the

United States to reflect a significant deterioration in the United States' global strategic position.

Ronald Reagan and the Republican party seized upon events in Iran and Afghanistan to help crystallize widespread disquiet about the United States' standing in the world, and to turn that disquiet into a Republican campaign issue. The tone of the indictment is suggested by passages on defense policy from the 1980 Republican Party Platform (Congressional Quarterly 1980, 75B-76B):

The [Carter] Administration's neglect of America's defense posture in the face of overwhelming evidence of a threatening military buildup is without parallel since the 1930s. The scope and magnitude of the growth of Soviet military power threatens American interests at every level, from the nuclear threat to our survival, to our ability to protect the lives and property of American citizens abroad. . . . Despite the growing sentiment for a stronger defense, candidate Carter ran on a promise of massive cuts in U.S. defense spending, one promise he has kept. . . . His tough speeches before military audiences cannot hide his continuing opposition to Congressional defense increases. . . . We have depleted our capital and must now devote the resources essential to catching up.

Taken literally, much of this Republican indictment was unsupported by the facts. As Figure 1 indicates, Carter's first three defense appropriations essentially kept pace with inflation, even after some whittling down by Congress. Increasingly, however, Carter's moderate approach put him behind the curve of public (and congressional) opinion. As Figure 2 shows, a small public plurality favoring defense spending increases had emerged even before the events in Iran and Afghanistan. In the first half of 1980 that plurality grew so rapidly that throughout the campaign season, the fraction of the public favoring defense spending increases outnumbered the fraction favoring decreases by about 40 percentage points.⁵

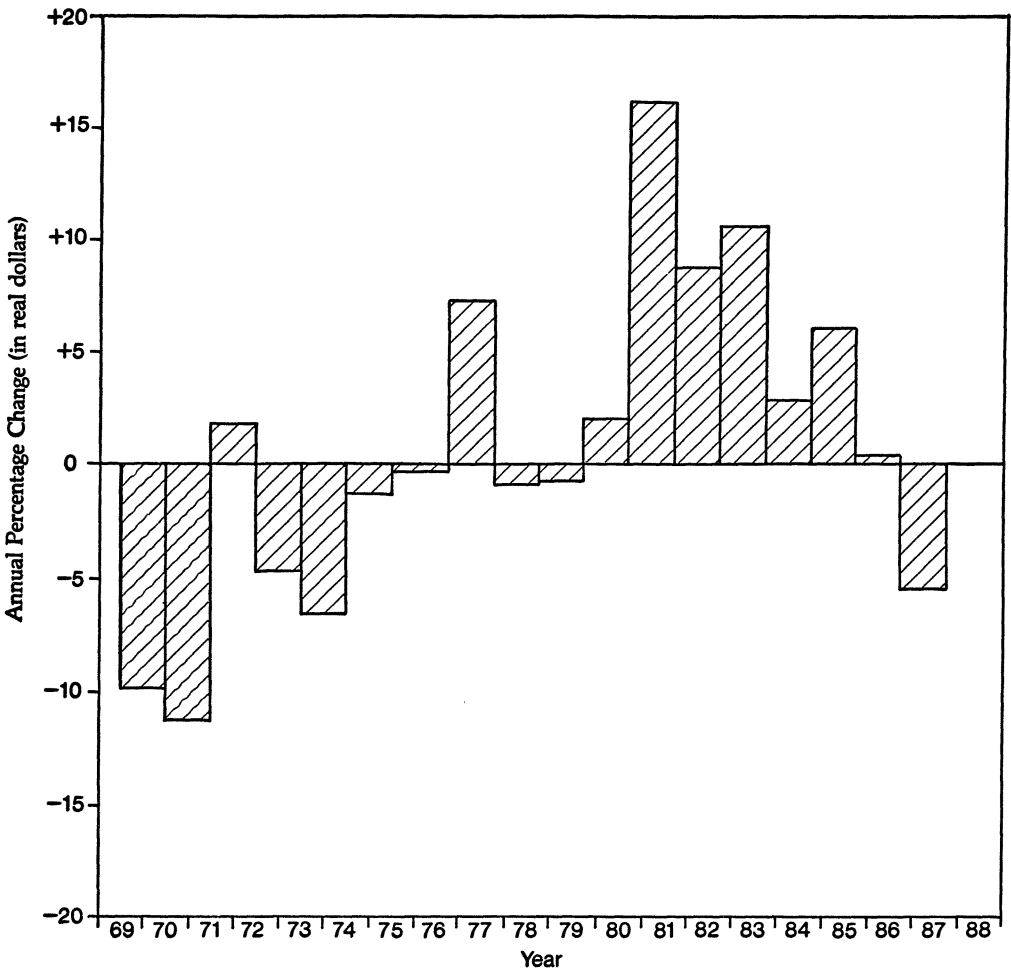
Carter proposed a real increase in defense appropriations of almost 5% for

FY 1981 and significant additional increases for FY 1982, but the Republican platform was not alone in criticizing these proposals as too little and too late. Six weeks before Election Day the House voted a real increase almost twice as large as the one Carter proposed for FY 1981, and candidate Reagan promised more to come.

The strong public demand for a defense buildup (and the clear perceived differences between the party's presidential

candidates on the issue) made defense policy a significant issue in the 1980 campaign. One analysis intended to measure the net effects of party identification, ideology, and a variety of personal assessments, performance evaluations, and issue preferences in the 1980 presidential election suggested that the defense spending issue contributed 7.6 percentage points—much more than the 3.2 percentage points contributed by a whole series of five domestic issues—to the Reagan mar-

Figure 1. Pentagon Appropriations (including supplemental appropriations)



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gin of victory (Miller and Shanks 1982, 349).

Swept into office by a strongly pro-defense electorate, Reagan redeemed his campaign pledges by proposing a significant acceleration of the U.S. defense buildup. A supplemental appropriation redoubled the real increase for FY 1981, and in March the new administration requested \$222 billion in new budgetary authority for Pentagon programs in FY

1982, \$26 billion more than Carter had requested in January.⁶ The new Republican-controlled Senate was a more-than-willing partner in the Reagan defense initiative, eventually passing a FY 1982 defense appropriation bill that exceeded the president's own revised request. Thus, the House of Representatives—especially a bipartisan group of pivotal moderates in the House—found itself facing from the Right a major and popular policy initia-

Figure 2. Public Opinion Toward Defense Spending

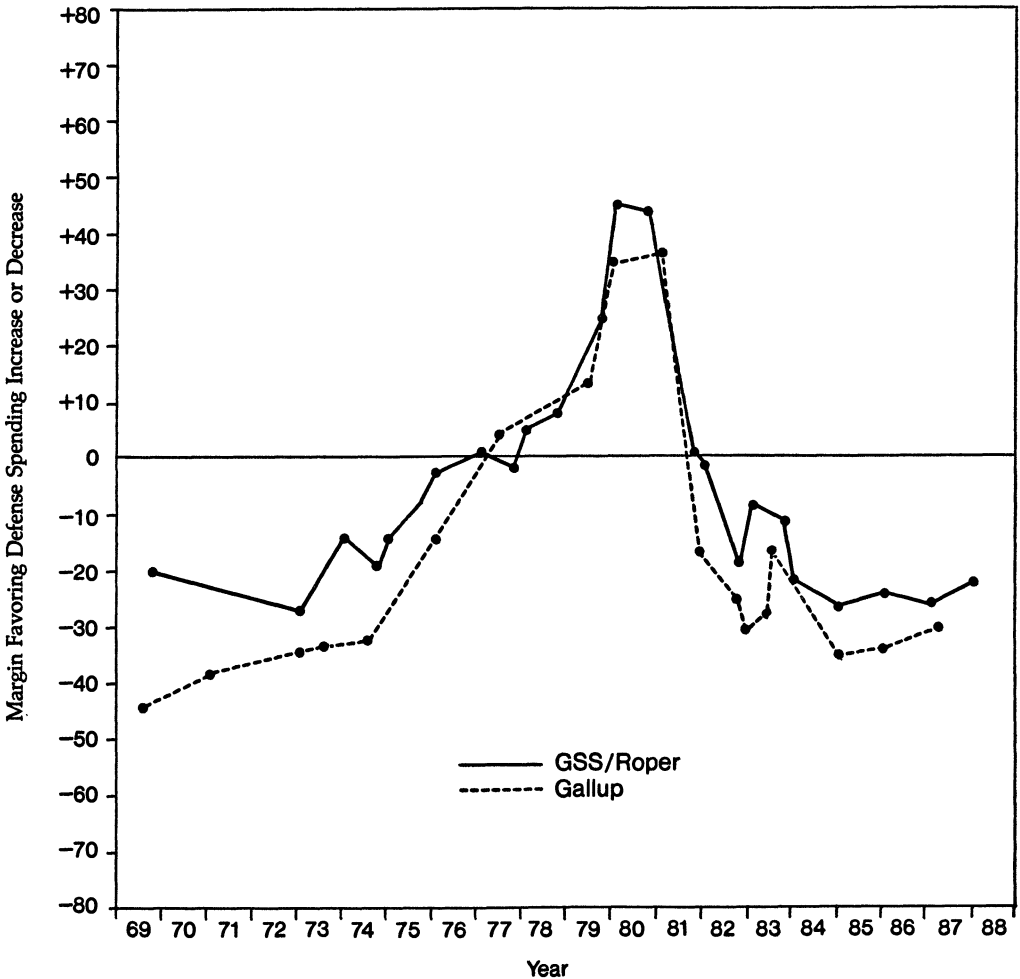
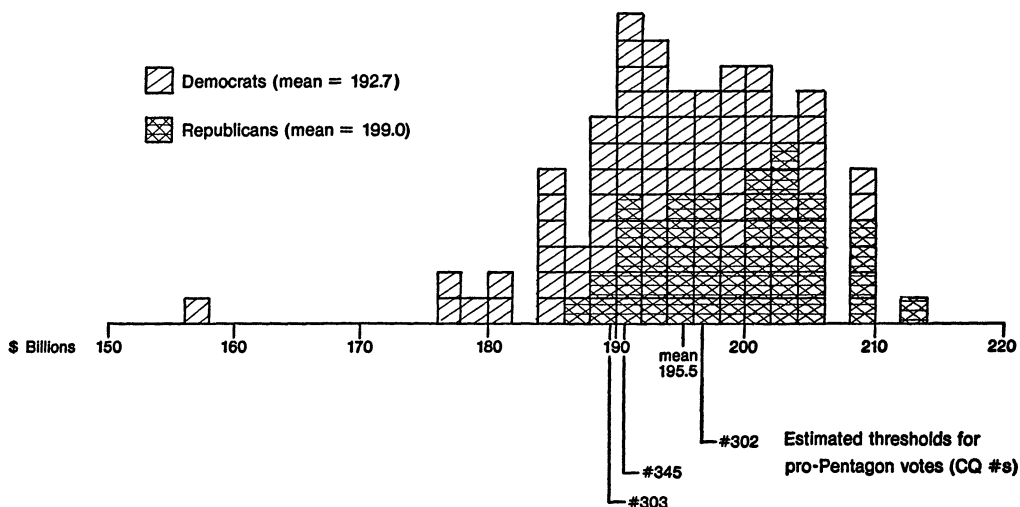


Figure 3. Imputed Preferred Levels of FY 1982 Defense Appropriations
(for 108 representatives in 1980 NES sample)



tive and from the Left a long series of amendments intended to block or roll back that initiative.⁷ The present analysis examines how individual representatives and the House as a whole responded to those political forces.

Sources of Congressional Support for Defense Appropriations

What factors account for representatives' positions on the issue of defense budget policy during the crucial first year of the Reagan Pentagon buildup? Analyses of legislative behavior, both quantitative and qualitative, have often been hamstrung by the difficulty of imputing policy preferences to legislators. Here I use a technique developed by Krehbiel and Rivers (1988) to estimate representatives' positions on an underlying policy dimension by relating characteristics of the representatives and their districts to observed behavior on a sequence of related roll call votes.

The sequence of votes I analyze in

detail covers three stages of the FY 1982 defense appropriations process: an amendment to reduce the amount of money appropriated for weapons procurement and research and development, the appropriations bill itself, and the conference report reconciling the House and Senate appropriations figures. By observing various combinations of positions on these three votes (and relating them to observed characteristics of the representatives and their districts), it is possible to estimate the underlying preferences of individual representatives regarding overall levels of defense spending.⁸

The resulting estimated FY 1982 defense appropriations preferences of the 108 representatives in the National Election Study (NES) sample are shown in Figure 3.⁹ The estimated mean preference is for \$195.5 billion in FY 1982 defense appropriations, about \$4 billion less than was actually appropriated. (Recall that the final appropriation represented a compromise with the Senate's higher figure.) Except for a single anti-Pentagon outlier, the range of estimated preferences is from

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Table 1. Sources of Support for Pentagon Appropriations

Variable	Units	Estimated Effects (Billions of Dollars)
Intercept	—	183.96 (13.40)
Constituency opinion	NES 7-point scale	12.87 (5.82)
Constituency × competitiveness	NES scale × loser's % vote	.0112 (.0497)
Tax burden	\$1,000s per capita	-4.14 (3.72)
Pentagon outlays	\$1,000s per capita	7.70 (3.68)
Partisanship	Republican = 1, Democrat = 0	3.87 (1.79)
Presidential influence	vote difference in 100,000s	4.69 (3.45)

Note: Standard errors of estimated effects are in parentheses. Based on probit analysis "including competitiveness" reported in Table A-2 in the Appendix.

about \$175 billion (a real decrease of almost 5% from the supplemented FY 1981 appropriation) to about \$215 billion (a real increase of more than 15% over the supplemented FY 1981 appropriation).

The parameter estimates in Table 1 relate the imputed appropriations preferences shown in Figure 3 to salient characteristics of the representatives and their districts.¹⁰ The characteristics whose effects are estimated in Table 1 are of three general sorts: constituency opinion, economic interests, and partisan political factors (including the representatives' own partisanship and presidential influence).

Constituency Opinion

My main interest here is in the relationship between constituency opinion and representatives' legislative behavior. One of my reasons for focusing on the specific issue of defense spending is that the 1980 NES survey included an item directly tapping constituents' opinions on that issue: "Some people believe that we should

spend much less money for defense. Others feel that defense spending should be greatly increased. Where would you place yourself on this scale, or haven't you thought much about this?" Respondents were offered a seven-point scale with the endpoints labeled *greatly decrease* and *greatly increase*. In my recoding of the raw data these endpoints correspond to scores of -3 and 3, respectively. In each congressional district my measure of constituency opinion is the mean score (based on an average of 19 individual responses) on this seven-point scale.¹¹ It is a testament to the force of prodefense sentiment in the nation as a whole in 1980 that of the 108 congressional districts included in the NES survey, 107 had mean constituency opinions favoring defense spending increases.¹²

The estimated impact of that prodefense sentiment on representatives' appropriations preferences in Table 1 is quite striking. Every one-point increase or decrease in mean constituency opinion on the NES seven-point scale produced an estimated increase or decrease in congres-

sional defense appropriations preferences of almost \$13 billion. Given the observed range of district means—3.5 points on the NES seven-point scale—this estimate suggests that individual representatives' appropriations preferences varied by as much as \$45 billion (over a total appropriation of less than \$200 billion) due to variations in constituency preferences. By the same estimate, a difference of a bit less than half a point on the seven-point scale (one standard deviation in the distribution of district means) would be sufficient to produce a difference of \$6.3 billion in appropriations preferences—the difference between the preferences of an average Democrat and an average Republican in Figure 3.

Table 1 also includes an estimate of how the impact of constituency opinion varied with the electoral competitiveness of specific congressional districts. The idea is that representatives elected by relatively narrow margins might be especially sensitive to the policy demands of their constituents. Some evidence of differential responsiveness consistent with that hypothesis does appear, but it is too slight and too imprecise to amount to much. A representative elected by the narrowest possible margin would, by this estimate, be less than 5% more responsive to constituency opinion than one elected without any opposition at all.

Economic Interests

Another obvious source of district-level variation in support for defense spending is district-level variation in the economic costs and benefits of various Pentagon activities. Other things being equal, we expect representatives—in the realm of defense spending as elsewhere—to support programs that bring their constituents contracts and salaries and to oppose programs that cost their constituents tax dollars, even when those costs and bene-

fits are not entirely reflected in aggregate constituency opinion.

While it would obviously be very helpful to have detailed data on the economic implications of every roll call for every congressional district, readily available data are much rougher. Here, I measure each district's stake in the Pentagon budget as a whole by including among the explanatory variables a single measure of costs (annual per capita federal tax payments) and a single measure of benefits (annual per capita outlays by the Department of Defense). The roughness of the measures is exacerbated by the fact that the relevant data are available not at the level of congressional districts but at the level of states.

In spite of these difficulties, both measures have plausible estimated impacts in the analysis of defense appropriation preferences reported in Table 1. A thousand-dollar per capita difference in annual Defense Department outlays corresponds to a \$7.70-billion difference in imputed congressional preferences for FY 1982 defense appropriations, while a thousand-dollar per capita difference in tax burdens corresponds to a -\$4.14 billion difference in preferred defense appropriations. These effects are especially impressive if one bears in mind that economic interests also have a substantial indirect effect on congressional preferences through their effect on constituency opinion.¹³

Partisanship

Does it matter that the partisan division of congressional seats is considerably more stable from one election to the next than it was before 1950? Net partisan turnover is significant to the extent that Democrats and Republicans behave differently in Congress. But it is important to avoid confusing the net effect of partisanship per se with the total observed difference between Democratic and Republican

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representatives, since much of the total difference may be attributable not to the partisanship of Democratic and Republican *representatives* but to the distinctive characteristics of Democratic and Republican *districts*. Here I attempt to characterize the real political impact of partisan turnover by estimating the effect of a representative's party affiliation on his preferred level of defense appropriations after statistically controlling for relevant characteristics of his constituency.

The estimate in Table 1 suggests that, other things being equal, Republican representatives wanted about \$3.9 billion more than their Democratic counterparts in FY 1982 Pentagon appropriations. This estimate of the net effect of partisanship represents only about three-fifths of the observed \$6.3 billion partisan difference in appropriations preferences in Figure 3; the remainder of the observed aggregate difference is attributable to the fact that Republicans tended disproportionately to represent pro-Pentagon districts and Democrats tended disproportionately to represent anti-Pentagon districts.

Presidential Influence

Students of the presidency at least since Neustadt (1960) have observed that presidents pushing for significant policy changes can succeed only if they find the political means necessary to influence the behavior of other actors. Furthermore, they have noticed that "election outcomes obviously bear upon [the president's] chances to obtain his policy ends by other means" (Neustadt 1960, 91). For a representative, the most relevant election outcomes are presumably those in his own district; thus, the president's power to persuade should vary directly with presidential support in the representative's district and inversely with the political insulation provided by the representative's own district-level support. Thus, it seems reasonable here to measure Reagan's

(potential) influence over (potentially) unwilling representatives by the extent to which his 1980 vote total in each district led or trailed the congressional winner's own vote total.

It is an interesting comment on the relative electoral security of most representatives that Reagan's victory left him well behind the winning congressional candidate—Democratic or Republican—in most districts.¹⁴ The estimated effect in Table 1 suggests that on average, the one representative in five who trailed Reagan in his own district in 1980 was willing as a result to spend almost \$4 billion more on defense in 1981 than was the one in five who outpolled Reagan by more than 50 thousand votes.

The FY 1982 Defense Buildup: A Political Accounting

I have examined the determinants of individual representatives' preferred levels of Pentagon appropriations. I now turn from an individual to a collective perspective: my aim here is to analyze the implications of the results in Table 1 for the aggregate level of Pentagon appropriations for FY 1982. The relevant calculations are summarized in Table 2.

My starting point in accounting for the level of Pentagon appropriations in FY 1982 is the level of appropriations in FY 1981. Congress appropriated \$171.31 billion for the Department of Defense in FY 1981. Including an inflation adjustment of \$12.11 billion,¹⁵ the corresponding appropriations level for FY 1982 would amount to about \$183.42 billion. The difference between this baseline spending level and the actual FY 1982 Pentagon appropriation, \$199.69 billion, reflects the real increase in Pentagon spending resulting from the FY 1982 appropriations process.

One difficulty in estimating the aggregate impact of political factors on Penta-

Table 2. FY 1982 Pentagon Appropriations: A Political Accounting

	Billions of Dollars
Total FY 1981 appropriation (including 11.57 supplemental)	171.31
Inflation adjustment (7.07% 1982 government purchases price inflation)	12.11
Constituency opinion	15.89
Constituency × competitiveness interaction	.38
Partisan replacement	.31
Presidential influence	.18
Unaccounted for	-.48
First FY 1982 Pentagon appropriation	199.69

Note: Appropriations exclude military construction (covered by a separate bill) and defense-related activities outside the Department of Defense.

Sources: For appropriations, *Congressional Quarterly* 1980, 186; *Congressional Quarterly* 1981, 321, 353. For inflation adjustment, *Statistical Abstract of the United States* 1987, 456. For political effects, estimates in Table 1.

gon outlays is to establish appropriate baselines from which to measure the effects of those factors. Constituency opinion has a natural baseline at the point where aggregate national opinion favors neither an increase nor a decrease in the current level of defense spending. Thus, I estimate the total impact of constituency demand by multiplying the observed mean national position on the NES defense spending scale (1.235) by the estimated effect of constituency opinion on representatives' appropriations preferences in Table 1 (\$12.87 billion) to produce an estimated aggregate impact of almost \$16 billion.

Now, \$16 billion is a considerable chunk of money, even for the Pentagon. But the apparent effect of constituency opinion in Table 2 is still more impressive when we recognize that it significantly understates the actual magnitude of congressional responsiveness to constituency opinion in at least four ways. First, as I

have indicated, Congress had already responded to constituency demands for Pentagon spending by voting huge increases in defense appropriations for FY 1981, once in the last year of the Carter administration and again in a supplemental appropriation after Reagan assumed office; the FY 1982 increases attributed to constituency opinion here are in addition to those in the FY 1981 budget. Second, as Figure 2 makes clear, much of the public enthusiasm for defense spending increases measured by the NES survey in late 1980 had already waned by late 1981, when representatives were casting the roll call votes analyzed here; to the extent that representatives were cognizant of current constituency opinion on the issue, they were actually responding to a considerably weaker aggregate public demand for defense spending increases than the one portrayed in the 1980 NES data. Third, representatives in late 1981 were responding not only to a public demand for defense spending increases but also to simultaneous public demands for social programs, tax reduction, and fiscal responsibility; the contradiction inherent in these simultaneous demands manifestly limited the ability of Congress to respond to each of them separately.¹⁶ Finally, the increase in appropriations for FY 1982 shown in Table 2 understates the long-run commitment to increased defense spending entailed in the FY 1982 Pentagon appropriations votes, since the budget increases approved for FY 1982 were disproportionately concentrated in big new procurement programs whose total cost would be spread out over several years.¹⁷

It is impossible to estimate precisely the magnitude of the underestimation resulting from these various factors. However, it does seem clear that the increase in appropriations attributed to constituency opinion in Table 2 should be thought of not as a comprehensive estimate of the total effect of the public demand for defense spending increases documented in

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Figure 2, but as a lower bound upon such an estimate. The magnitude of the effect is, by any standard, substantial.

As it turns out, this undifferentiated effect of constituency preferences accounts for the vast bulk of the actual increase in Pentagon outlays. Multiplying the observed national mean defense spending preference by the observed mean challenger's vote percentage (27.8) and the estimated interactive effect in Table 1 (\$.0112 billion) produces an estimated aggregate impact of district competitiveness of only \$.38 billion. Similarly, multiplying the observed 1980 net partisan turnover of 7.9% in the House of Representatives by the estimated effect of partisanship in Table 1 (\$3.87 billion) produces an estimated aggregate impact of partisan replacement of only \$.31 billion.

For presidential influence the appropriate baseline is less clear. Having measured Reagan's potential influence by his vote margin relative to the winning congressional candidate in each district in 1980, I somewhat arbitrarily adopt as a baseline for comparison the corresponding margin for Gerald Ford in 1976. Reagan in 1980 ran an average of 3,833 votes closer to the winning congressional candidate in each district than Ford had done in 1976; multiplying this average increment in (potential) influence by the estimated effect of presidential influence in Table 1 (\$4.69 billion per hundred thousand votes) produces an estimated aggregate impact of presidential influence of only \$.18 billion.

Taken together, the four political effects represented in Table 2 account for a real increase in FY 1982 Pentagon appropriations of \$16.76 billion. This figure matches quite closely the actual real increase of \$16.27 billion in FY 1982 appropriations. The correspondence must be regarded as at least partly coincidental, since the calculations in Table 2 ignore both errors of model specification and estimation¹⁸ and other influences on con-

gressional behavior; nevertheless, the coincidence should give some pause to those who would prefer on ideological grounds to view defense spending in general, and the Reagan defense buildup in particular, as fundamentally undemocratic phenomena.

Conclusion

The analysis presented suggests that public opinion was a powerful force for policy change in the realm of defense spending in the first year of the Reagan administration. Moreover, the impact of constituency opinion appears to have been remarkably broad-based, influencing all sorts of representatives across a wide spectrum of specific defense spending issues.¹⁹

Whether constituency opinion has a similar impact on congressional policy making in other issue areas and under other political circumstances is, of course, an open question. For all its volume and apparent sophistication, the empirical literature on representation does little to help answer that question.²⁰ Certainly, aggregate changes in public opinion of the magnitude and salience observed on the defense spending issue in the late 1970s are rare.²¹ But at this point we simply know too little to be able to guess with any confidence whether the effect of less dramatic constituency demands for policy change are likely to be proportional to their magnitude, their intensity, their specific source, or some complicated combination of all three.

To the extent that the analysis reported here does turn out to be representative of other times and other issues, it suggests, contrary to some accounts, that Congress can produce substantial policy changes even in the absence of significant turnover. Given the fickle and fragmentary nature of public opinion on many issues, these policy changes may seldom be

sweeping or sustained; certainly the public and Congress alike cooled markedly in their enthusiasm for defense spending even by the end of 1981. But then, a policy realignment of the classic sort may not be so desirable after all if it merely serves to preserve and exaggerate a temporary public enthusiasm in the legislature.

The analysis presented here also suggests (though it does not conclusively demonstrate) that congressional responsiveness depends on a more complex mixture of motives than is typically assumed in the scholarly literature. The allure of a simple assumption about motivation—that elected officials respond to their constituents in order to maximize their own chances for reelection—is obvious. But the practical limitations of that assumption should also be obvious when, as here, representatives who win with 100% of the vote appear to be about as responsive to constituency opinion as those who win with 51% of the vote. Either subjective safeness bears no relationship to objective safeness (e.g., because representatives are risk-averse to the point of total spinelessness) or (as seems more likely) the reelection motive must be thought of as only one—albeit an important—element in a broader array of congressional goals.²²

Finally, the pattern of results reported here cries out for further exploration of the actual political processes relating constituency opinion and legislative behavior. Does representation occur because representatives really do know and heed average constituents' views about specific policies, or because those average constituents' views happen to mirror more influential views (of the Washington policy community, district elites, or the representative him- or herself)? Is the stability of voting alignments across a wide range of detailed issues primarily a Washington phenomenon (reflecting the mutual influence of working networks of like-minded representatives), or primarily a district

phenomenon (reflecting independent choices by individual representatives similarly estimating the latent opinions of their uninformed constituents)? The observational literature on Congress and representatives (e.g., Fenno 1978; Kingdon 1981) provides one valuable set of insights into questions like these. Nevertheless, as much remains to be learned about *how* political responsiveness works as about *how well* it works.

Appendix

The Sample and the Data

The 108 representatives included in my analysis are those whose districts were included in the sampling frame for the 1980 American National Election Study.²³ The explanatory variables appearing in the analysis (with descriptive statistics for the 108 districts in the NES sample follow.

Black. District percentage black, 1980 census (Min = 0; Max = 87; Mean = 13.4; SD = 17.1).

Competitiveness. Loser's share of district two-party congressional vote (%) in 1980 election (Min = 0; Max = 50; Mean = 27.8; SD = 15.0).

Constituency Opinion. Estimated district mean on NES seven-point defense spending scale: -3 = greatly decrease; 0 = no change; 3 = greatly increase (Min = -1.25; Max = 2.25; Mean = 1.205; SD = .469). Calculated from 1980 NES.

Partisanship. Indicator variable for districts with Republican representatives in 1981 (Mean = .444).

Pentagon Outlays. Defense Department expenditures per capita (in thousands of dollars), 1979, by state (Min = .109; Max = 1.288; Mean = .454; SD = .259).

Population Change. Percentage change in district population, 1970-1980 (Min = -.24; Max = 94; Mean = 12.67; SD = 20.86).

Presidential Influence. Number of votes (in hundred thousands) by which Reagan led (trailed) congressional winner in 1980

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election (Min = -1.174; Max = .244; Mean = -.269; SD = .294).

South. Indicator variable for districts in Alabama, Arkansas, Florida, Georgia, Louisiana, Mississippi, North Carolina, South Carolina, Tennessee, Texas, and Virginia (Mean = .241).

Tax Burden. Federal tax revenues per capita (in thousands of dollars), 1979, by state (Min = 1.288; Max = 2.655; Mean = 2.012; SD = .295).

West. Indicator variable for districts in Arizona, California, Colorado, Oregon, Utah, Washington, and Wyoming (Mean = .176).

All of the data except those for constituency opinion are from Barone and Ujifusa 1981. Mean constituency opinions are based on between 6 and 46 responses per district on the NES defense spending question (excluding missing data and respondents with no opinion on the question); the standard errors of the resulting estimated constituency means range from .166 to .773 on the NES seven-point scale.

Because the estimated constituency means contain substantial sampling error, ordinary regression analyses employing constituency opinion as an explanatory variable will produce inconsistent parameter estimates. The correction employed here is based on a purging regression relating the mean constituency opinion in each district to a variety of other (by assumption exogenous) district characteristics. Because the magnitude of the sampling error varies across districts, each district is weighted in the purging regression by the reciprocal of the standard error of the estimated district mean constituency opinion. (Thus, districts with more survey respondents get more weight in the purging regression.)

The results of the purging regression are reported in Table A-1. The regression coefficients make good sense (except, perhaps, for the apparent anti-Pentagon bias of southern districts holding the other explanatory factors constant); and the

**Table A-1. Purging Regression for
Constituency Opinions**

Variable	Parameter Estimates
Intercept	2.166 (.325)
Population change	.00651 (.00215)
Pentagon outlays	.287 (.155)
Tax burden	-.464 (.157)
Black	-.00173 (.00287)
South	-.280 (.132)
West	-.476 (.117)
Adjusted R ²	.71
Standard error of regression	1.12
N of observations	108

Note: Dependent variable is the estimated district mean constituency opinion on the NES defense spending scale. Each district is weighted by the reciprocal of the standard error of the estimated mean constituency opinion. Standard errors of parameter estimates are in parentheses.

standard error of the regression suggests that the purging is quite efficient.²⁴

Imputing Congressional Preferences

The method used here to estimate representatives' preferred levels of defense appropriations is essentially that set out by Krehbiel and Rivers (1988). We observe representatives' votes on a sequence of three roll calls offering alternative levels of total defense appropriations for FY 1982. The first vote (*Congressional Quarterly* roll call #302, 18 November 1981) was on an amendment to the appropriations bill proposing to cut 2% from funds appropriated for weapons procurement and research and development;²⁵ the second vote (*Congressional Quarterly* roll call #303, 18 November 1981) was on the

Table A-2. Probit Analyses of Defense Appropriations Preferences

Variable	Excluding Competitiveness	Including Competitiveness
Intercept	-1.031 (2.114)	-.910 (2.180)
Constituency opinion	2.157 ^a (.908)	2.095 ^a (.947)
Constituency × competitiveness	.000 (—)	.00183 ^a (.00808)
Tax burden	-.639 (.585)	-.673 (.605)
Pentagon outlays	1.289 (.578)	1.253 (.599)
Partisanship	.640 (.289)	.630 (.292)
Presidential influence	.802 .537	.764 (.561)
Threshold 1	.000 (—)	.000 (—)
Threshold 2	.183 (.082)	.183 (.082)
Threshold 3	1.148 (.168)	1.148 (.168)
Log likelihood	-91.0	-91.0
N of observations	96	96

Note: Standard errors of parameter estimates are in parentheses.

^aParameter estimates for purged versions of endogenous variables.

appropriations bill itself; and the third vote (*Congressional Quarterly*, roll call #315, 15 December 1981) was on the conference committee report reconciling the House and Senate appropriations.

With the first of these votes representatives faced a choice between the level of appropriations in the original bill, \$197.44 billion, and a reduced level of appropriations amounting to approximately \$195.78 billion; with the second vote the choice was between \$197.44 billion and some unspecified (presumably uncertain) reversion level of appropriations; with the third vote the choice was between the conference report recommendation of \$199.69 billion (a compromise between the House's \$197.44 billion and the Senate's \$208.68 billion) and the unspecified reversion level. Assuming sincere voting based on symmetric single-peaked

utility functions, the corresponding indifference thresholds for the three votes were \$196.61 billion, \$98.72 billion plus $Q/2$, and \$99.85 billion plus $Q/2$, respectively, where Q is the implicit reversion level of spending, given the failure of either the appropriations bill or the conference report.²⁶

Given the assumptions of the model, representatives' observed patterns of votes on the three bills can be related to a series of explanatory variables (measuring each representative's political circumstances and district characteristics) by an ordered probit model. Table A-2 shows the probit parameter estimates for two versions of such a model, one excluding, and the other including, an interaction between constituency opinion and electoral competitiveness. The estimated interaction effect in the second specification

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is trivial in magnitude; thus, the pattern of parameter estimates for the other explanatory variables is similar across the two specifications.²⁷

The estimated threshold values from the ordered probit model shown in Table A-2 can be used in conjunction with what we know about the content of the three bills to estimate both the relationship between dollar amounts and positions on the underlying continuum of support in Figure 3 and the implicit reversion level Q .²⁸ The estimated reversion level, \$181.7 billion, corresponds closely to the figure of \$183.4 billion obtained by simply adjusting the FY 1981 appropriation (including the \$11.57 billion supplemental appropriation voted after Reagan took office) for inflation. The distribution of imputed spending preferences, shown in Figure 3, also seems reassuringly plausible.²⁹

Notes

I am grateful to the Center for Advanced Study in the Behavioral Sciences, the National Science Foundation (grant no. BNS-8700864), and the University of Rochester for generous financial support. I thank several colleagues for comments on previous drafts; Eric Hanushek was especially helpful. Survey data from the 1980 NES, conducted by the University of Michigan's Center for Political Studies, were provided through the Inter-University Consortium for Political and Social Research.

1. The relevant literature is voluminous; a sample of important work might include Achen 1978, Converse and Pierce 1986, Erikson 1978, Fiorina 1974, Fowler and Shaiko 1987, Jackson 1974, Jackson and King 1989, Miller and Stokes 1963, Rivers n.d., and Rothenberg 1989. All of these studies are interesting and useful, but most fall short of providing concrete estimates of the effect of constituency opinion on legislators' behavior of the sort advocated here, often because they measured only indirectly or in very aggregated form constituency opinions or legislators' behavior or both. Statistical analyses of roll call votes have often employed very broad-gauged measures of district characteristics (such as mean demographic scores) as proxies for constituency opinions or interests. Conversely, analysts employing more direct measures of constituency opinion derived from survey data have often relied on roll call scales constructed for other purposes and have

seldom provided descriptions of the specific votes that make up the scales or, more importantly, substantive interpretation of the magnitudes of the estimated relationships.

2. See, e.g., Mayhew 1974 on "vanishing marginals," Gelman and King 1990 on increasing "incumbency advantage," and Ferejohn and Calvert 1984 on declining "coattails" linking presidential and congressional candidates. Since 1980, about 80% of the senators and 95% of the representatives seeking reelection have been successful, with at least two-thirds of these piling up margins exceeding 20% of the general election vote (Ornstein, Mann, and Malbin 1990, 56-60).

3. From 1870 to 1950 net partisan seat shifts of 20%-30% over one or two election cycles were not uncommon in the House, and the average net seat shift in each election amounted to about 10% of the total membership. Since 1950 the partisan composition of the House has stabilized markedly. Only 3 of the last 20 congressional elections have produced net partisan seat shifts of 10% or more; and all three were reactions from, rather than accompaniments of, presidential landslides.

4. Even a political movement as potent as the "Reagan revolution" had only marginal effects in the House: the Republicans netted 34 new seats in 1980 (about 8% of the total House membership), and lost 25 of those 34 seats two years later.

5. The opinion trends plotted in Figure 2 are from the General Social Survey (GSS) and Roper (reported by Niemi, Mueller, and Smith 1989, 87) and from Gallup (reported in various issues of *The Gallup Poll*). In each case the indicated percentage is the margin believing that "we" (GSS/Roper) or "the government in Washington" (Gallup) are spending "too much (-)" or "too little" (+) on "the military, armaments and defense" (GSS/Roper) or "national defense and military purposes" (Gallup). Typically, one-third to one-half of the public thought current spending levels were "about right" or didn't know whether spending should be increased or decreased.

6. Congressional Quarterly 1981, 311-12. The budget figures cited here include military construction and expected supplemental spending, which were not included in the main defense appropriations bill. Later in the year, in the face of increasing budgetary pressure, the administration's request was scaled back by \$8 billion, with about a quarter of that amount reflecting reductions in actual FY 1982 outlays.

7. These amendments focused sometimes on total dollar amounts, sometimes on specific weapons programs, and sometimes on proposals to reform Pentagon procedures. Many were offered by staunch liberals (notably Patricia Schroeder, Democrat, Colorado); the few that were eventually adopted were offered by moderates from both parties.

8. The three roll calls analyzed here (*Congressional Quarterly* 1981 House roll calls #302, #303,

and #345) were chosen as the best available indicators of representatives' preferences over alternative levels of total defense spending. More detailed descriptions of each roll call and of the estimation procedure are provided in the Appendix.

9. Figure 3 also shows the estimated threshold values of defense appropriations preferences—the underlying preference levels at which representatives are predicted to switch from support to opposition or vice versa—for each of the specific roll call votes on which the analysis is based. It is interesting to note that the estimated threshold value for the key amendment attempting to contain the Reagan Pentagon buildup in the areas of weapons procurement and research and development (*Congressional Quarterly* roll call #302) is within about a billion dollars of the estimated mean (and median) legislator's preference; in the event, that amendment failed on the House floor by just five votes (197–202).

10. Both the estimated preferences shown in Figure 3 and the estimated effects of district characteristics shown in Table 1 are based on the probit analysis ("including competitiveness") reported in Table A-2 in the Appendix.

11. Several analysts (e.g., Achen 1978; Converse and Pierce 1986; Rivers n.d.) have attempted with some success to distinguish the impact of different constituents' opinions on representatives' behavior. Thus, the views of partisan supporters may be weighted more heavily than those of partisan opponents, or representatives may be most responsive to wealthier, more educated, and more politically active constituents. By contrast, my focus here on the mean constituency opinion in each district implies that representatives treat all constituents' views as equally relevant. This simplification is imposed in part for theoretical reasons (to approximate the ideal of responsiveness suggested by democratic theory) and in part because of data limitations (especially the relatively small number of individual respondents in each district).

12. The single exception is Charles Rangel (Democrat, New York), whose estimated constituency mean on the NES defense spending scale (based on eight responses) was -1.25 ; the other 107 estimated constituency means ranged from $.14$ to 2.25 . Omitting Rangel from the analysis would leave all of the results essentially unchanged.

13. Although no full-scale analysis of the sources of constituency support for defense spending is offered here, the purging regression reported in Table A-1 in the Appendix combined with the estimated effect of constituency opinion in Table 1 suggests that these indirect effects of economic interests are on the order of \$4 billion for a thousand-dollar per capita difference in Defense Department outlays and $-\$6$ billion for a thousand-dollar per capita difference in federal tax payments, making the total effects in each case on the order of \$10–12 billion.

14. Reagan received more votes than the winning

congressional candidate in only 20 of the 108 districts in the NES sample, despite the fact that the total vote cast for presidential candidates is significantly greater than the vote cast for congressional candidates in most districts.

15. My inflation adjustment is based on a 7.07% increase in the price index for government purchases of goods and services in 1982.

16. President Reagan and his conservative allies in Congress significantly scaled back their defense spending proposals between the spring and autumn of 1981. Some of these concessions presumably reflected compromise with Pentagon opponents in Congress; but journalistic accounts emphasized the role of growing budgetary pressures even within the pro-Pentagon coalition.

17. The nominal increases in appropriations from FY 1981 to FY 1982 were 44% for procurement, 24% for research and development, and 16% for current operations (personnel, operations and maintenance, and pensions). The emphasis on new procurement and long-range investment in FY 1981 and FY 1982 may provide one explanation for the fact—evident from a comparison of Figures 1 and 2—that Pentagon appropriations continued to expand for several years after public opinion favoring such expansion had evaporated. Appropriations in the first year of the Reagan administration for the MX missile and B1 bomber programs, among others, produced significant momentum for additional spending on those programs in subsequent years.

18. For example, part of the real increase unaccounted for in Table 2 may reflect unmeasured presidential influence. I have estimated how representatives' positions changed as their vote totals relative to Reagan's vote in their districts changed; but it is impossible given the available data to estimate Reagan's absolute impact. The baseline I have adopted for the calculations in Table 2 supposes that Reagan was totally without influence in districts where he ran no better in 1980 (relative to the winning congressional candidate) than Ford had run in 1976. This somewhat arbitrary baseline probably underestimates Reagan's actual influence on the defense appropriations process in 1981.

19. In order to test the scope of congressional representation across a range of more specific defense issues, I replicated the analysis described earlier for 25 additional House roll call votes—all of the votes on defense issues in 1981 that appeared to have any significant budgetary implications. A detailed description of this supplementary analysis is omitted here but is available upon request. The most notable finding is that constituency opinion had significant effects on roll call votes across the whole spectrum of defense spending decisions, whether they involved specific weapons programs, military construction projects, or Pentagon purchasing procedures. On 22 of the 25 roll calls, however arcane the specific policy at issue, representatives' votes were

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strongly and positively related to the positions of their constituents on the NES defense spending scale. This fact seems to confirm the appropriateness of thinking about "defense policy" (or at least "defense budget policy") as a unitary dimension; it also emphasizes the very considerable scope of congressional responsiveness to variations in relevant district opinion.

20. A notable exception to this generalization is the recent work by Jackson and King (1989) on tax policy, which is similar in its aims—and in many of its qualitative conclusions—to the work reported here.

21. Since the early 1970s the GSS has regularly measured public opinion favoring increases or decreases in government spending not only on defense but also on space exploration, foreign aid, education, environmental protection, national health, the problems of big cities, crime, drug addiction, welfare, and the condition of blacks. None of the other issue areas has seen a change in aggregate opinion approaching in magnitude the change shown for the defense spending issue in Figure 2. For these and other relevant data, see Niemi, Mueller, and Smith 1989.

22. An influential typology of representatives' goals and an analysis of the consequences of those goals for congressional behavior was provided by Fenno (1973).

23. The same districts were included in the 1978 NES, but defense spending was not among the issues constituents were asked about in 1978.

24. The standard error of this weighted regression due to measurement error alone would be 1.00; thus, the error introduced by purging amounts only to an additional 12%.

25. The vote was on Roukema's (Republican, New Jersey) substitute for Schroeder's (Democrat, Colorado) amendment proposing to reduce the appropriations for procurement, research and development, and testing and evaluation. Roukema's substitute proposed a 2% cut rather than the 5% cut proposed in Schroeder's amendment; it also exempted funds for procurement of spare parts, repair parts, and ammunition. The relevant actors seem to have assumed that Schroeder's amendment itself would fail (as it eventually did by voice vote), making the real alternative to the Roukema substitute the level of appropriations in the unamended bill. Both the announced position of the administration in opposition to Roukema's substitute and the observed pattern of support and opposition in the House lend support to this interpretation.

26. Obviously, n. 25 indicates that voting on the Roukema substitute was in fact strategic; but if my interpretation is correct, it was strategic voting of a straightforward (and readily incorporated) sort. There is no other indication of strategic voting in the roll call data. Given my interpretation in the text of the Roukema vote, four of the eight possible pat-

terns of votes on the three separate roll calls are consistent with the assumption of single-peaked preferences over a single underlying dimension of preferred defense appropriations levels (and thus with the approach taken here of estimating unobserved ideal points by reference to observed threshold values). Each of the 96 congressmen in the NES sample who participated in all three of the relevant roll calls displayed one of these four consistent voting patterns.

27. The interaction between constituency opinion and electoral competitiveness, like constituency opinion itself, is treated here as endogenous. The corresponding regressor in the analysis reported in Table A-2, col. 2 is based on a weighted purging regression paralleling the weighted purging regression for constituency opinion shown in Table A-1. An unweighted version of the purging regression produced similar results.

28. We have a system of equations in which three pieces of information (the threshold values in Table A-2) can be used to solve for three unknowns (the intercept and slope of the equation relating probit scores to dollar amounts and the implicit reversion level Q). In Krehbiel and Rivers 1988 the reversion level is taken as given; here there is no obviously reasonable assumption about the final outcome, given the failure of either the appropriations bill or the conference report.

29. Spending preferences were imputed to each representative by multiplying the representatives' probit score (calculated using the probit parameter estimates in Table A-2, col. 2) by \$6.145 billion and adding \$189.555 billion. (These conversion values were computed from the estimated probit threshold values in Table A-2 using the system of equations referred to in n. 28.)

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