The Political Efficacy of Lobbying and Money: Gun Control in the U. S. House, 1986
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This paper sheds empirical light on the effectiveness of both sides of the gun lobby in affecting votes in the House on the McClure-Volkmer bill. It examines the impact of elite and grass roots lobbying, in addition to the influence of campaign contributions. The results show that, at least on this issue, the NRA's and Handgun Control's prevote campaign contributions affected member's subsequent votes, even when other variables, including ideology, member's prior position, and constituency characteristics, are held constant. Handgun Control's monetary contributions had a statistically marginal impact, but their lobbying effort, along with that of the police, was clearly successful, while NRA's was not. The paper suggests some reasons why contributions appear to have had an impact on congressional voting even for a salient issue.

The purpose of this paper is twofold. First, it sheds empirical light on the political effectiveness of both sides of the gun lobby in affecting votes in the House. Second, it examines the impact of elite and grass roots lobbying and campaign contributions on congressional voting behavior on the gun issue.

Despite its prominence in the press, there have been no academic studies of the gun lobby and no published quantitative studies of the impact of that lobby. This study begins to fill both gaps in our knowledge, using the model of political representation set forth by Denzau and Munger (1986) to interpret the empirical findings.

The research builds on models of congressional behavior that are widely used in the literature on campaign contributions. On one hand, activists (Green 1984; Stern 1988) and the press (Greenfield 1988; Drew 1982) have asserted that PAC money has a significant and deleterious impact on congressional voting behavior. "Under scrupulous accountancy and care, companies and industries buy and sell our national legislators, all within the letter of the revised law" (Greenfield 1988, 64). On the other hand, unlike the anecdotal articles in the popular press,

more scientific research designs have produced mixed evidence about the direct influence of money on congressional votes. Some investigators have found that contributions have significantly affected roll-call votes (Silberman and Durden 1976; Wilhite and Theilmann 1987; Brown 1983; Kau and Rubin 1982; Schroedel 1986; Frendreis and Waterman 1985; Saltzman 1987), others that contributions have no effect (Chappell 1981, 1982; Grenzke 1989a; Welch 1982).

This disparity in findings does not appear to reflect the methodological approach used. It has long been recognized that PAC money may sometimes "help" a legislator decide how to vote, but a representative's previous vote or position also "helps" a PAC decide to whom to contribute money. Some studies have focused solely on the direct impact of money on votes (Frendreis and Waterman 1985; Silberman and Durden 1976). Others have focused exclusively on how votes affect the PAC's choice to contribute (Wright 1985; Gopoian 1984; Evans 1986; Grier and Munger 1986). Among those studies that used simultaneous models, some have found a significant effect of contributions on votes (Wilhite and Theilmann, 1987; Kau and Rubin 1982; Brown 1983; Saltzman 1987), while others have found little or no effect (Welch 1982; Chappell 1981, 1982; Grenzke 1989a). Moreover, among those studies that did not use simultaneous models, we still find disagreement over the money-vote relationship.

Using a cross-section or a time-series design does not appear to systematically alter the results either. Among cross-sectional studies, Chappell (1981, 1982) and Welch (1982) found no effect, while Kau and Rubin (1982) and Saltzman (1987) did. Of those who used a time-series approach, Wilhite and Theilmann (1987) and Brown (1983) discovered significant effects of money on votes, while Grenzke (1989a) did not.

Nor does studying a single vote (or a series of votes on a single issue) rather than a series of votes on different issues favor one relationship or the other. Only three studies used aggregate votes (i.e., group ratings, which are based on votes) as the dependent variable. One of these studies found little or no direct connection between money and votes (Grenzke, 1989a), while the others did find such a connection (Wilhite and Theilmann 1987; Saltzman 1987). All other studies used only one vote or a series of votes on one issue as the dependent variable; their results varied.

Previous research has also found that the effect of money on votes is more likely to emerge when the issue is nonvisible, specialized, or narrow (Sabato 1984; Schroedel 1986; Bedlington and Powell 1986). In these cases, organized opposition is frequently absent, and the press may not

consider a highly specialized technical issue to be newsworthy. Further-more, it is in the committee, rather than on the floor, that major decisions are made about legislation. Sabato (1984) argues that these arenas are the least visible to the voting public. As a result, studies of roll-call votes on the floor of Congress may underestimate the impact of campaign contribu-tions. However, none of the research on the linkage between contributions and votes has focused solely on the committee level.[1]

Further, the literature in this area has not devoted much atten-tion to competing or opposing interest groups. Only two studies (Schroedel 1986; Saltzman 1987) consider PAC contributions on both sides of an issue. Yet competition and conflict among interest groups is a major factor in many or even most votes cast in Congress.[2]

In addition to direct effects on roll-call votes, PAC contribu-tions in the aggregate can affect electoral outcomes (Jacobson 1978, 1985; Langbein 1986), since congressional votes affect electoral out-comes. This particular issue, however, has received scant empirical at-tention (for an exception, see Saltzman 1987).

The research in this study examines not only the impact of con-tributions on subsequent congressional votes but also the effect of con-gressional votes on outcomes in the next election. It differs from previous research in several ways. While we examine just one series of votes—those related to the Firearms Owners Protection Act of 1986, commonly referred to as the McClure-Volkmer Bill—we investigate the entire gun control subsystem: the National Rifle Association, allegedly one of the most powerful lobbies; Handgun Control, Inc., a younger, less wealthy, and supposedly less influential, competing interest group; the Gun Owners of America and the Citizens' Committee for the Right to Keep and Bear Arms, two small, more militant progun groups; and the National Coalition to Ban Handguns, a small gun-control group. We also investigate police groups, which became a part of the gun control subsystem only during the debate on the McClure-Volkmer Bill. Most importantly, and unlike earlier research, we look not just at the finan-cial resources of these groups, but also at other activities generated by them, such as letters and phone calls from constituents and group con-tacts with congressional offices.

The votes on the issue we examine were highly visible and oc-curred on the floor of the House amidst considerable competition be-tween the progun and gun-control advocates. These factors may make the influence of contributions appear smaller than it would appear on less visible issues. Nonetheless, we feel the gun control issue is worth studying in view of the allegedly invincible power of the NRA.

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Legislative Setting of the McClure-Volkmer Bill

Senator James A. McClure (R.-ID) introduced the Firearms Owners Protection Act (S. 49) for the third consecutive session on January 3, 1985. The bill eased many provisions of the 1968 Gun Control Act that were thought to be burdensome to law abiding gun owners. Major provisions of the bill allowed over-the-counter interstate sales of all firearms as long as the sale did not violate the law in the buyer's or seller's state; allowed interstate transport of firearms, provided they were unloaded and inaccessible; eliminated record keeping requirements for sales of ammunition; and required federal agents to give notice to gun dealers before conducting inspections. On January 21, 1985, McClure, with the help of Senate Majority Leader Robert Dole (R.-KS), succeeded in having the Firearms Owners Protection Act, placed directly on the Senate's legislative calendar, thus avoiding the committee action and procedural problems encountered in the previous two sessions. On July 9, 1985, the Senate passed the act by 79–15. Several amendments on the floor were defeated by wide margins, including one preserving the ban on interstate sales of handguns and another requiring a 14-day waiting period on handgun sales.

After the Senate action, House Judiciary Committee Chairman Peter W. Rodino (D.-NJ), known as a supporter of gun-control measures, uncompromisingly announced, "I'm not going to work to weaken a law that already needs strengthening" (*Congressional Quarterly Weekly Report* 1985, 1391). He further inflamed supporters of the act by saying that the bill was "dead on arrival" in the House. The chief sponsor of the bill, Harold L. Volkmer (D.-MO), filed a discharge petition on October 22 to bring the bill to the floor without House Judiciary Committee action. Lobbying on the measure began immediately with the National Rifle Association, the Gun Owners of America, and the Citizens Committee for the Right to Keep and Bear Arms aiding McClure-Volkmer supporters in the discharge petition drive. Several law enforcement groups, including the Fraternal Order of Police, the National Sheriff's Association, the National Troopers Coalition, and the International Association of Chiefs of Police, formed an ad hoc group, the Law Enforcement Steering Committee, to work with Handgun Control, Inc., in opposing the McClure-Volkmer bill.

By February 27, 1986, Volkmer had 190 of the 218 names needed to bring to the floor a rule that would have allowed debate and amendments on Volkmer's bill, H.R.945; an up-down vote, with no amendments, on Rodino's bill, H.R.3155, strengthening gun control; and an up-down vote on S.49. The last bill to win passage would be the

version approved by the House. The large number of signatures on the discharge petition forced William J. Hughes (D.-NJ), chairman of the Crime Subcommittee, to mark up a bill on March 6 so the full House could consider a Judiciary Committee bill before Volkmer's bill reached the floor. Hughes's bill, H.R.4305, differed from Volkmer's in that it did not allow interstate sale of handguns and would require dealers to notify police of handgun sales. The committee bill made some of the law enforcement community's concerns about S.49 part of the debate. In many other respects it was similar to S.49, an indication that Rodino and Hughes knew by this time that Volkmer had enough support to pass some kind of bill easing gun control.

H.R.4305 was reintroduced in committee as H.R.4332 and the House Judiciary Committee approved the bill 35–0 on March 11. Meanwhile, Volkmer's discharge petition reached the 218 signatures needed on March 13. (The NRA later referred to these 218 members as its "Honor Roll.") Volkmer had a political advantage in that he crafted the rule under which the bills would be considered on the floor. On March 19, the House Rules Committee approved a rule that killed Volkmer's discharge petition, but allowed for a vote on Volkmer's bill first; if it passed, a vote on the Judiciary Committee bill would not be allowed. Volkmer's bill was scheduled for consideration on the floor on March 20, but after a 10-hour debate and a vote on a Contra-aid package, Hughes, Rodino, Volkmer, and John M. Dingell (D.-MI) met with Speaker Thomas P. O'Neill (D.-MA) and Majority Leader Jim Wright (D.-TX) and agreed to postpone the debate and vote until April 9. By this time, Hughes sensed that passage of the committee bill, H.R.4332 was unlikely and began work on an amendment package to the Volkmer substitute.

After general debate on the issue on April 9, Hughes first offered his full amendment package, which included provisions to continue the ban on interstate sales and transportation of handguns and retain existing record-keeping requirements. It was defeated by a 176–248 margin. (This is vote 1 in our analysis.) An aide later said that too many things had been put into the package and a whip check had not been performed—a serious miscalculation by Hughes and Rodino. Hughes then offered separately an amendment to bar interstate transportation of handguns that also lost, 177–242 (vote 2).

At this point Speaker O'Neill interrupted the process and ended the session, arguing that the House needed to avoid paying overtime to Capital workers to save money because of the Gramm-Rudman-Hollings deficit reduction law. Hindsight by many observers credited this move by O'Neill as critical to saving Hughes's next amendment. The next day, after members had time to reflect and listen to arguments

from law enforcement officials, the amendment to continue the ban on interstate sales of handguns passed 233–184 (vote 3). In an effort to get more time to debate an amendment that would ban future sales and possession of machine guns, Hughes made a motion for the Committee of the Whole to rise. This motion failed 124–298 (vote 4). However, Charles Rangell (D.-NY), acting as chairman of the Committee of the Whole, was able to push through this amendment by voice vote right at the expiration of time for debate.

Finally, the House voted 286–136 (vote 5) to adopt the Volkmer substitute for the committee bill. One last vote was taken to substitute the House version of the bill for S.49, 292–130 (vote 6). The House version now included the continued ban on interstate sales of handguns and ban on future sales and possession of machine guns. The substitution prompted a House-Senate conference in which Hughes hoped other law enforcement provisions could be added or the bill might die. However, on May 6 the Senate passed the House version by voice vote and added a separate bill, S.2414, to clarify three sections of S.49. President Reagan signed S.49 on May 19, 1986 (Pub. L. No. 99–308). This clarifying legislation cleared the House on June 24.

Discussions with representatives from the NRA and Handgun Control, with a staff member of the House Judiciary Committee who worked the floor during the votes, and with a member of Congress and reports appearing in *Congressional Quarterly Weekly Report* all indicated that these six votes on the House floor did not reflect logrolling on other issues. Thus we feel that it is possible to study this series of votes apart from votes on other issues. It also seems unlikely that the series of six votes reflects much strategic voting, which makes the roll-call analysis problematic (Denzau, Riker, and Shepsle 1985). There was considerable sentiment in favor of weakening the 1968 Gun Control Act, and the Crime Subcommittee repeatedly got rolled by the larger House (Krebiel 1987). Gun control opponents could therefore have their cake and eat it too by voting their sincere preferences and getting the outcome they preferred. From the perspective of gun control proponents, Hughes' amendments were actually somewhat weaker than the status quo, but would strengthen the Volkmer substitute. There appears to be no reason why proponents would vote strategically against the amendments. Since the committee had already been rolled, it appeared likely that the unamended Volkmer substitute would win when paired against the committee bill. Thus, gun control proponents could calculate that it was better to vote sincerely and lose than to vote strategically and lose. Finally, the explanatory power of the statistical model estimated below

suggests that most voting must have been sincere; strategic voting, if there was any, would appear in the error term.

Model Specification, Data, and Measurement

The dependent variable to be examined is the legislator's policy stance on the ith issue (P_i) in the series of six votes on the McClure-Volkmer Bill. According to theories of congressional voting behavior, numerous variables affect a member's policy stance on a particular issue (see, for example, Kingdon 1977; Mayhew 1974; Asher and Weisberg 1978; Kau and Rubin 1982; Brown 1983; Grenzke 1989a; Saltzman 1987; Peltzman 1984). In some theories, a member's position on a policy issue is affected by his ideology (P); there is, however, disagreement as to whether this indicates the influence of constituency characteristics or shirking on the part of legislators. In the empirical model, we measure ideology by ($P-P_i$), which is ideology purged of its dependent variable component.

Denzau and Munger (1986) extend the goal oriented decision-making processes described by Kingdon (1977) and Mayhew (1974) by suggesting that legislators seek to accumulate resources. In order to satisfy the goal of reelection, representatives first adopt policy positions to attract votes directly. If they anticipate no net loss in votes, they are free to adopt positions that will attract campaign funds. In turn, these monies are used to publicize their accomplishments. Thus, the resources (R_{ij}) from each of the j groups (j = 1, . . ., m) associated both pro and con with the ith issue are included in our model. Other variables thought to affect congressional voting include the characteristics of the member's constituency relevant to voting on the ith issue (C_i); and the member's previous policy position on the ith issue ($P_{i,t-1}$). The legislator's policy stance on the ith issue can thus be empirically represented as

$$P_i = f [(P - P_i), R_{ij}, C_i, (P_{i,t-1})] \qquad (1)$$

We base our estimates on a random sample of 200 members of the 99th Congress. Our data collection effort, which included a telephone survey of congressional offices, necessitated use of a sample rather than the entire population. Our sample reflects the partisan division of the entire House: the sample is 57% Democratic, and the population is 58% Democratic. The telephone survey was conducted between December 1986, when we interviewed staffers of members who we knew were retiring, and June 1987. Ninety percent of the interviews were conducted between February and May. We completed 178

of 200 possible interviews, for an 89% response rate. The two main reasons for nonresponse were that the knowledgeable staffer was no longer working for the member and could not be found or that the office had a policy against responding to surveys.

The operationalization of the variables in equation (1) occurs in the context of the gun-control issue. The representative's policy stance on gun control (P_i) is captured by a Likert scale of the number of times the member voted progun on the McClure-Volkmer bill and its various amendments (CQ vote numbers 64–69, see *Congressional Quarterly Weekly Report* 12 April 1986, 828–29). A score of 6 is the highest possible progun score; a score of 0 represents the highest possible support for gun control.[3]

Following Fowler and Shaiko (1987) and Poole (1981), we measure ideology with CQ's conservative coalition support and opposition scores (*Congressional Quarterly Almanac* 42:44–C, 45–C).[4] However, since the six votes on McClure-Volkmer are part of those scores, we adjusted them by removing the component attributable to those votes. Our measure of ideology ($P - P_i$), purged of the gun-issue portion, is the adjusted conservative coalition support score divided by the sum of the adjusted support and opposition scores.[5]

Resources from interest groups (R_{ij}) include campaign contributions as well as direct lobbying by each group. We found that five groups concerned with the gun-control issue had made contributions to House members during the 1984 or 1986 election cycle: the National Rifle Association (and its associated Institute for Legislative Action), the Gun Owners of America, the Citizens' Committee for the Right to Keep and Bear Arms, Handgun Control, and the National Coalition to Ban Handguns.[6] However, we measure total contributions to each incumbent from each group in one specific time period: R_{ij} in equation (1) includes all contributions from the five interest groups during the 1986 election cycle that were reported prior to April 1986, when the votes occurred.[7]

For the prevote period, total contributions to the incumbent from the jth group associated with the gun-control issue consist of the sum of direct contributions and of money spent on behalf of the incumbent by the group (see Federal Election Commission, 1985–86 Committee Indexes).

We supplement our data on the prevote monetary contributions of interest groups with information on their attempts to contact members' offices directly. In the survey of members described above, we asked staffers who handled the gun control issue whether they recalled the member's office being contacted by phone or letter or visited

by the NRA, Handgun Control, other pro- and anti-gun-control groups, police groups, and companies involved in the manufacture or sale of firearms to the public. For the NRA and Handgun Control, we develop a 3-point scale: 0 if there was no phone or letter contact and no visit, 1 if there was either a phone/letter contact or a visit, and 2 if there were both. For the other groups besides the NRA and Handgun Control, we add the number of visits and contacts reported for each general type of group (progun, pro-gun-control, police, and companies). Thus a "2" for progun groups would indicate the number of progun groups that visited and/or contacted the member's office with respect to the McClure-Volkmer bill, above and beyond what was heard from the NRA.

The next variable that must be operationalized is C_i, constituency characteristics relevant to the gun control issue. We measure two kinds of constituency characteristics, which we refer to as "active" and "passive." Active characteristics describe the "noise" that members of Congress hear from their constituents and passive characteristics refer to the type of district the member represents.

We employ our survey data to measure constituency activity. Specifically, we asked staffers how many pro- and anti-McClure-Volkmer letters and phone calls they received. Since many respondents were unable to recall or look up the specific numbers, we coded the responses into nine categories.[8] Most of the pro-bill mail was NRA-inspired; we assume it reflects not necessarily the number but the political intensity of NRA members in the member's district.[9]

We use information from the *Congressional District Data Book of the 98th Congress* to measure most of the passive characteristics of the member's constituency.[10] Passive characteristics are of three types: indicators of the demand for guns by hunters, indicators of the demand for guns by potential crime victims, and indicators of the district's overall partisan complexion.

Wright, Rossi, and Daly (1983) and Wright and Marston (1975) find that the hunting gun "culture" has characteristics that we can measure using demographic data from each district in our sample. This culture is largely WASP (measured by variables for the percentage of the population that is white and the percentage that is of Dutch, English, German, Norwegian, Scottish, or Swedish descent),[11] largely rural (the percentage that dwell in rural areas), moderately well-off (median district income), moderately well educated (percentage of the population with a college degree), and largely southern (a dummy variable) and includes many veterans of the armed services (percentage of civilians over 16 years old who are veterans).

Another part of the gun constituency is composed of urban per-

sons fearful of crime. Violent crime could stimulate either a demand for guns or a demand for gun control; consequently, the expected sign on this variable is not clear. Since data on crime rates by congressional district are not available, we use instead the violent crime rate in the state and the district's population density.

The last passive characteristic of a congressional district is its partisan or ideological complexion, which we measure by the percentage voting for Reagan in 1984 (Barone and Ujifusa 1985).

The member's previous position on the gun issue ($P_{i,t-1}$) is thought to affect his current position and campaign contributions from gun-related interest groups as well. Before the McClure-Volkmer bill, there had been no floor vote on the gun issue since 1968, so no direct measure of $P_{i,t-1}$ for our 1986 sample of incumbents is readily available. (Only 13% of the members in our sample have enough seniority to have revealed a position in 1968). Nonetheless, both the NRA and Handgun Control routinely survey members concerning their positions on the gun issue and use that information (as well as other considerations) to allocate contributions. Neither group would share their survey results with us. As a consequence, we proxy $P_{i,t-1}$ with two dummy variables. The first equals 1 if the incumbent received a contribution from NRA during the 1984 election cycle, and 0 otherwise; the second equals 1 if the incumbent received a Handgun Control donation during the same election cycle, and 0 otherwise. We assume that both groups give only to members who support their position. The specific amount given may well depend on other factors.[12]

In estimating the parameters of equations linking campaign contributions and congressional voting, there is often the possibility of simultaneity between these two variables. Contributions may influence the vote; but votes may also influence contributions. However, in the case of the McClure-Volkmer vote as we examine it in equation (1), simultaneity is not likely. As was noted above, the contributions variable includes only monies received during the 1986 election cycle but before the April 1986 vote. Thus, the independent variable temporally precedes the dependent variable; events at time t cannot cause events at time $t-1$. Lagging the independent variable in this way, however, is appropriate only when votes on an issue occur infrequently. The McClure-Volkmer vote was a discrete, discontinous event; campaign contributions received before the vote from one side or the other of the gun lobby would be a clear signal about the desired vote on McClure-Volkmer, and could not be interpreted as a reward for previous votes on the gun issue, since there had been no such vote for nearly 20 years. By contrast, if one were examining the relation between contributions and

votes on appropriations for a major weapons system, one would have to use simultaneous equation estimation procedures since such bills occur routinely and with relatively great frequency.

Since the dependent variable in equation (1) is limited to values ranging from 0 to 6, ordinary least squares (OLS) would produce biased and inefficient parameter estimates. Instead, a multinomial logit maximum-likelihood procedure is used.

Results

Table 1 reports the means for the 1986 prebill contributions, letter writing, and contact variables. The NRA outspent its nearest opponent, Handgun Control, by slightly more than 6 to 1. (The bulk of contributions from all groups came during the 1984 election cycle and after the McClure-Volkmer vote.) The other groups lagged far behind. In terms of contacts, NRA and Handgun control were about equally active. With respect to the smaller groups, those on the progun side were clearly more active than those on the procontrol side. Police groups, however, were more active than the progun groups.[13] Finally, the Table reveals that members received considerably more progun than antigun letters and phone calls.

There is a slight tendency for the NRA to direct its lobbying and contributions toward the same people; this is also true of Handgun Control. The correlations between the NRA prebill contributions reported in Table 1 and NRA contacts, other progun group contacts, and progun letters range from .11 to .22. Similarly, the correlations between Handgun Control prebill contributions and Handgun Control contacts, other antigun group contacts, police group contacts, and antigun letters range from .12 to .28. Moreover, NRA and Handgun Control target their contributions and lobbying efforts in different directions; the correlations of NRA contributions and lobbying with Handgun Control contributions and lobbying are smaller than the correlations reported above and are never significantly different from zero.

Table 1 also displays the distribution of the dependent variable by reporting the percentage who voted progun 0, 1, 2, 3, 4, 5, or 6 times. Most of the sample (61.6%) was consistently pro- or anti-gun control; 23.1% cast no progun votes, and 38.5% cast all their votes in favor of easing gun control. But a substantial minority (38.4%) switched their votes.[14]

Table 2 reports the parameter estimates for a linear, additive specification of equation (1). Overall, the goodness-of-fit statistics are quite acceptable. All of the significant and most of the insignificant var-

TABLE 1
Contributions, Lobbying, and Voting on the
McClure-Volkmer Bill, 1986

Descriptive Statistic	Mean Value
Prevote Contributions during the 1986 Election Cycle	
NRA	$321.
Gun Owners of America	0
Citizens' Committee for the Right to Keep and Bear Arms	2.
Handgun Control	50.
National Coalition to Ban Handguns	0
Visits and Phone or Letter Contacts	
NRA (scale of 0–2)	1.42
Number of Progun Groups Establishing Contact	1.46
Handgun Control (scale of 0–2)	1.27
Number of Antigun Groups Establishing Contact	.42
Number of Police Groups or Delegations Establishing Contact	5.93
Constituents' Phone or Letter Contacts (scale of 0–9)	
Progun	5.98
Antigun	2.95
Number of Progun Votes	Percentage Distribution
None	23.1
One	3.5
Two	4.9
Three	8.4
Four	7.7
Five	14.0
Six	38.5

iables have the theoretically expected sign. Conservative ideology has a highly significant positive impact, but political party is not significant. Both NRA's and Handgun Control's contributions are also significant, and have the expected signs. Holding other variables constant, NRA's prebill contributions increased the number of progun votes, while Handgun Control's might have diminished them, depending on one's choice of significance level. Contributions from the smaller committees were either nonexistent or not significant. Previous position on the gun issue, as indicated by having received a 1984 contribution from the NRA, is highly significant, but the same factor as measured by having received a Handgun Control contribution is not. Both variables have the theoretically expected sign.[15] Neither NRA's nor Handgun Control's direct contacts with congressional offices were significant; nor were contacts from other gun-related lobbies. Police contacts were, however, highly significant in pushing members toward a gun-control

TABLE 2
The Effect of Contributions and Lobbying on Roll-Call Voting
on the McClure-Volkmer Bill, 1986
(logit estimates)

Independent Variable	Unstandardized Coefficient	Standard Error	Chi-Square
Intercept 1	−1.27	3.09	.17
Intercept 2	−1.97	3.10	.40
Intercept 3	−2.91	3.12	.87
Intercept 4	−4.14	3.15	1.73
Intercept 5	−4.92	3.16	2.42
Intercept 6	−6.10	3.17	3.70
Conservative Ideology	.050	.01	12.68*
Republican Party	− .50	.68	.54
Prevote Contributions			
NRA	.001	.0005	4.37**
Citizens' Committee	.034	.094	a
Handgun Control	− .004	.003	2.04***
Interaction of Previous Position and			
NRA Contributions in 1984	2.25	.93	5.86*
Interaction of Previous Position and			
Handgun Control Contributions in 1984	− .29	1.01	.08
Contacts			
NRA	.19	.44	.19
Progun Groups	− .26	.21	1.49
Handgun Control	.24	.43	.30
Antigun Groups	− .35	.36	.94
Police Groups or Delegations	− .18	.06	7.90*
Constituent Contacts			
Progun Letters	.15	.11	1.73***
Antigun Letters	− .26	.14	3.38**
Demographic Variables			
Southern	.44	.47	.88
Rural	.03	.016	4.90**
Protestant	− .019	.04	.28
Veterans	.19	.14	1.81***
College Graduates	.07	.08	.91
Median Income	− .0002	.0001	4.13**
Violent Crime	− .0005	.001	.16
Population Density	− .0005	.001	.17
Reagan Voters	− .004	.03	.02

R = .53   Model Chi-Square = 179.92   Chi-Square Probability <.001
Fraction Concordant Pairs (predicted and actual responses) = .788
N = 143

Note: The dependent variable is the number of times the member voted progun.
[a] No chi-square calculated; inclusion in final iterations caused conversion problems.
  * asymptotic $p \le .01$, one-tailed test.
 ** asymptotic $p \le .05$, one-tailed test.
*** asymptotic $p \le .10$, one-tailed test.

position. Even though members received more progun than pro-gun-control letters, pro-gun-control letters had a significant impact on re-ducing the number of progun votes, while NRA-inspired progun letters had only a marginally significant effect in the opposite direction. Only three demographic variables were significant. Specifically, being from a low-income, rural district with relatively numerous veterans increased the number of progun votes, other factors being equal.[16]

Multinomial logit analysis makes it possible to predict the probability of voting progun more than 0, 1, 2, 3, 4, or 5 times, given se-lected values of the independent variables. To compare the relative im-pact of NRA and Handgun Control dollars, Table 3 shows the indicated probabilities for a member whose characteristics are at the sample mean for ideology, receipt of a 1984 NRA contribution, number of po-lice contacts and antigun letters, and district percent rural, veteran, and median income.[17] Each entry in the table is such a member's probabil-ity of voting progun more than 0, 1, 2, 3, 4, or 5 times, given the levels of NRA or Handgun Control contributions indicated. For example, such a member who received no contributions from either group had a .64 probability of voting progun more than 2 times. Recall that the average NRA 1986 prevote contribution was about $300, while the average Handgun Control donation was $50. The impact of a $300 contribution from the NRA was to raise the probability of voting progun more than twice from .64 to .71. By contrast, if Handgun Control had been able to donate $300, it would have reduced the probability of more than two progun votes from .64 to .35. In fact, the results from each column of Table 3 consistently show that if Handgun Control had given the NRA average, it would have a greater impact on reducing the probability of pro-gun votes than the NRA actually had on raising that probability. The overall impression is that Handgun Control is a David compared to NRA's Goliath. This conclusion is buttressed by the fact that the abso-lute value of the estimated Handgun Control contribution coefficient in Table 2 is larger than the NRA contribution coefficient; by the fact that gun-control letters were significant while pro-gun letters were only marginally so; and, finally, by the effectiveness of the police groups in bringing about more gun-control votes. Nonetheless, the gun-control lobby, while it appears to have won the battle over the ban of interstate sales of handguns, still lost the war, since the McClure-Volkmer bill was passed by Congress relatively unscathed.

The high visibility and competition surrounding the McClure-Volkmer vote make the empirical results surprising, since it is especially under these conditions that money is hypothesized to have no impact on legislative behavior (Sabato 1984; Bedlington and Powell 1986). Yet

TABLE 3

Contributions and Roll-Call Voting on the McClure-Volkmer Bill, 1986

Source of Contribution		Probability of Voting Progun More Than x Times, x =					
NRA	Handgun Control	0	1	2	3	4	5
$300	0	.93	.86	.71	.42	.25	.09
175	0	.92	.85	.68	.39	.22	.08
50	0	.91	.83	.66	.36	.20	.07
0	0	.90	.82	.64	.34	.19	.07
0	$ 50	.88	.79	.60	.30	.17	.06
0	175	.82	.70	.47	.21	.11	.04
0	300	.74	.58	.35	.14	.07	.02

Note: Results are from a multinomial logit model that includes only the significant variables in Table 2.

the findings show that both money and lobbying have substantial impact.

The model of representation proposed by Denzau and Munger (1986) suggests why money might be effective even when issues are salient. Denzau and Munger contend that when a legislator's policy stance has no impact on his or her overall electoral margin, then the legislator's willingness to accept money in exchange for a policy stance will be unconstrained by voter preferences. They go on to argue that rational ignorance on the part of voters can explain why a legislator's policy stance might not affect his or her margin in the next election: voters are likely to be ill-informed about the voting behavior of their representatives because the cost of information is often high.

Another interpretation is, however, plausible: divisiveness can also explain why a vote has no electoral impact. While a majority favor gun control, they report that they are less likely to base their vote in a congressional election on that issue than the minority who oppose it (Shuman and Presser 1981, 234–42). If one side has numbers and the other side has political activism, the net effect is a contested issue in which the average member's vote is likely to attract as much support as opposition.

Empirical evidence supports this conjecture: it appears that, for the average legislator, a progun vote in April 1986 had no effect on the November electoral margin. To support the interpretation, we estimated the parameters of an equation in which a representative's electoral margin (V) is a function of his or her votes on the particular gun issue (P_i); his or her votes on all other policy issues, alternatively conceptualized as ideology purged of the gun issue ($P - P_i$); the total resources he or she spends (R); the total resources the opponent spends

(R*); and indicators of the incumbent's personal and partisan strength (S) in the district (Jacobson 1978, 1985):

$$V = g\,[P_i,(P - P_i),\, R,R^*,S] \qquad\qquad (2)$$

The equation is similar to Jacobson's model (1985), but differs in two important respects. First, it includes two indicators of the legislator's policy stance. Second, it is based only on 1984 incumbents in our sample who ran again for Congress in 1986.

 Measurement of the policy variables P_i and $(P - P_i)$ necessitate some adjustment, since being progun or conservative does not directly produce a larger (or smaller) electoral margin for the average member. Instead, the impact of a member's policy stance depends on the proclivity of the district to be conservative or progun in the first place. Consequently, we measure the impact of a member's April 1986 gun control votes (P_i) on his margin in the November 1986 election by regressing the member's Likert vote index score on the number of progun letters and phone calls the member received, as measured by the 1–9 scale discussed in the previous section. The absolute value of the residual from this regression is a measure of how deviant the member is from what active constituents prefer, and this absolute residual value is used in the electoral margin equation as a measure of the incumbent's policy stance, relative to the district's preference.[18] The coefficient for this term should be negative: the larger the deviation between the member's actual progun vote and the member's predicted vote, based on the number of pro-gun letters received, the smaller the electoral margin should be.[19] If the coefficient is statistically insignificant, it suggests that a member's votes on the gun control issue have no impact on the margin in the next election.

 According to the model, votes on other policy issues in the legislature also affect the member's electoral margin, but again the effect is not direct. Conservative votes by the member are likely to raise the electoral margin only in conservative districts. The member's votes on other policy issues, which we here refer to as ideology $(P - P_i)$, are measured by the member's conservative coalition support score, as described in the previous section. The district's conservatism is measured by the 1984 Reagan vote. By regressing the member's conservative coalition support score on the district's 1984 Reagan vote and measuring the absolute value of the resulting residual, we create a variable that reflects the deviation between constituency preferences and member behavior. The larger the deviation, the smaller the incumbent's electoral margin should be, according to the model.

        The next terms in the electoral margin equation reflect the incumbents' and their opponents' expenditures in the election. We measured total resources spent by the incumbent (R) by the representative's reported total expenditures for the 1986 general election cycle (Federal Election Commission 1988). More specifically, we summed net disbursements by the incumbent, major party and nonparty expenditures for the incumbent, independent expenditures and communications costs for the incumbent, and nonparty, independent expenditures and communication costs against the incumbent's general election opponent.[20] We gauge total resources spent by the opposition (R*) from data on total expenditures by each of the incumbent's opponents in the 1986 general election as reported to the FEC. The general election opponent's funds are composed of net disbursements by that candidate; major party, nonparty, and independent expenditures and communication costs for the opponent; plus nonparty and independent expenditures and communication costs against the incumbent. The natural logarithm of expenditures is used to capture the diminishing marginal electoral returns of additional campaign expenditures (Jacobson 1985).[21]

        The equation also contains a term for the incumbent's party, in order to capture national partisan trends in 1986; a 1 indicates Republicans, and a 0 designates Democrats. The incumbent's previous electoral margin in the 1984 election is also in the equation to measure the incumbent's strength in his or her own district.[22] Finally, electoral margin, the dependent variable, is measured by the incumbent's vote percentage in the November 1986 election.

        The results in Table 4 show clearly that, for the average member, the magnitude of the deviation between the member's actual progun vote and predicted vote, based on progun letters from the district, had no effect on electoral success in the next election.[23] (Recall that this was true even when other measures of the policy term were used.) By contrast, votes on other policy issues appear to have a significant effect. Specifically, the larger the deviation between the member's actual Conservative Coalition score and the score that would be predicted based on the district's conservatism, the smaller the incumbent's electoral margin. Using a 1-tailed test, the coefficient is almost significant at the .01 level. Overall, these two coefficients suggest that the member's vote on the specific gun control issue had no electoral impact, but that the member's overall vote pattern (i.e., ideology) did.

        The signs of the remaining estimates accord with expectations. The logarithm of the incumbent's expenditures has the anticipated positive sign and is highly significant, while the opponent's expenditures

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TABLE 4
Progun Voting on the McClure-Volkmer Bill and
Electoral Margin in the 1986 Election
(OLS estimates)

Independent Variable	b	Standardized Estimate	T-Score
Intercept	27.88	—	1.89
Progun Vote (actual vs. predicted)	− .53	−.04	− .49
Conservative Coalition Vote (actual vs. predicted)	− .17	.14	2.64*
Log of the Incumbent's Total Expenditures	4.37	.33	6.33**
Log of the Opponent's Total Expenditures	− 2.17	−.74	−13.06**
Republican Party	− 3.73	−.12	− 2.25***
1984 Electoral Margin	.17	.15	2.77***
Adjusted R^2 = .62 F_{prob} ≤.0001	N = 158		

*p ≤.05, one-tailed test.
**p ≤.01, one-tailed test.
***p ≤.03, two-tailed test.

have the opposite impact and are also significant. Democrats appear to have had an electoral edge over Republicans in the November 1986 election, other things being equal. Finally, a larger electoral margin in 1984 also translated into a larger one in 1986, even when other variables in the equation are constant. Overall, the goodness of fit for these results is quite satisfactory, explaining just over 60% of the variance in the dependent variable.

Conclusion

The empirical results suggest that, even though gun control is a salient issue, campaign contributions from both the NRA and Handgun Control influenced how members of Congress voted on the McClure-Volkmer Bill, when the analysis controls for a member's position prior to the debate and holds constant indicators of ideology, constituency characteristics and lobbying efforts. Although the NRA outspent Handgun Control, Handgun Control's contributions were more influential on a per dollar basis.

The results also show that more than money affects congressional votes. The NRA's extensive grass roots lobbying appears to have

been effectively countered by the activity of Handgun-Control-inspired local and national police groups. While neither the NRA's nor Handgun Control's legislative contacts appeared influential, contacts made by local and national police groups were very influential. Handgun Control, which was responsible for pulling the police groups into the policy debate, thus increased the impact of its position by increasing the number of actors in the gun policy subsystem. In addition, NRA-inspired progun letters were only marginally significant, while antigun letters showed Handgun Control's position was persuasive.

Our empirical results also reveal that, while contributions appeared to influence a member's vote on the McClure-Volkmer Bill, the vote on the bill had no impact on the member's margin in the next election. Interpretation of these results in light of Denzau and Munger's (1986) theory of representation illustrates how the lack of an electoral connection between a member's vote and subsequent electoral margin can explain why money might be influential even on a salient, but divisive, political issue. In today's campaign environment, dominated by expensive television media, legislators know they must raise large sums of money to remain competitive. When there are no perceived adverse electoral consequences of a particular vote, a policy position that conforms to a contributor's interests can only provide more of the resources desperately needed. Accordingly, PAC contributions may have an impact on salient issues so long as the legislator believes he or she will not lose electoral support or can satisfactorily explain the vote to the reelection constituency, an issue to which we now turn.

Fenno (1978, 8) argues that every member of Congress "perceive(s) an explicitly political constituency"—those voters who the member believes vote for him or her. At the same time, the member knows who never votes for him or her. A group that is part of a member's reelection constituency will not punish a member at the polls if the member can explain that the vote in question was merely an aberration of his or her position, not a new trend. This will be possible if the member has previously earned the trust of the group by establishing a compatibility between their positions. If the group was not part of the member's reelection constituency, it doesn't matter what position he takes, because the group won't vote for the member anyway.

Peltzman (1984) would probably argue that ideology, which is an inexpensive way to communicate overall policy positions to voters, is the vehicle by which this trust is earned. Our findings are consistent with such an interpretation, since we show that ideology (i.e., overall policy positions) has electoral consequences but that votes on the specific issue do not. Moreover, an aberrational vote could be easily explained. For ex-

ample, progun members who cast pro-gun-control votes on one of the Hughes Amendments (our votes 1, 2, and 3) could argue that they were casting a vote for law enforcement. The lesson for lobbying groups seems clear. If the group can provide a member with an explanation for a vote that appears contrary to the member's reelection constituency's interests, it is more likely to be persuasive. As long as members maintain an overall ideological compatibility with their reelection constituency, they can cast an occasional aberrational vote on a salient issue, perhaps in response to interest group pressures, and not expect any adverse electoral consequences. They cannot ignore their reelection constituency all of the time however, because the overall voting pattern, which we conceptualize as ideology, is still important for reelection.

The fact that ideology has electoral consequences is also relevant to the ongoing debate about whether ideology as a determinant of congressional voting indicates that legislators are shirking constituency interests (Kau and Rubin 1979, 1982; Kalt and Zupan 1984; Peltzman 1984). According to the results in this study, voting in accord with the ideological preferences of one's district has a positive electoral payoff. Ideological voting by legislators therefore reflects, at least in part, the aggregate ideological preferences of their constituents (Feld and Grofman 1988). While this conclusion does not rule out shirking as an explanation for ideological voting by legislators, it suggests that at least some ideological voting reflects the ideological preferences of constituents. This is not an unlikely possibility, since it is easier for constituents to monitor the overall pattern of voting than it is to monitor every single vote (Peltzman 1984).

These interpretations rest on the empirical veracity of the statistical conclusions, but at least two of the statistical conclusions may be questionable. Our results show that both interest group resources (contributions and direct lobbying) and constituency characteristics (some demographic variables and pro-gun-control letters) influence congressional behavior. Unfortunately, our measures of constituency characteristics are less than complete.

With imperfect measures of constituency characteristics and an issue that commands widespread grass-roots attention, contributions and lobbying directed at a particular member of Congress may reveal, among other things, constituency characteristics.[24] Campaign contributions and direct lobbying on issues such as gun control may signal to members that the issue is very important to voters. Such activities by interest groups could thus convey information to the members about constituents' opinions. Because demographic variables and letters only imperfectly measure constituency characteristics and opin-

ions relevant to the gun-control issue, PAC contributions and direct lobbying become in part a proxy for these variables. To the extent that this is true, the significant coefficients for campaign contributions and for direct lobbying may overstate the independent influence on congressional behavior of money from and lobbying by organized groups.

We also found that the deviation of members' votes on McClure-Volkmer from what their constituency might have preferred, as measured by letters (or demographic constituency variables), had no apparent effect on the margin in the next election. For a nonsalient issue, this would not be a surprising result. But gun control is surely an issue on which representatives feel that voters are looking over their shoulder. There are, however, two possible explanations for our result. One is that because the measures of constituency characteristics are imperfect, we have inadequately measured the deviation of the member's vote from constituency opinion, resulting in a biased estimate. Another possible explanation is lack of variance in the deviation term. If members of Congress truly believe that voters are aware of their votes on the gun issue and if reelection is the predominant goal of most incumbents, they will not dare to deviate from constituency preferences. Lack of variance in an independent variable could thus account for statistical insignificance. However, the coefficient of variation for the deviation of the gun vote from constituency preferences (.70) is larger than the coefficient of variation for the deviation of the overall voting pattern from constituency preferences (.50), and the latter variable is significant but the former is not. Nonetheless, better measurement of constituency characteristics, and hence constituency preferences, could alter these results, so that lack of variance could still explain why deviation of congressional behavior from voter opinions on the gun issue is not a significant determinant of electoral outcomes.

Thus, the interpretation of the statistical results in this and similar studies is very dependent on the assumption of good, if not perfect, measurement of constituency characteristics. Further, the model and the evidence in this study pertain only to interest groups with specific policy goals. The behavior of specific interest PACs may differ from that of PACs whose members span multiple issues (Eismeier and Pollock 1986). Moreover, the efficacy of money and lobbying may simply reflect the relative political novelty of the gun control issue at the time of the McClure-Volkmer votes, and may not apply to subsequent manifestations of the gun issue in Congress.

In sum, the results show that, for this particular vote, and given our data, the NRA had the political clout it is reputed to have but that Handgun Control was effective, too. In both cases, the campaign contri-

butions appeared to affect members' votes. While Handgun Control's monetary contributions had a statistically marginal impact, their lobbying effort, along with that of the police, was clearly successful, while NRA's was not. Moreover, the results suggest that if Handgun Control had given as much as the NRA, its donations would have had a greater effect in reducing the number of progun votes than the NRA's actual contributions had in increasing the number of progun votes. The fact that both groups were effective, but in different ways, suggests that relative wealth does not determine overall effectiveness but rather affects how groups chose to exercise influence.

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NOTES

1. Schroedel (1986) recognizes the importance of this distinction and limits the sample to committee members but then examines the floor votes of these members and not their committee votes. That study, however, uses cosponsorship as another dependent variable.

2. The two leading typologies of public policy clearly predict that gun control will be a conflictual issue. Using Wilson's (1980) fourfold classification scheme, one would characterize gun control as a classic example of entrepreneurial politics. In this political arena, there will be conflict between a policy entrepreneur (Pete Shields, founder of Handgun Control) who can mobilize public support as well as allies inside and outside government, and the group likely to bear the costs of regulation (represented by the NRA).

Using Ripley and Franklin's (1986) categories, one would characterize gun control as an example of protective regulatory policy. In this arena, at the policy formulation stage, the targets to be regulated see themselves in an adversarial relation with those proposing the regulation.

As Olson (1965) points out, organized group activity cannot easily be explained by simple theories of rational individual behavior, but Peltzman (1976), Moe (1980), and Salisbury (1984) give theoretical and empirical evidence for the seeming omnipresence of organized groups.

3. We also included the NRA "Honor Roll" score in the measure of P_i, adding a 1 to the Likert scale for those who were on it. Since doing so had no effect on any of the results reported below, we omit the member's presence on the "Honor Roll" from the operationalization of P_i.

4. While ADA ratings are commonly used, Poole (1981) finds that Congressional Quarterly's Conservative Coalition support and opposition scores are a better indicator of ideology. In addition, Fowler and Shaiko (1987) point out that the Conservative Coalition support and opposition scores separate party from ideology better.

5. This computation is necessary because CQ's Conservative Coalition support and opposition scores reflect the number of votes for which the member was present. A low CQ score could indicate low support or opposition or a high absentee rate or both.

6. With the exception of one $250 contribution from Smith and Wesson, we ascertained that no police groups or companies involved solely in the sale or manufacture of guns to the public reported to the FEC campaign contributions to members of our sample. We chose to ignore contributions from large, diversified, companies like Dupont (which, among other things, makes bullets). Corporations such as these are unlikely to send a clear policy message on gun control to the recipients, and hence we exclude such contributions from this study. We also ignored the Smith and Wesson contribution.

With regard to NRA's contributions, we added the money spent on behalf of a candidate by the NRA's Institute for Legislative Action to the NRA's direct contributions from the NRA Political Victory Fund.

7. Because we examine the impact of prevote contributions on the vote and assume that events occurring after cannot cause events occurring before, we do not use simultaneous equation techniques for parameter estimation (see Saltzman 1987; and Namboodiri, Carter, and Blalock 1975, 493). Later in the paper, we discuss this issue in more detail.

8. These were the specific categories: 0 = no letters/phone calls; 1 = 1–9 letters/calls; 2 = 10–49; 3 = 50–99; 4 = 100–299; 5 = 300–499; 6 = 500–599; 7 = 600–799; 8 = 800–999; and 9 = 1000 or more.

9. We were unable to get membership data by congressional district from NRA and Handgun Control alike. Both groups keep that information very private. We presume that members of Congress do not know the precise membership figures either. Instead, we expect that members, to the extent they are responsive to constituency preferences on the gun-control issue, rely on the same information we use: letters and phone calls from the district and a general knowledge of the demographic characteristics of the constituency.

10. For states that were redistricted, we used data pertaining to the 99th Congress.

11. These particular categories were chosen to represent white, anglo-saxon, Protestants.

12. We recognize that contributions reflect more than a member's position. There is much research (Grenzke 1989b; Poole and Romer 1985; Grier and Munger 1986) showing that groups allocate money on the basis of an expected close election, agenda power in the legislature, and ideology. We assume, however, that only progun members will have received an NRA contribution and only pro-gun-control members will have received a Handgun Control contribution. The other variables determine the amount of the contribution, which we ignore by measuring only whether or not a contribution was received. If there is a source of error in our proxy, it is that there may be progun members who received no NRA money and pro-gun-control members who received no Handgun Control money. Budget-constrained groups, for example, may give nothing to safe members who support the group's position.

13. The progun, antigun, and police contact scales can be compared to each other, but not to the NRA and Handgun Control contact scales.

14. Even though most members voted consistently, to recode the dependent variable into a simple dichotomy would mean that the switchers would have to be dropped from the sample or misclassified. The analysis that follows examines only the impact of the independent variables on the total number of progun votes. It does not examine the internal dynamics of the voting process itself. In the future, we intend to investigate the difference between the switchers and the consistent voters and to look particularly at those who changed their position between our vote 2 (before the overnight recess) and our vote 3 from an anti- to a pro-gun-control position.

15. The two prior position variables are highly (negatively) related to one another ($r = -.76$), as well as to prevote Handgun Control contributions (though in oppo-

site directions; r's of about .4); but the collinearity diagnostics indicate no severe collinearity. Nonetheless, these correlations suggest that the standard error of estimate for the influence of Handgun Control contributions in Table 2 may well be high as a result.

     16. In addition to the variables included in equation (1) and shown in Table 2, it is possible that expected postvote contributions affect how legislators vote. Omitting such a variable from equation (1) could therefore produce biased estimates. To test for this possibility, logit-estimated probabilities of getting a postvote contribution from the NRA or Handgun Control were included in a respecification of equation (1). For the NRA, the dependent variable was 1 if the member received a postvote NRA contribution and 0 otherwise; the independent variables were a measure of legislative power, prevote NRA contributions, the proxy for prior position (1 if the member received an NRA contribution in the 1984 election cycle), and electoral margin. For Handgun Control, a similar dichotomous variable was created; the independent variables were ideology, legislative power, the proxy for prior position (1 if the member received a Handgun Control contribution in the 1984 cycle), and electoral margin. In both cases, the independent variables were selected because they emerged from a larger set of regressors as statistically significant or because they were theoretically relevant.

     These logit models were used to create two variables measuring the legislator's estimated probability of receiving a postvote contribution from NRA and Handgun Control. Both equations were significant, and the independent variables had the expected signs. The proportion of concordant pairs of predicted probabilities and actual contributions (measured as 1 or 0) was .62 in the NRA equation and .75 in the Handgun Control equation.

     Including the predicted probabilities in the equation used to generate the results reported in Table 2 did not have any effect, with one exception: actual NRA prebill contributions became insignificant. However, the probabilities of NRA and Handgun Control postvote contributions were also not significant. Collinearity diagnostics revealed considerable shared variance among prevote NRA contributions, the NRA prior position dummy, expected NRA postvote contributions, and progun letters. The simple correlation between actual NRA prebill contributions and expected postvote NRA contributions is .65. Disentangling future NRA contributions from actual prevote contributions is difficult because legislators undoubtedly base their predictions of future NRA contributions on past NRA contributions.

     The results in Table 2 seem superior to those discussed here for two reasons. First, they are more robust, since they are less plagued by collinearity. Second, the adjusted results suggest that future contributions are based on past behavior. The results reported in Table 2 may well reflect expectations about the future, but these expectations cannot be separated from past behavior. In any event, the combined results suggest that contributions, be they past donations or expected future ones, affect votes in Congress on this issue. Perhaps prebill contributions from the NRA, even though they are small compared to later donations, have an effect on the vote because they signal future donations.

     17. This is, of course, a purely hypothetical member. No individual in our sample is at the average on these seven variables simultaneously.

     18. Johannes and McAdams (1981) also use regression residuals to measure the impact of an incumbent's votes on the electoral return.

     19. Numerous other specifications of this variable were examined. One looked at the absolute value of the residual derived from regressing the member's progun vote on district characteristics that were likely to indicate a progun proclivity. Another looked at the absolute value of the residual derived from regressing the member's antigun vote on the number of antigun letters received. Five interactive terms were also considered: the member's progun vote times the number of phone calls and letters; the member's progun

vote times the district's 1984 Reagan vote; the member's progun vote times the percentage rural in the district; the member's progun vote times the percentage rural times the number of progun letters and phone calls; and the member's antigun vote times the number of antigun letters and phone calls from the district. In all cases, the results do not differ from those reported in Table 4.

20. To more accurately measure total resources spent by a candidate, we found it necessary to include money spent against the opponent as money spent on behalf of the candidate.

21. Linear and parabolic forms of the expenditure terms were also examined. In each case, the R^2 was about half that shown for the log form and reported in Table 4. Moreover, the sign on the term for incumbent's expenditures was significantly negative, indicating that the more the incumbent spent the smaller his vote percentage. The log form raised the R^2's and changed the sign of the incumbent's expenditure variable to positive. Altering the form of the expenditure variables never affected the sign or the significance of any of the other variables included in the model. (One incumbent and 58 challengers reported no expenditures to the FEC, indicating that they spent anywhere from nothing to $4999. It was therefore necessary to turn the zero values into a one to make the log operation possible.)

22. The member's seniority, measured by the number of terms he had been in Congress, was also included in the equation. The coefficient was not significant, and its inclusion had no effect on any of the coefficients reported in Table 4.

23. Unlike Jacobson's 1985 estimates, some of which are based on two-stage least squares (TSLS) estimates, the results in Table 4 are OLS estimates. TSLS might be necessary because of the possibly simultaneous relationship between expenditures and electoral margin (though it had no effect on Jacobson's results) and between the member's policy and ideological closeness to constituents' preferences and electoral margin. The coefficients in Table 4 can best be regarded as reduced form estimates, however, rather than estimates of structural parameters.

24. In related research, we find that NRA contributions are positively and significantly correlated with the percentage rural and percentage of·veterans in the district, while Handgun Control contributions are negatively and significantly correlated with percentage rural and percentage Protestant.

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