DO CAMPAIGN DONATIONS ALTER HOW A POLITICIAN VOTES? OR, DO DONORS SUPPORT CANDIDATES WHO VALUE THE SAME THINGS THAT THEY DO?*

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Abstract

Despite all the work on how campaign donations influence a politician's behavior, the nagging question of whether contributions alter how the politician votes or whether these contributions constitute support for like-minded individuals remains unresolved. By combining the campaign contributions literature with the work on politicians intrinsically valuing policy outcomes, we offer a simple test that examines how politicians' voting patterns change when they retire and no longer face the threat of lost campaign contributions. If contributions are causing individual politicians to vote differently, there should be systematic changes in voting behavior when future contributions are eliminated. In contrast, if contributors donate to candidates who intrinsically value the same policies, there should be no changes in how a politician votes during the last period.

I. Introduction

Do special interest campaign contributions significantly alter how politicians vote on legislative issues? Can these political action committee (PAC) contributions ''buy'' votes within the Congress? Despite the large number of studies measuring the positive correlation between contributions and congressional voting behavior, these questions remain unanswered.[1] The

[1] See John P. Frendreis and Richard W. Waterman, *PAC Contributions and Legislative Behavior: Senate Voting on Trucking Deregulation,* 66 Soc Sci Q 401, 401 (1985), who write, ''[I]t is impossible to eliminate as an explanation for the observed partial correlation the giving of contributions to legislators who would vote in a particular fashion regardless of

empirical evidence in these studies is equally consistent with the hypothesis that interest groups contribute to and support politicians with similar interests and ideologies to their own. These correlations do not represent consistent estimates of the effect of PAC contributions on voting behavior because campaign contributions are endogenously determined by a number of factors, including a politician's ideology.

This article attempts to assess the causal link between campaign contributions and a politician's voting behavior by focusing on the effect of changes in campaign contributions during a politician's last term in office. These changes in special interest contributions are largely determined by a politician's retirement decision and subject to less endogeneity between a politician's or a constituent's preferences and contributions. In effect, we use factors that influence politicians' retirement decisions as instrumental variables in identifying the relationship between voting behavior and contributions.

The economics literature today generally accepts the claim that politi-

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whether they received contributions.'' Some early research has shown a large and statistically significant association between PAC contributions and voting behavior on minimum wage legislation (J. I. Silberman and G. C. Durden, *Determining Legislative Preferences on the Minimum Wage: An Economic Approach,* 84 J Pol Econ 317 (1976)), business and unions and several regulatory bills (James B. Kau and Paul H. Rubin, *Congressmen, Constituents, and Contributors: Determinants of Roll Call Voting in the House of Representatives* (1982)), the American Trucking Association and trucking deregulation (Frendreis and Waterman, id), agricultural legislation (Thomas Stratmann, *What Do Campaign Contributions Buy? Deciphering Causal Effects of Money and Votes,* 57 S Econ J 606 (1991)), and labor legislation (Sam Peltzman, *Constituent Interest and Congressional Voting,* 27 J L & Econ 181 (1984); Marick F. Masters, *Congressional Support for Unions' Positions across Diverse Legislation,* 9 J Lab Res 149 (1988)). Stratmann (id at 619) concludes that legislation that reduces PAC contributions to only $2,500 ''would be insufficient'' because contributions would still significantly affect the outcome of legislative votes. The continual introduction of new campaign reform legislation in Congress shows the general acceptance of this view. Other economists and political scientists have found smaller though still statistically significant relationships between PAC contributions and voting patterns for a number of areas: a cargo preference bill (Henry W. Chappell, Jr., *Campaign Contributions and Voting on the Cargo Preference Bill: A Comparison of Simultaneous Models,* 36 Pub Choice 301 (1981)), dairy price supports (W. P. Welch, *Campaign Contributions and Legislative Voting: Milk Money and Dairy Price Supports,* 35 W Pol Q 478 (1982)), auto emissions standards, defense appropriations, and truck weight limit regulations (Henry W. Chappell, Jr., *Campaign Contributions and Congressional Voting: A Simultaneous Probit-Tobit Model,* 64 Rev Econ & Stat 77 (1982)). Papers by James W. Endersby and Michael C. Munger, *The Impact of Legislator Attributes on Union PAC Campaign Contributions,* 13 J Lab Res 79 (1992); and Kevin Grier and Michael Munger, *The Impact of Legislator Attributes on Interest-Group Campaign Contributions,* 7 J Lab Res 347 (1986), have attempted to explain which candidates receive labor union contributions. They find that being on a legislative committee with jurisdiction over the activities that affect a union and supporting the union's positions are positively related to union campaign contributions. Others claim that increased access from these contributions must translate into tangible service (Richard L. Hall and Frank W. Wayman, *Buying Time: Moneyed Interests and the Mobilization of Bias in Congressional Committees,* 84 Am Pol Sci Rev 797 (1990)).

cians intrinsically value policy outcomes.[2] The most recent debate has been not over whether politicians have such ideological preferences but whether voters can successfully sort into office those politicians whose preferences coincide with the voters'. If sorting is successful, politicians will continue representing their constituents' desires even when the threat of reelection is removed during their last term. To the extent that these preferences do not perfectly match, politicians will deviate from constituent interests when the costs of shirking decline. Likewise, if campaign contributions are made to support those politicians who already value the same positions as their donors, there should be no change in voting patterns after campaign contributions stop during a politician's last term in office.[3]

Both the ''ideological sorting'' and the ''vote-buying'' hypotheses are consistent with a positive correlation between PAC contributions and voting behavior. However, the ''sorting'' theory predicts that politicians will not alter their last-period behavior, whereas the vote-buying hypothesis predicts the opposite—campaign contributions are only ''rational'' when they alter how an individual politician votes on an issue.[4] If campaign contributions

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[2] John R. Lott, Jr., and W. R. Reed, *Shirking and Sorting in a Model of Finite-Lived Politicians,* 61 Pub Choice 75 (1989), provide a formal model of this type of sorting by voters. It is possible to replace voters with donors in that model without any loss of generality. For a survey of the empirical work on shirking and sorting questions, see Bruce Bender and John R. Lott, Jr., *Legislator Voting and Shirking: A Critical Review of the Literature,* Pub Choice (in press). Sorting can also be done by the politicians themselves. D. C. Coker and W. Mark Crain, *Legislative Committees as Loyalty-Generating Institutions,* 81 Pub Choice 195 (1994), show that House members demonstrating more loyalty to the party leaders obtain more important committee assignments. See also W. Mark Crain, Donald R. Leavens, and Robert D. Tollison, *Final Voting in Legislatures,* 76 Am Econ Rev 833 (1986).

[3] While such evidence would also be consistent with voters and donors having no control over politicians, there are fortunately other studies on another dimension of shirking—how frequently representatives vote during their last term—which can help differentiate these two explanations. If politicians are already shirking as much as they desire prior to their last term in office, the last term should produce no changes in either how frequently they vote or how they vote when they do vote. However, if politicians value both policies and leisure, the ideological sorting hypothesis predicts changes in attendance rates even when there are no changes in how a politician votes. Politicians in their last term will continue to vote for what they believe in, but since they no longer obtain the additional return of larger future support, they just vote less often (John R. Lott, Jr., *Political Cheating,* 52 Pub Choice 169 (1987)).

[4] See, for example, Chappell, *Campaign Contributions and Congressional Voting* (cited in note 1); and Thomas Stratmann, *Are Contributors Rational? Untangling Strategies of Political Action Committees,* 100 J Pol Econ 647 (1992). Correlations between donations and performance do not imply anything about the effect PAC contributions have on an individual politician's voting behavior. Nor does examining whether contributions are made to committee heads help solve this problem. Campaign contributions may be directed toward those in important positions because the value of returning politicians to office who share your political ideology is highest for the most important positions, and not because of a greater expected return to changing those politicians' positions on political issues. However, even after addressing the question of causation, there is still the difficulty of determining the significance of these findings. For example, why are contributors not included as part of a politician's

''buy'' ideological politicians' votes, causing them to deviate from their preferred positions, their voting patterns should diverge from contributors' interests during their last term in office when the threatened loss of future campaign donations is reduced or eliminated.

The following sections test whether politicians receiving campaign contributions from particular special interest groups change their voting behavior between their second to last and last terms in office relative to those who had never received that group's campaign contributions. We first examine if any patterns emerge in comparing the simple changes between periods and then see if any relationships appear after controlling for other effects—such as how a politician's behavior varies over his life cycle. Only a few papers that test whether politicians have a personal ideology include measures of campaign contributions,[5] and none of these papers addresses the question of causality we discuss here. Section V tests for whether it was easier to ''buy off'' congressmen when they were still able to retain unused campaign funds for personal use. Finally, Section VI examines whether a congressman's last 2 years in the House of Representatives really constitutes his last term in any meaningful sense by controlling for what the politician and his offspring did after he left office. Interest groups may compensate politicians after they leave elective office through future employment opportunities for either themselves or their children.

II. A First Look at the Evidence

This article identifies whether politicians' voting behavior changes between their second to last and last terms in office relative to those who had never received a special interest group's campaign contributions.[6] Our em-

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relevant constituency? As John R. Wright, *PAC Contributions, Lobbying, and Representation,* 51 J Pol 713, 726 (1989), points out, ''Members of Congress seldom experience financial pressures and lobbying pressures from groups that have little or no economic or organizational claims in their districts.'' While the access that politicians provide donors may change political outcomes, instead of ''buying'' votes, such access may simply assist politicians in better representing the constituents from their own district with the most intense preferences. (See Harold Demsetz, *Efficiency, Competition, and Policy* (Blackwell, 1989), for a further discussion on the question of what is the relevant constituency for politicians.)

   [5] See James B. Kau, Donald Keenan, and Paul H. Rubin, *A General Equilibrium Model of Congressional Voting,* 97 Q J Econ 271 (1982); Rodney Fort, William Hallagan, Cyril Morong, and Tesa Stegner, *The Ideological Component of Senate Voting: Different Principles or Different Principals?* 76 Pub Choice 39 (1993); James B. Kau and Paul H. Rubin, *Ideology, Voting, and Shirking,* 76 Pub Choice 151 (1993).

   [6] See also John R. Lott, Jr., and Michael L. Davis, *A Critical Review and an Extension of the Political Shirking Literature,* 74 Pub Choice 461 (1992); and John R. Lott, Jr., and Stephen G. Bronars, *Time Series Evidence on Shirking in the U.S. House of Representatives,* 76 Pub Choice 125 (1993), for a more complete discussion of this type of analysis.

phasis on changes in donations and voting, rather than the correlation between the levels of these variables, recognizes that it is rational for PACs to allocate their funds to their highest valued use. These PAC contributions are likely to have the greatest effect on election outcomes in districts where the contest is expected to be close. Hence PAC contributions are likely to flow to candidates for open seats and in ''competitive'' districts, not necessarily to the strongest advocate of the special interest. In addition, because PACs are interested in producing majorities and not unanimity, contributions are directed toward politicians representing relatively indifferent constituencies.[7] Thus our approach identifies changes in contributions to politicians in their last term whose voting behavior was most likely to have been altered by the campaign contributions throughout their careers.

The data are primarily limited to members of the House of Representatives who served in office from 1977 to 1990. Additional data on campaign contributions are available from the Federal Election Commission back to 1975, though they are not disaggregated by the source of the donation for 1975 and 1976. We use this additional aggregate data only in Section III, where we examine data reporting on politicians' careers after leaving the House of Representatives. Because our empirical analysis focuses on changes in a politician's voting over time, we typically limit our sample to the 661 congressmen who held office for at least 2 terms between 1977 and 1990. These congressmen accounted for 94.5 percent of the terms served during that period.[8] By 1990, 285 of these multiterm congressmen had left the House through retirement (91), to seek another office (97), or by losing their bid for reelection (97).[9] In Section IV, where our empirical analysis focuses on how aggregate PAC contributions change, our sample includes the 731 multiterm congressmen who held office between 1975 and 1990.

Table 1 presents the mean and standard deviation of real PAC contributions (in thousands of 1982 dollars) and the average fraction of congressmen receiving contributions by seven different categories of contributors. The top panel of Table 1 presents sample statistics for multiterm representatives in all terms other than their last term. Political action committee con-

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[7] See, for example, Arthur T. Denzau and Michael C. Munger, *Legislators and Interest Groups: How Unorganized Interests Get Represented,* Am Pol Sci Rev 89 (1986); and Stratmann (cited in note 4).

[8] Over the period 1977–90 there are 820 individuals serving a total of 3,045 2-year terms. The mean completed tenure among the multiterm representatives in our sample is 6.24 terms. At a moment in time the tenure for a randomly selected congressman in our sample is 4.19 terms.

[9] We exclude the last-term observations for the 28 congressmen who died while in office. If these congressmen did not anticipate their death, their inclusion would bias our results towards not finding significant changes in last-period behavior.

TABLE 1

MEAN REAL PAC CONTRIBUTIONS, 1977–1990, IN THOUSANDS OF 1982 DOLLARS

	Corporate	Labor	Conservative	National Security	Trade	Cooperative	Non-connected
Representatives continuing in Congress:							
% recipients	97.7	88.6	6.8	14.1	97.5	76.8	90.8
Mean	43.8	32.5	1.56	.70	39.6	4.48	9.31
	(39.5)	(36.5)	(1.98)	(.87)	(27.9)	(5.11)	(12.1)
PAC recipients in penultimate and last term:							
All reasons for last term:							
Mean in $t-1$	42.1	27.3	2.29	.91	38.1	4.53	8.83
	(39.9)	(33.8)	(2.83)	(.86)	(27.4)	(5.70)	(11.0)
Mean in t	24.5	19.7	.90	.21	20.4	2.38	7.03
	(37.8)	(36.1)	(1.96)	(.42)	(27.8)	(5.06)	(14.8)
Mean change	−17.6	−7.60	−1.39	−.70	−17.7	−2.15	−1.80
	(43.3)	(34.0)	(2.76)	(.60)	(31.5)	(5.87)	(15.2)
Retiring:							
Mean in $t-1$	34.7	20.2	3.57	.85	30.9	3.80	6.13
	(32.1)	(25.5)	(4.02)	(.83)	(22.3)	(4.07)	(9.03)
Mean in t	5.60	3.31	.22	.14	3.88	.51	.90
	(11.5)	(9.41)	(.33)	(.27)	(7.79)	(1.35)	(1.97)
Mean change	−29.1	−16.9	−3.35	−.71	−27.0	−3.29	−5.23
	(26.9)	(23.4)	(3.81)	(.65)	(19.2)	(3.80)	(8.37)
Other office:							
Mean in $t-1$	54.5	31.2	1.64	.97	47.1	4.71	11.2
	(46.5)	(38.1)	(2.52)	(.97)	(31.1)	(6.62)	(11.1)
Mean in t	15.3	8.53	.16	.19	11.1	.59	3.02
	(24.1)	(16.0)	(.60)	(.50)	(15.6)	(.99)	(5.15)
Mean change	−39.2	−22.6	−1.48	−.78	−36.0	−4.12	−8.20
	(41.3)	(34.1)	(2.49)	(.60)	(29.6)	(6.53)	(11.0)
Lost:							
Mean in $t-1$	36.3	29.5	2.56	.86	35.9	4.95	8.73
	(36.3)	(35.1)	(2.61)	(.71)	(25.4)	(5.82)	(12.0)
Mean in t	50.2	42.3	2.27	.35	44.3	5.95	16.2
	(48.7)	(48.6)	(2.86)	(.45)	(32.1)	(7.36)	(21.5)
Mean change	13.9	12.8	−.29	−.51	8.46	.99	7.50
	(38.6)	(31.2)	(2.16)	(.56)	(23.9)	(5.29)	(18.5)

NOTE.—Standard deviations are in parentheses.

tributions were legally limited to $10,000 ($5,000 per primary and general election campaign) during the sample. Over 90 percent of representatives continuing in Congress received contributions from corporate, trade, and nonconnected PACs, and nearly 90 percent received labor PAC contributions. In contrast, less than 15 percent of continuing congressmen received contributions from conservative or national security PACs.[10]

The bottom panel of Table 1 focuses on representatives' final 2 terms in office. We limit the sample to congressmen who received PAC contributions in their penultimate term in office (denoted by period $t - 1$) and present the change in PAC contributions between their last (period t) and penultimate terms. The first six rows aggregate last-term representatives into a single group. It is important to note that the time-series pattern of PAC contributions differs substantially across congressmen who retire, run for other office, and lose their reelection bid. This is not surprising because the congressmen we classify as retiring publicly announced their retirement prior to the filing date for primaries, so they were not eligible for general election campaign contributions. These retiring congressmen were eligible to receive PAC contributions prior to the primary filing date and therefore faced some (although greatly reduced) costs to voting against these groups' interests even during their final term.

Table 1 shows that representatives in their last term owing to retirement or because they are running for other office are less likely to receive PAC contributions, and when PAC contributions are made the magnitude of the contributions declines substantially. The average labor PAC recipient experienced a decrease of $16,900 in labor contributions in their retiring term (84 percent of their previous level of labor contributions) and a decrease of $22,600 when running for other office (72 percent of their previous contributions). There are similarly large percentage declines in contributions for other categories of PACs. Consequently, there is significantly less dispersion in PAC contributions across congressmen when they are in their final term in office. If contributions are indeed buying votes, one would expect these large declines in PAC contributions (especially corporate and labor)

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[10] The conservative PACs include such groups as the Conservative Victory Fund, Fund for a Conservative Majority, Americans for Constitutional Action, and Citizens for the Republic; the trade PACs include all the trade associations such as the American Bankers Association, American Medical Association, National Association of Home Builders; the cooperative PACs are primarily agricultural and include groups such as the Sunkist PAC, Rice Growers of California, and MidAmerica Dairymen PAC; and the nonconnected PACs represent all ideological PACs (like the conservative PACs listed above) and other PACs like the Jewish American PAC, the Jimmy Carter PAC, and Friends of Right to Work PAC. Total nonparty PAC donations are almost entirely accounted for by either the corporate, labor, trade, cooperative, or nonconnected categories.

in a congressman's retiring term to lead to substantial changes in his voting behavior on issues valued by interest groups.

Note that losing congressmen actually experience an increase in PAC contributions in their final term. This increase probably occurs because these candidates and their contributors have correctly anticipated a difficult reelection campaign. Moreover, PAC contributions are likely to be larger, on average, in competitive congressional districts that are likely to have close election outcomes. This suggests that even larger declines in contributions will occur when a representative in a competitive district retires or runs for another office.

We define a competitive district as one in which the average election outcome (over the period 1974–88) had a vote differential of less than 20 percentage points.[11] Using this definition, 19 percent of congressional districts in our sample are ''competitive.'' Table 2 presents a description of changes in PAC contributions for retiring congressmen and congressmen running for other office during their last 2 terms in office in both competitive and noncompetitive districts. These changes in contributions are only computed for representatives who received contributions from a PAC of the designated type in their penultimate term. For most categories of PAC contributions, congressmen in competitive districts received higher average PAC contributions in their penultimate term and experienced a relatively larger percentage decrease in contributions after deciding to retire or run for another office.

This raw data can also potentially test the sorting versus vote-buying hypotheses by answering whether PACs simultaneously give donations to two different candidates in the same race. It would be difficult to reconcile simultaneous contributions with the sorting hypothesis. Unfortunately, the Federal Election Commission data on campaign contributions does not distinguish well between primary and general election contributions. To help answer this question, we interviewed those running 20 of the PACs used in our sample, and representatives of all these PACs insisted that either they never provided simultaneous contributions to two opponents in the same race or that they did so only under the most exceptional circumstances (for

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[11] We used several other methods for conditioning on the competitiveness of a district: (1) we defined a ''competitive district'' as one in which the margin of victory in the previous election was less than 20 percent, (2) we used a margin of victory residual from a regression that included state and term dummies, presidential election outcomes in the district, and average demographic characteristics in the district to define a ''competitive district,'' and (3) we included interactions between changes in PAC contributions and the average margin of victory in the district in the regression models in Tables 4–6. None of these approaches indicated any significant differences in behavior across competitive and noncompetitive districts.

TABLE 2

CHANGE IN REAL PAC CONTRIBUTIONS, 1977–90, IN THOUSANDS OF 1982 DOLLARS BY DISTRICT COMPETITIVENESS

	Corporate	Labor	Conservative	National Security	Trade	Cooperative	Non-connected
PAC recipients in penultimate and last term before retiring:							
Competitive districts:							
Mean in penultimate term	36.7 (36.0)	34.8 (31.8)	5.16 (4.73)	.49 (.23)	35.1 (26.8)	4.53 (5.49)	10.8 (15.1)
Mean in last term	6.14 (13.6)	1.62 (3.91)	.25 (.43)	.09 (.15)	4.95 (8.90)	.13 (.47)	.79 (1.50)
Mean change	−30.6 (29.1)	−33.2 (32.6)	−4.92 (4.38)	−.40 (.13)	−30.1 (21.6)	−4.40 (5.50)	−9.97 (13.9)
Noncompetitive districts:							
Mean in penultimate term	34.5 (32.2)	18.1 (23.8)	1.18 (.94)	.94 (.91)	30.7 (21.5)	3.90 (3.76)	4.90 (6.50)
Mean in last term	5.59 (11.6)	2.56 (6.41)	.18 (.25)	.15 (.30)	3.55 (7.44)	.55 (1.41)	.82 (1.59)
Mean change	−28.9 (27.0)	−15.5 (20.4)	−1.00 (1.18)	−.79 (.71)	−27.2 (18.5)	−3.34 (3.13)	−4.09 (5.55)
PAC recipients in penultimate and last term before running for other office:							
Competitive districts:							
Mean in penultimate term	61.9 (62.4)	65.1 (49.7)	.48 (.26)	1.06 (.44)	57.8 (40.6)	7.42 (7.97)	19.2 (16.3)
Mean in last term	15.0 (20.3)	19.6 (27.8)	.00 (.00)	.26 (.30)	13.9 (17.9)	.64 (1.31)	3.36 (4.65)
Mean change	−46.9 (61.6)	−45.5 (49.9)	−.48 (.26)	−.81 (.23)	−43.9 (43.8)	−6.78 (7.68)	−15.8 (16.6)
Noncompetitive districts:							
Mean in penultimate term	53.0 (40.2)	22.1 (29.4)	1.95 (2.78)	.95 (1.07)	45.4 (28.6)	3.83 (5.50)	9.11 (8.11)
Mean in last term	14.2 (24.5)	4.89 (9.70)	.21 (.68)	.18 (.54)	9.88 (15.6)	.60 (.94)	2.44 (5.03)
Mean change	−38.8 (35.2)	−17.2 (26.9)	−1.75 (2.77)	−.77 (.67)	−35.5 (25.5)	−3.23 (5.53)	−6.67 (7.80)

NOTE.—Standard deviations are in parentheses.

example, a PAC may feel obligated to support one of their members who is running for office even if they expect him to lose).[12]

The changes in voting behavior are defined as the changes in five different special interest indexes of congressional voting: (1) American Conservative Union (ACU), (2) Americans for Democratic Action (ADA), (3) AFL-CIO's Committee on Political Education (COPE), (4) National Security Council (NSC), and (5) National Taxpayers Union (NTU). The unit of observation is the individual member of the House of Representatives. Each of these special interest groups assigns a congressman an index number between 0 and 100, indicating the percentage of votes that he casts in accord with the wishes of that group.[13] The one exception is the liberal ADA index, which records abstentions as conservative votes and thus reports a lower score when a representative abstains from voting.[14] The change in each voting index subtracts the interest group score he received during the ith + 1 Congress from his average value from that same group during the ith Congress. While ignoring the effect of campaign donations and the question of causation, the changes in voting indexes shown in Table 3 are generally consistent with other studies that examine these indexes over a slightly longer time period.[15] With the exception of the ACU index, it reveals that there are no statistically significant differences in the mean change in voting score for continuing congressmen and for those who are leaving office to retire or run for other offices, though the table does reveal that the standard deviations for how these voting indexes change are consis-

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[12] A detailed account of these telephones interviews is available from the authors. We interviewed the American Conservative Union, Conservative Victory Fund, American Medical Association, American Bankers Association, National Association of Life Underwriters, National Association of Home Builders, Association of Trial Lawyers of America, Phillip Morris, Tenneco, National Association of Automobile Dealers, National Association of Retired Federal Employees, United Food & Commercial Workers International Union, United Auto Workers, the International Machinists & Aerospace Workers Union, Americans for Democratic Action, American Dental Association, National Rifle Association, Realtors' PAC, Rockwell International Corp., and Lockheed Employees.

[13] A particular term's index may be based on as few as 13 votes (COPE) or as many as 430 votes (NTU). While four of the indexes are constructed with votes over a 2-year congressional term, the NSC index is based solely on votes occurring during the second year of each term. This fact about the NSC index is useful when we note the timing of public announcements to retire.

[14] The ADA approach produces both some potential difficulties as well as opportunities. Since congressmen tend to vote less frequently during their last term (see Lott (cited in note 3)), the ADA index will indicate that congressmen are more conservative during their last term when the only real change may be that the return to voting has declined. However, adjusting for this effect will not alter the results shown in this article. One benefit from using the ADA index as it was originally constructed is that donations might alter not only how a politician votes but also whether he abstains from voting. The ADA index will help measure whether donations alter politicians' decisions to abstain from voting.

[15] Lott and Bronars, at 128–33 (cited in note 6).

tently different between continuing congressmen and those running for other offices.[16]

For 74 of the 91 retiring congressmen where we know the exact date that they publicly announced their retirement, the average announcement was made 11.91 months prior to the November general election.[17] Twenty-four congressmen made the announcement after Congress reconvened during the last year of their last term, with two making the announcement as late as June of the election year. If survey information on when congressmen who privately decided that 1978 was to be their last year in public office is a reliable guide for later congressmen,[18] they privately decided to retire about eight months prior to their public announcement.[19,20]

Table 4 provides a first pass at combining changes in contributions and voting behavior. The change in the different voting indexes is given for various subsamples of congressmen: those continuing in office, those retiring from office, and those leaving Congress to run for another political office. For each group of representatives, we calculate the percentage change in their contributions from a special interest group relative to their contribution in the previous congressional election cycle. As in Table 2, we exclude politicians from Table 4 who received no PAC contribution from each special interest group in their next-to-last term. Our tests of whether campaign contributions buy votes focus on retiring congressmen, where it is quite common that PAC contributions decline by more than 50 percent of their previous value.[21] In situations where PAC contributions decline by more than 50 percent, we present changes in voting indices overall and separately for competitive and noncompetitive districts. In the different sections of Table 3, we compare a voting index with the most relevant types of PAC contributions. The change in the AFL-CIO's COPE voting index is compared

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[16] Lott (cited in note 3) and Lott and Bronars (cited in note 6) provide a more extensive analysis of this question.

[17] This information was obtained using a NEXIS search with the keywords being the congressman's last name, his state, and the words ''retire'' and ''Congress.''

[18] Lott (cited in note 3).

[19] Wiggins, from California, said that he had made his retirement decision and publicly announced it when he first ran for Congress 10 years earlier. His response is excluded from this average.

[20] Unlike earlier work examining the life-cycle changes in political voting behavior, we primarily focus on the change in voting indexes and not the absolute value of that change since if changes in contributions are made to alter how politicians vote there should be systematic changes in voting.

[21] A detailed breakdown for those congressmen who lost their reelection campaign is available from the authors. No significant relationships between changes in donations and changes in voting indexes were found for this category. We also performed this test for the NTU index for both the change and the absolute value of that change, but we again were unable to observe any systematic relationships.

TABLE 3

COMPARING THE CHANGE IN HOW CONTINUING CONGRESSMEN VOTE AND THE STANDARD DEVIATION IN THAT CHANGE TO THE
COMPARABLE MEASURES FOR CONGRESSMEN IN THEIR LAST TERM

	Change in COPE	Change in ACU	Change in ADA	Change in NSC
Continuing:				
All districts	.7920613	−.8439332	.4501579	−.8239278
	(14.83367)	(9.620882)	(10.43039)	(16.56543)
Competitive districts	.302795	−.5450311	.3773292	.4099379
	(15.80663)	(9.276238)	(10.94597)	(17.68431)
Noncompetitive districts	.8751979	−.894723	.462533	−1.033809
	(14.66471)	(9.679684)	(10.34318)	(16.36318)
Last term:				
All districts	−.2077465	−.7323944	.0441696	−.625
	(19.19334)*	(11.69582)*	(10.60388)	(18.14277)*
Competitive districts	−2.211111	−.5222222	1.911111	−3.444444†
	(17.07551)	(10.32176)	(10.2301)	(19.21909)
Noncompetitive districts	.7216495	−.8298969	−.8264249	.7105263
	(20.07421)*	(12.30535)	(10.6884)	(17.5039)

328

Retiring:				
All districts	−.0777778	−3.111111*	.65	−2.321839
	(19.77016)*	(10.65147)	(9.212367)	(15.96325)
Competitive districts	−.4722222	−3.194444	1.083333	−2.777778
	(13.40486)	(9.71224)	(8.331814)	(15.09794)
Noncompetitive districts	.0208333	−3.090278†	.5416667	−2.202899
	(21.13945)*	(10.93751)	(9.471139)	(16.28567)
Other:				
All districts	2.340206	−.0927835	−1.744792	3.302083*
	(19.88621)*	(12.72328)*	(10.08334)	(16.07687)
Competitive districts	1.70	1.38†	−1.84	1.44
	(22.79757)*	(11.77062)†	(8.942781)	(22.82922)†
Noncompetitive districts	2.256944	−.6041667	−1.711268	3.957746*
	(18.86049)*	(13.07749)*	(10.51484)	(13.05421)*
Lost election:				
All districts	−4.876289*	.8350515†	3.231959*	−2.989691
	(16.88812)†	(11.31318)*	(11.22661)	(21.18691)*
Competitive districts	−4.957447*	−.5106383	5.287234*	−6.297872
	(14.46917)	(9.706838)	(10.25742)	(18.35864)
Noncompetitive districts	−4.80*	2.10*	1.30	0.12
	(19.0322)*	(12.60669)*	(11.84466)	(23.29548)*

NOTE.—Standard deviations are in parentheses. See text for definitions of abbreviations.
* Significant difference between competitive and noncompetitive districts at 5% level.
† Significant difference between competitive and noncompetitive districts at 10% level.

TABLE 4
CHANGE IN VOTING INDEX BY CHANGE IN CAMPAIGN CONTRIBUTIONS

CONTRIBUTIONS	CHANGE IN COPE INDEX: PERCENT CHANGE IN LABOR PAC CONTRIBUTIONS			CHANGE IN COPE INDEX: PERCENT CHANGE IN CORPORATE PAC CONTRIBUTIONS		
	Continue	Retire	Other	Continue	Retire	Other
>50 percent	3.27*	−9.00	8.86	2.24*	8.50	5.83
	(.75)		(4.40)	(.61)		(7.16)
0–50 percent	.60	2.5	11.25	1.21*	−3.50	−13.8
	(.64)	(6.00)	(18.8)	(.56)		(14.8)
−50–0 percent	−.26	−.90	10.3	−.04	−2.83	7.53
	(.63)	(3.68)	(9.54)	(.75)	(1.92)	(3.84)
<−50 percent	−.20	.14	3.30	1.00	.63	3.71
	(1.10)	(2.58)	(2.41)	(1.63)	(2.32)	(2.45)
By level of competitiveness						
<−50 percent competitive races	2.18	−1.35	−1.25	7.50	−.12	.82
	(3.21)	(3.95)	(5.50)	(5.33)	(3.33)	(5.62)
<−50 percent noncompetitive races	−.56	.51	4.63	.26	.84	4.72
	(1.17)	(3.08)	(2.66)	(1.70)	(2.83)	(2.67)

CONTRIBUTIONS	CHANGE IN ACU INDEX: PERCENT CHANGE IN CONSERVATIVE PAC CONTRIBUTIONS			CHANGE IN ADA INDEX: PERCENT CHANGE IN CONSERVATIVE PAC CONTRIBUTIONS		
	Continue	Retire	Other	Continue	Retire	Other
>50 percent	.30	...	...	−.17	...	...
	(1.97)			(.63)		
0–50 percent	−4.00	...	.0	1.83	...	...
	(2.08)			(.44)		
−50–0 percent	−2.29	2.5	0	2.53*	2.50	−5.00
	(2.01)			(.93)		

<−50 percent	1.05 (.86)	3.38 (4.47)	.92 (2.51)	1.02 (.57)	−2.50 (2.15)	1.04 (1.91)
By level of competitiveness						
<−50 percent competitive races	2.83 (1.53)	1.83 (5.93)	−6.67 (1.76)	1.57 (1.19)	−4.00 (2.18)	4.50 (1.53)
<−50 percent noncompetitive races	.51 (1.01)	8.00	3.20 (2.86)	.85 (.66)	2.00	.00 (2.38)

CHANGE IN NSC INDEX: PERCENT
CHANGE IN NSC PAC

CONTRIBUTIONS	Continue	Retire	Other
>50 percent	1.82 (1.07)	...	...
0–50 percent	.45 (3.33)	...	0.0
−50–0 percent	.19 (1.19)	8	0
<−50 percent	.96 (1.55)	−4.46 (2.99)	3.36 (2.50)
By level of competitiveness			
<−50 percent competitive races	3.74 (5.14)	5.00 (5.00)	.00 (.00)
<−50 percent noncompetitive races	.50 (1.59)	−3.56 (3.31)	5.69 (3.43)

NOTE.—Standard errors are in parentheses. See text for definitions of abbreviations.
* Denotes significance at the 5% level.

with the change in labor and corporate PAC contributions, the ACU and ADA indexes with conservative PAC contributions, and the NSC index with that group's own PAC.[22]

Table 4 points to a generally weak and statistically insignificant relationship for retiring politicians between their change in donations and their voting behavior. In fact, we often see a statistically insignificant increase in support for a special interest group by retiring congressmen even though their PAC contributions from the interest group have decreased by more than 50 percent. This relationship for retiring congressmen shows up in the comparison of COPE scores to labor contributions (an increase of .14 percentage points) and ACU scores to conservative PAC contributions (an increase of 3.38 percentage points). In other words, larger drops in contributions from a special interest group as a congressman retires are associated with the retiring congressman voting more in accord with the special interest group during his last term. While these results are not statistically significant, they imply the opposite of that predicted by the vote-buying hypothesis.[23]

In addition, there is no evidence of systematic differences in last term voting behavior across competitive and noncompetitive districts. The only evidence in favor of the vote-buying hypothesis in Table 4 is statistically insignificant: retiring congressmen who experience a more than 50 percent drop in national security PAC contributions are 4.46 percent less likely to vote in accordance with the NSC interest group.

Since the ADA index records abstentions as conservative votes, these initial results also provide us with some information on whether donations can ''buy'' a politician's decision not to vote. This also provides a second reason to expect that during a politician's last term lower conservative contributions will be associated with higher ADA scores, and it implies that if donations affect abstentions, it seems most likely to be observed for this index. However, the results for the ADA index fail to confirm that contributions affect politicians' behavior through abstention in their last term.[24]

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[22] The strongest comparisons are obviously those where we can directly link a group's index with its own decisions on whom to contribute to. We had hoped to use the ADA's PAC contributions to make comparisons with the ADA index but could not since their PAC made no contributions to retiring congressmen in either their last or next to last terms in office. However, the relationship between the COPE index and corporate PAC contributions provides the weakest comparison since, while corporations and unions often disagree on issues, some legislation benefits both groups.

[23] Those who made their decisions to retire late may have received more contributions, but there was also a shorter period of time over which their votes during their last term would be affected by their decision not to run for reelection.

[24] The difference in the NTU index (which aggregates votes on all spending issues) between two consecutive terms and the absolute value of this change was compared to the change in total contributions. The results implied that there were no systematic changes in politicians' views (that is, whether they prefer larger or smaller government) and no in-

For continuing congressmen, higher labor and corporate PAC contributions are correlated with significantly greater support for pro-union legislation, and less conservative PAC money implies a significantly higher ADA index. The pattern of results for changes in corporate contributions and COPE scores is somewhat puzzling since it implies that larger contributions by corporations are associated with increased pro-union voting by congressmen. While these correlations between changes in PAC contributions and voting indices parallel previous findings, it is difficult to infer from continuing congressmen whether contributions altered a politician's voting decisions or whether PAC donors anticipated changes in a congressman's support on key issues.

III. Controlling for Changing Constituent Interests and How the Costs of Opportunistic Behavior Vary over a Politician's Life-Cycle

Economists have argued that the costs of deviating from constituent interests depend on whether a politician faces the threat of reelection and on the entry barriers created when the politician accumulates additional brand name capital. To complicate matters, voters are simultaneously trying to sort out of office politicians who deviate from constituent interests, and these interests may be themselves changing over time.[25]

Consistent with previous studies, we measure the cost of deviating from constituents' interests by controlling for whether it is the last term, along with a variable for tenure and tenure squared. Dummy variables are used to differentiate the various reasons for the last term: retiring, lost, or running for another office. Changing constituency interests are measured in two sets of regressions: first by using term and state dummies and then re-running the regressions with those dummy variables in addition to a set of socioeconomic variables. The socioeconomic variables include the percent of the congressional district that is white-collar, blue-collar, service workers, white, black, and other racial groups along with the district's average

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creased dispersion in their views of government spending. Total donations were used since no identifiable PAC exists that unambiguously supports either more or less government spending on all questions

[25] See Lott and Reed (cited in note 2) for a discussion of how these effects imply that to the extent shirking exists it will increase over a politician's lifetime. For discussions of the existence of entry barriers in political markets, see Morris Coats and Thomas Dalton, *Entry Barriers in Politics and Uncontested Elections,* 49 J Pub Econ 75 (1992); P. L. Hersch and G. S. McDougall, *Campaign War Chests as a Barrier to Entry in Congressional Races,* Econ Inquiry 630 (1994); and John R. Lott, Jr., *The Effect of Nontransferable Property Rights on the Efficiency of Political Markets: Some Evidence,* 32 J Pub Econ 231 (1987). See also Bender and Lott (cited in note 2) for a more complete discussion of these trade-offs.

age, average education, average income, and total population. Each of these pooled cross-section/time-series regressions has 2,211 observations, except the National Security Council PAC, with 1,815 observations, because their PAC ended in 1988.[26]

To proxy for a district's changing conditions, we interacted the term dummies with measures of the socioeconomic conditions from either the 1970 or 1980 Census depending on whether the terms compared were during the 1970s or 1980s.[27] These interactions allow us to put different weights on the socioeconomic variables to explain voting patterns some years after the Census data were collected.

The regressions in Table 5 attempt to explain the change in COPE, ACU, ADA, and NSC voting scores through the changes in related PAC contributions along with the changes in those contributions multiplied by a retirement dummy. It is likely that a change in an interest group's contributions will have the largest effect on voting behavior when these contributions comprise a large fraction of the total contributions. To control for this, we not only tried interacting the retirement dummy with the change in PAC contribution but also with the percent of a politician's total contributions accounted for by this group's contributions. All these regressions also control for other reasons a politician is leaving office, as well as tenure, and state and term dummies.

Specifications 10, 11, and 13–20 all indicate that campaign contributions are significantly related to changes in how a politician votes. The results generally parallel the preliminary findings shown in Table 4. Higher labor contributions are thus associated with a significantly more pro-union voting record and higher National Security Council contributions with a significantly more pro-defense voting record. While these correlations are consistent with politicians being influenced by PAC contributions, they are also consistent with greater contributions being made to those politicians that interest groups believe will represent their positions in future votes. Again,

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[26] Another way of viewing these regressions is that contributions from PACs and voting records are correlated because of omitted (unobserved) measures of a politician's ideology. Under the null hypothesis that contributions do not influence voting behavior, an exogenous change in contributions—that is, a change in contributions that is uncorrelated with a change in the politician's unobserved ideology—should not influence a politician's voting behavior. In this article we argue that decreases in contributions due to retirement decisions are uncorrelated with ideology and hence provide an excellent opportunity for testing the null hypothesis that PAC contributions do not buy votes.

[27] The 95th and 96th Congresses (1975–80) used the data obtained from the 1970 Census for those district boundaries formed after the 1972 redistricting; the 97th Congress (1981–82) used the data from the 1980 Census for those boundaries formed after the 1972 redistricting; and the 98th–101st Congresses (1983–90) used the data from the 1980 Census in those districts formed after the 1982 redistricting.

the positive and significant coefficients on corporate contributions in the change in COPE index regression are puzzling since they imply that larger contributions by corporations are associated with increased pro-union voting by congressmen.

While the coefficients on the change in PAC contributions have an ambiguous interpretation, the coefficients for the change in contributions and the retirement dummy interaction provide a relatively consistent story. In most of the specifications that interact these 2 terms (with and without the weighting of these contributions by their share of total contributions), the coefficients are insignificant, and in 11 of the 15 cases the signs imply that reductions in contributions during a politician's last term are associated with votes that are more in accord with the political action group's desires. If campaign contributions cause ideological congressmen to vote in the contributors' interest, eliminating those contributions should encourage the congressmen to move away from positions that benefit the contributors and vote more according to their own preferences during their retirement term. In addition, the ADA index does not support the hypothesis that contributions affect politicians' behavior through abstentions.[28]

There is one case where the empirical evidence in Table 5 provides some support for the vote-buying hypothesis. Specification 18 shows that a $1,000 decrease in contributions by the NSC PAC during a retirement term is associated with a significant 1.36 percent ($1.62 - .26 = 1.36$) decrease in the NSC voting index. Specification 20 shows that this effect occurs only in noncompetitive districts; in competitive districts there is an insignificant increase in the NSC voting index when NSC PAC contributions fall during the retirement term.

The second piece of evidence that strongly rejects the vote-buying hypothesis is seen in the relationship between conservative PAC contributions and ACU scores in specification 11. Evaluated at sample means, for each $1,000 decrease in conservative PAC contributions experienced by a retiree, the retiring representative would vote with the ACU 5.2 percent *more* of the time. The large significant coefficient on the interaction term (Retire*ΔConservative\$*%Conservative\$) suggests, however, that a retiring representative who had received a high enough fraction of donations from conservative PACs would be expected to substantially reduce his ACU voting score in his last term. For example, a retiring congressman who had

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[28] The drop in attendance that occurs during a politician's last term should not alter our discussion on the effect of lower conservative donations because we are already controlling for the average drop with the last term dummy. The question is whether those who experience a drop in conservative contributions become more liberal relative to the entire set of retiring politicians.

TABLE 5

THE EFFECT OF REDUCED PAC CONTRIBUTIONS ON THE VOTING INDICES OF RETIRING REPRESENTATIVES, 1977–90

INDEPENDENT VARIABLES	DEPENDENT VARIABLE: CHANGE IN COPE INDEX							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Retire	−1.58	−2.57	−2.43	−2.80	−.697	−.464	−1.63	−.439
	(.92)	(1.29)	(1.19)	(1.29)	(.39)	(.19)	(.65)	(.16)
Competitive				.138				.046
				(.14)				(.05)
Competitive*Retire				.542				−.140
				(.10)				(.02)
ΔLabor$	.024	.027	.027	.021				
	(1.56)	(1.72)	(1.71)	(1.19)				
Retire*ΔLabor$		−.078	.101	−.119				
		(1.01)	(.52)	(.10)				
Retire*ΔLabor$*%Labor			−.385					
			(1.01)					
Competitive*ΔLabor$				.024				
				(.68)				
Competitive*Retire*ΔLabor$				.084				
				(.16)				
ΔCorporate$					.035	.035	.035	.036
					(2.75)	(2.66)	(2.64)	(2.50)
Retire*ΔCorporate$						.009	−.336	.005
						(.14)	(1.59)	(.07)
Retire*ΔCorporate$* %Corporate							.694	
							(1.70)	
Competitive*ΔCorporate$								−.005
								(.16)
Competitive*Retire* ΔCorporate$								.020
								(.13)

	Dependent Variable: Change in ACU Index				Dependent Variable: Change in ADA Index				Dependent Variable: Change in NSC Index			
	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)	(17)	(18)	(19)	(20)
Retire	−1.68 (1.57)	−1.65 (1.53)	−1.87 (1.71)	−1.89 (1.57)	−1.29 (1.23)	−1.21 (1.15)	−1.24 (1.15)	−1.71 (1.00)	−.025 (.01)	−.055 (.03)	−.400 (.19)	−.141 (.06)
Competitive				.302 (.48)				1.31 (2.12)				−.897 (.76)
Competitive*Retire				.466 (.17)				−.584 (.22)				.798 (.17)
ΔConservative$	−.327 (1.21)	−.340 (1.20)	−.331 (1.17)	−.292 (.80)	−.226 (.86)	−.260 (.94)	−.264 (.96)	−.317 (.89)				
Retire*ΔConservative$		.153 (.16)	−8.57 (2.05)	−6.77 (5.31)		.404 (.43)	3.63 (.89)	1.33 (.26)				
Retire*ΔConservative$* %Conservative			685.5 (2.14)				−254.7 (.82)					
Competitive*ΔConservative$				−.120 (.21)				.146 (.26)				
Competitive*Retire* ΔConservative$				7.27 (1.34)				−.956 (.18)				
ΔSecurity$									1.62* (2.17)	1.62* (2.16)	1.63* (2.16)	2.16* (2.70)
Retire*ΔSecurity$										−.260 (.05)	.813 (.10)	−.296 (.06)
Retire*ΔSecurity$* %Security											43.05 (.05)	
Competitive*ΔSecurity$												−4.20* (1.99)
Competitive*Retire* ΔSecurity$												−3.42 (.19)

NOTE.—Absolute values of *t*-statistics are in parentheses. See text for definitions of abbreviations.
* Significant at the 5% level.

337

been receiving 2.2 percent of his PAC contributions from conservative PACs would be predicted to vote with the ACU 6.2 percent (statistically significantly) less of the time for each $1,000 decrease in conservative PAC contributions. It is rare for a representative in our sample to receive this high of a share of contributions from conservative PACs: only 8 of the 661 congressmen in our sample received at least 2.2 percent of their contributions from conservative PACs.

Our results, in general, are consistent with contributions being made to politicians who value the same policy positions as their donors. Our findings are therefore consistent with sorting models in which politicians who share the same ideology and preferences as their constituents are elected to office. Successful sorting results in consistent congressional voting patterns even when the threat of reelection is removed and when campaign contributions from interest groups decline dramatically. If donors support the ideological candidates who intrinsically value the same policy outcomes, these ideological politicians will find it costly to deviate from their donors' interests during their last period because it will lower their level of utility.[29]

The retirement dummy coefficients for all these specifications are very similar to those found in previous studies, and they are almost always insignificant and economically small. In only one of these twenty specifications is the retirement dummy significant at the .10 level for a two-tailed t-test. The implication is consistent with the results interacting donations and retirement: politicians do not appear to be altering their voting behavior when the threat of reelection is removed.[30,31]

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[29] Rerunning the regressions shown in Table 4 with the socioeconomic variables for district characteristics leaves the results virtually unchanged. We also looked at the correlation between trade associations and labor unions and between labor, corporate, and trade associations and the interests of the ACU, ADA, and NSC, but in none of these cases were the interaction between retirement and the change in contributions significant.

[30] Other information helps distinguish these hypotheses. Donations from PACs are by far the greatest when politicians are first elected and when the politicians are removed from office due to defeat. These contributions fall to 87.1 percent of what were during a politician's first successful campaign by his second election. Presumably, this donation pattern results from the relative difficulty in challenging incumbents. Yet, if incumbents are so protected from competition, it also implies that most incumbents will attach relatively little benefit to receiving larger campaign contributions and thus are less likely to alter their positions on key votes in exchange for more donations. When combined with previous results, an extension of the ''ideological sorting'' hypothesis is that PACs are relatively successful at determining who their friends (or enemies) are early in a politician's congressional career.

[31] While variables such as tenure may be correlated with the presence of sunk investments in political reputation and thus may tell us something about the presence of entry barriers, a more direct measure is the depreciated value of a politician's past campaign expenditures. However, since expenditures are only available from the Federal Election Commission starting in 1976, using lagged campaign expenditures for just two previous campaigns reduces the time period we can study to 1979–90 and decreases our sample size by almost 20 percent. With this smaller sample, we reestimated the specifications shown in Table 4 by now also

One concern is that the change in voting scores might be affected by the timing of a politician's retirement decision. For example, if the decision to retire was made at the very end of their last term, little change should be expected in the voting index between a politician's last 2 terms in office no matter which theory is correct. We attempted to adjust for this by multiplying the change in donation interactions by an additional variable measuring the number of months before the end of the term that a politician publicly announced his retirement. Another similar interaction term was included to control for the four congressmen in our sample who publicly announced their retirement during their second to last term. In that case, the number of months that they made the announcement prior to the end of their second to last term is interacted with the retirement and change in donation interaction. We also separately controlled for the number of months the public retirement announcement was made prior to the end of either the last or second to last term.[32]

Making these adjustments for the retirement announcement for the regressions using the ACU, ADA, and NSC indexes results in the retirement and change in contribution interactions having insignificant but now consistently the opposite coefficient signs of what the vote-buying hypothesis predicts. However, the adjustment for the COPE index makes the retirement and change in contribution interactions produce contradictory results. The coefficient for the labor contributions regression is significant and implies the opposite of the vote-buying hypothesis, while the coefficient for the corporate contributions supports it, though it is insignificant.

A final question is whether no change in voting behavior is observed for retirees because contributions from opposing groups might offset each other. For example, corporate and labor PACs could cancel each other out in determining a politician's COPE score. If corporate or labor PACs unilaterally stopped contributing to a politician, he could move toward the positions desired by the other donor, but if both types of PACs cut their contributions at the same time, no change might be observed.

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controlling for both the incumbents' and the general election challengers' campaign expenditures lagged over the two previous elections (when available), those four lagged variables squared, a dummy variable for whether the incumbent had served in previous elected positions, and a dummy variable for whether the incumbent has relatives who have served in elective office. In general, the coefficients on interactions between retirement and change in donations were extremely similar to those reported previously.

[32] By regressing the change in retiring congressmen's PAC contributions during their last 2 terms on an intercept term and just the number of months that they publicly announce their retirement prior to the November election during their last term, we found some evidence for PAC contributions being reduced the earlier that politicians announced their retirement. The number of months coefficients were significantly negative for changes in corporate, labor, and total PAC donations and were insignificantly negative for the NSC PAC.

The simplest way to test this is to rerun the COPE specifications shown in Table 5 but simultaneously control for both the change in corporate and labor contributions and those changes interacted with the retirement dummy. Combining these control variables, however, had no effect on either the signs or significance of the coefficients shown earlier. The retirement and contribution interactions are still insignificant, and their signs are the opposite of what the vote-buying hypothesis predicts. We also attempted to control for the possibility that the marginal effect of changing one type of contribution depends on the change in the other type of donation by adding an additional term which interacts the labor and corporate contributions for retiring congressmen. In both cases this new coefficient was insignificant, and its inclusion did not alter the other coefficients.

IV.   Do Changes in Total PAC Donations Alter Voting?

However, even if individual sources of PAC contributions cannot explain voting behavior, it is possible that total PAC contributions are important in explaining voting behavior. Table 6 is analogous to Table 5 in that it attempts to examine whether changes in total PAC contributions might explain changes in any of the five voting indexes during a congressman's last term in the House of Representatives. These changes in total PAC contributions are substantial. While the average congressman experiences an increase between terms of $14,670 (with an SD of 59,490), retiring congressmen experience an average drop of $73,650 (with an SD of 57,630). However, unlike the earlier specifications matching PAC contributions with a related voting index, the vote-buying hypothesis does not imply a specific relationship between total PAC contributions and changes in these voting indexes. The National Taxpayers Union index is more natural to use with total contributions since none of the identifiable PACs unambiguously supports either more or less government spending on all questions. We thus used both the actual and absolute value of the changes in the voting index to capture whether there were either any systematic changes in voting or increased dispersion in voting by retiring congressmen.

The results in Table 6 show that in only four of the 20 specifications are changes in total PAC contributions correlated with changes in the voting indexes. Higher total PAC contributions are associated with higher ADA and COPE scores. These regressions also continue to support our earlier findings and imply that changes in total PAC contributions affect neither the dispersion of political voting scores nor their average score for retiring representatives. Of the 30 interactions involving the retirement dummy and changes in total PAC contributions, 27 have t-statistics that are less than one. Yet, even ignoring the lack of significance the coefficients are small

TABLE 6

THE EFFECT OF REDUCED TOTAL PAC CONTRIBUTIONS ON THE VOTING INDICES OF RETIRING REPRESENTATIVES, 1975–90

DEPENDENT VARIABLE

INDEPENDENT VARIABLES	Change in Indices					Absolute Value of Change in Indices				
	ACU (1)	NTU (2)	NSC (3)	COPE (4)	ADA (5)	ACU (6)	NTU (7)	NSC (8)	COPE (9)	ADA (10)
Retire	-4.03 (2.39)	1.11 (.94)	-1.70 (1.71)	-1.35 (.51)	-.992 (.58)	.801 (.71)	.053 (.07)	-.472 (.21)	.509 (.27)	-.720 (.59)
ΔTotal$	-.005 (1.42)	-.0003 (.13)	-.005 (1.01)	.013 (2.56)	.008 (2.28)	-.0003 (.12)	-.001 (.45)	.001 (.22)	.002 (.47)	.0000 (.01)
Retire*ΔTotal$	-.026 (1.45)	.019 (1.52)	-.003 (.09)	-.009 (.31)	-.005 (.27)	-.004 (.35)	.001 (.10)	.019 (.78)	-.019 (.92)	-.004 (.33)

INDEPENDENT VARIABLES	Change in Indices					Absolute Value of Change in Indices				
	ACU (11)	NTU (12)	NSC (13)	COPE (14)	ADA (15)	ACU (16)	NTU (17)	NSC (18)	COPE (19)	ADA (20)
Retire	-3.79 (2.07)	.787 (1.53)	-2.60 (.85)	-2.09 (.73)	-.795 (.43)	.768 (.63)	.359 (.043)	-.254 (.10)	1.19 (.59)	-.411 (.31)
Competitive	.147 (.26)	-.314 (.78)	.292 (.31)	-.096 (.11)	.912 (1.56)	-.546 (1.42)	.079 (.30)	.609 (.81)	.683 (1.06)	.190 (.45)
Competitive*Retire	-1.62 (.35)	2.13 (.65)	5.71 (.74)	4.40 (.60)	-.957 (.20)	.017 (.01)	-2.90 (1.35)	-1.53 (.25)	-5.71 (1.09)	-2.24 (.66)
ΔTotal$	-.005 (1.24)	.001 (.44)	-.005 (.86)	.013 (2.23)	.009 (2.47)	-.003 (1.08)	.0002 (.12)	.002 (.42)	-.0004 (.11)	.001 (.33)
Retire*ΔTotal$	-.025 (1.19)	.014 (.96)	-.013 (.36)	-.021 (.033)	-.003 (.14)	-.002 (.16)	-.006 (.61)	.017 (.63)	-.020 (.85)	-.005 (.31)
Competitive*ΔTotal$	-.0002 (.03)	-.006 (1.30)	-.001 (.05)	.001 (.09)	-.006 (.82)	.009 (2.01)	-.004 (1.14)	-.004 (.43)	.010 (1.26)	-.003 (.66)
Competitive*Retire*ΔTotal$	-.011 (.24)	.026 (.81)	.053 (.71)	.056 (.78)	-.005 (.12)	-.010 (.34)	.011 (.54)	.002 (.03)	-.018 (.35)	-.006 (.20)

NOTE.—Absolute values of t-statistics are in parentheses. See text for definitions of abbreviations.

in terms of what they imply. The largest effect is shown for the ACU index in specification 1, and even then the average drop in donations produces only a 1.9 percentage point change in voting patterns. Twelve of the 20 coefficients imply that the average drop in donations results in less than a 1 percentage point difference in how retiring congressmen vote.

V.   Did the Rules That Prevent Congressmen from Retaining Unused Campaign Funds for Personal Use Affect the Ability of Last-Term Donations to Alter Voting?

While congressmen who started serving in the House of Representatives prior to January 8, 1980, were allowed to spend unused campaign funds for whatever purposes they desired, those first elected after that date can only spend their funds on campaigns and moving back to their district after re-tirement.[33] For these earlier congressmen, a contribution during their last term might essentially represent a direct cash payment for services ren-dered, though (as Table 1 showed) interest groups seldom donate money to retiring congressmen. Post-1979 entering congressmen should be less sus-ceptible to being bribed, and whatever temptation they face declines further during their last term. In terms prior to their last one they can use the money to finance future campaigns, but during their last term their benefits are ex-tremely limited.

We tested this hypothesis by rerunning the regressions shown in Table 5 but by adding new variables which interact both the change in contribution variables and the retirement times change in contribution variables with a dummy variable that equals one if the congressman is a member of the pre-1980 class. The same was done for variables weighted by the percent of total contributions. Of the 20 new interactions using the retirement dummy variable, half the coefficients are consistent with either hypothesis, though only one of each type is significant at the .10 level for a two-tailed t-test, and even then the net effects on voting behavior are quite small—the mean change in contributions produces a less than 1 percentage point change in voting behavior.

The donation required to buy votes could also decline in the last term because a retiring politician no longer worries about losing future political support. If the lower cost of deviating from their constituents' interests ex-plains a politician's lower campaign contributions, including those who

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[33] This exemption for those in office prior to 1980 expired for all House members in 1994. However, since our data extend to only 1990 this restriction does not affect our sample. Retir-ing post-1979 congressmen could also use donations to pay personal debts from previous campaigns, but this is rare for politicians who have served more than a few terms.

continue to receive lower but still positive donations, this may obscure any effect created among those congressmen whose donations were completely eliminated.

To address this, we tested whether politicians whose contributions declined to zero differed from those who never received any contributions and those whose contributions remained positive during their last period. We replaced each variable containing the change in contributions with three new variables, where the change in contributions portion of the variable was replaced with dummy variables for whether contributions went from being positive to zero, for whether contributions remained positive in both periods, or for whether contributions equaled zero in both terms. These changes did not alter the previous findings, and none of the new retirement interactions were statistically significant at the .10 level for a two-tailed *t*-test.

Using the dummy variables to identify changes in contributions instead of the actual changes also allows us to take another look at how contributions are directed toward politicians representing relatively indifferent constituencies. If the minimum contribution necessary to alter a politician's voting behavior is made to all politicians, it may not be the size of the contribution that is important to identifying changes in how a politician votes but the fact that he received contributions. Alternatively, the previous specifications employing the actual change in donations can be viewed as testing to see if politicians receiving larger donations have had their votes ''bought'' on more issues.

VI.   Is the Politician's Last Term in Office Really His Last Term?

Other mechanisms—besides the threat of reelection and lost donations—may also exist to prevent politicians from cheating when they retire from office. For instance, constituencies or political parties may hire retiring politicians as liaisons to government bureaus, lobbyists, or consultants. If the salaries paid to ex-politicians decline the higher the level of cheating, politicians will find it costly to deviate from these groups' interests. However, if rewards are in terms of desirable jobs rather than direct pecuniary payments, the argument seems less plausible for older politicians whose remaining careers may be short. To test this, we use four different sets of regressions which interacted the retirement dummy variables with information on the postelective office career of politicians and their children, whether the congressman was over 65 when he retired, the congressman's age at retirement, and whether the congressman remains in the Washington, D.C., area after retirement or returns to the area that he represented.

The information on the careers of retired representatives and what their offspring did after the congressman left Congress was obtained from a telephone survey.[34] The survey includes information on whether the politician after leaving office engaged in lobbying or worked for the government or whether his children ran for public office, engaged in lobbying, or worked for the government. Unfortunately, our data on the postelective office career of politicians and their children are limited to those retiring in January 1979. This required that we employ voting indexes from the 1975 and 1976 term so that we could measure the change between terms. Since these earlier data are not disaggregated by the donation's source, we employ total donation data similar to what we used in Table 5. Using just this sample limits us to only the 27 congressmen whom were retiring from office in 1979, 13 of whom either worked for the government or lobbying and 6 of whom had offspring who either worked in the government, ran for office, or engaged in lobbying.

The only significant relationships between changes in PAC contributions and voting behavior in Table 7 relate to the ACU index. For the other special interest voting indices, changes in total PAC contributions affect neither the dispersion of political voting scores nor their average score for retiring representatives. The coefficients for specification 1 imply that for each $47,390 decline in PAC contributions (the average drop for this group of retiring congressmen), a retiring politician who still remains active in politics (for example, through engaging in lobbying, working for the government, or having children who run for public office, engage in lobbying, or work for the government) faces a drop in his ACU index of 1.28 percentage points.

The regressions conditioning on retirement age and location of retirement made use of the entire sample. We reran specifications 2–4, 6–8, 10–12, 14–16, and 18–20 shown in Table 5 by either interacting the change in contributions and retirement variable with a dummy variable for whether the congressman was over 65 when he retired or interacting it with the congressman's age. The data on where congressmen resided after leaving elective office are from the *Directory of the United States Association of Former Members of Congress.*[35] Again using the same regressions from Table 5, we used interacted dummy variables for whether the retired congressmen (1) remained in the Washington, D.C., area; (2) returned to their home states; (3) moved to a non–Washington, D.C., area state different from the

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[34] Lott (cited in note 3).

[35] See Alumni Association of the United States Congress, *Directory of the United States Association of Former Members of Congress* (1992–94).

TABLE 7

The Effect of Reduced PAC Contributions on the Voting Indices of Retiring Representatives, 1975–78

	Dependent Variable									
	Change in Indices					Absolute Value of Change in Indices				
Independent Variables	ACU (1)	NTU (2)	NSC (3)	COPE (4)	ADA (5)	ACU (6)	NTU (7)	NSC (8)	COPE (9)	ADA (10)
Retire	12.06 (1.79)	-4.92 (.71)	4.17 (.34)	2.20 (.34)	7.24 (1.04)	1.25 (.24)	-2.93 (.66)	-14.74 (1.62)	4.16 (1.03)	-3.36 (.62)
Retire*Future in Politics	-13.03 (1.69)	1.26 (.16)	-7.51 (.53)	-8.48 (1.08)	-10.44 (1.22)	2.82 (.47)	5.52 (1.08)	21.11 (2.02)	.119 (.02)	7.89 (1.18)
ΔTotal$	.014 (.98)	.009 (.62)	-.001 (.05)	.0001 (.01)	.009 (.46)	.014 (1.28)	-.008 (.81)	-.009 (.48)	.004 (.41)	.011 (.78)
Retire*ΔTotal$	.298 (2.07)	-.113 (.76)	.159 (.60)	-.009 (.06)	.221 (1.39)	-.089 (.80)	-.094 (.98)	-.281 (1.44)	.122 (1.33)	-.158 (1.27)
Retire*Future in Politics*ΔTotal$	-.325 (2.07)	.036 (.23)	-.338 (1.17)	-.043 (.26)	-.246 (1.37)	.089 (.73)	.136 (1.30)	.472 (2.21)	-.069 (.66)	.185 (1.31)

Note.—Absolute values of t-statistics are in parentheses. See text for definitions of abbreviations.

one that they represented; and (4) had an unidentified postretirement residence, with changes in PAC contributions during the retirement term.

Overall, controlling for postelective office careers strongly rejects the vote-buying hypothesis. The coefficients interacting either retirement age or postelective office residence with changing donations are usually the opposite sign of the vote-buying hypothesis, and in a few cases they are both statistically and economically significant. In no cases are the coefficients both statistically significant and consistent with the voting-buying hypothesis. The results examining the effect of postelective office employment are consistent with the earlier evidence and indicate that the only evidence we find in support of the vote-buying hypothesis is that (1) retiring representatives who receive smaller NSC PAC contributions are somewhat less likely to get a high NSC score in their retiring term, and (2) a handful of conservative PAC recipients, who receive a sizable share of their PAC contributions from conservative PACs, are significantly less likely to obtain high ACU scores in their retiring term.[36]

VII. Conclusion

This article has sought to answer the causality question of whether campaign contributions are made to support politicians with the ''right'' beliefs or whether politicians' support can be bought. Our tests strongly reject the notion that campaign contributions buy politicians' votes. While it is not possible for us to conclude that none of the congressmen ever sold their votes for donations, our estimates demonstrate a remarkable degree of stability in voting patterns over time, thus lending support to past work emphasizing that it is costly for ideological politicians to alter their positions. Contrary to the usual presumption, the article shows that campaign donations can be ''rational'' even when they do not alter how an individual poli-

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[36] This article assumes that politicians are ideologues. Yet, even if this were not the case, some deviation from their former contributor's interests would occur if it were costly for politicians to remain informed about their constituents' changing interests. While some non-ideologues might simply decide to continue voting in the way they had previously, this would produce the greatest differences between retiring congressmen's voting patterns and their constituent interests if their constituents' interests were changing over time. To test whether there is increased randomness, we reran all of the previously discussed regressions which used the change in contributions, but we replaced the measures of the change in the voting indexes with the absolute value of that change. The results are analogous to those reported earlier, with only two of the coefficients interacting retirement and the change in contributions being significant, though economically small. However, once these results are corrected for congressmen voting less frequently during their last term, thus making their voting indexes ''noisier'' measures of their true record (see Lott and Bronars, at 137–38 (cited in note 6)), neither coefficient remains significant. The evidence indicates that retiring congressmen do not appear to increase the randomness in their voting patterns.

tician votes. Just like voters, contributors appear able to sort into office politicians who intrinsically value the same things that they do.

Both the ''ideological sorting'' and the ''vote-buying'' hypotheses are able to explain the positive correlations observed between PAC contributions and voting behavior. Yet our evidence also indicates that there is usually no relationship between changing campaign donations during a congressman's last term and how he votes during that last term. The results remain essentially unchanged even after alternative explanations are accounted for, such as whether politicians were able to divert campaign funds toward personal use and what the politician or his offspring do after he leaves elective office.

APPENDIX

Information from PACs on Whether They Simultaneously Contribute Money to Competing Candidates

Because the Federal Election Commission data set does not allow us to accurately sort out whether donations were made during either the primary or general election campaigns, we were unable to be sure whether PACs were simultaneously making contributions to competing candidates. There was also the question of the timing of contributions during a congressman's last term. To help resolve these two questions we contacted the largest trade, corporate, ideological, or labor PACs by telephone during April 1994. Representatives from all the PACs told us very similar stories.

Ron Pearson of the Conservative Victory Fund told us that ''I cannot think of one case, and I have carefully studied all the conservative PAC contributions, where a conservative PAC has simultaneously given to more than one candidate in a race.'' Ann Murry of the American Medical Association said, ''I couldn't say with complete certainty that we have never done that, but it sure would seem weird if we did.''

Gary Fields of the American Bankers Association noted, ''We have a policy to never, ever, ever, go on both sides of a race.'' He could find only three cases over the years where even the state and national banking PACs made contributions to opposing candidates, and two of those involved Senate races. These races were Hunt versus Helms in North Carolina in 1984 and Simon versus Martin in Illinois in 1990. The one case involving the House occurred in an Iowa race in 1992 between Nussel and Nagel (two incumbents who were redistricted into the same district). Jim Tobin, the director of the National Association of Life Underwriters PAC, says that such simultaneous contributions do happen, but they are ''extremely rare'' and happen ''no more than 1 percent, maybe 2 percent, of the time.'' The main reason for them to occur is that ''one of our members may be running for congress and, even though he may not stand a chance, we feel obligated to give him some money so as to encourage other members to run in the future.'' He pointed out that four to five members of their association regularly run for Congress each election cycle and that in 1992 six members ran, ''though it is pretty obvious that most of them don't have a chance of winning.'' ''Much more rarely'' contributions may be given to two opposing candidates because ''different parts of our con-

stituency may support different candidates.'' John Kinas, of the National Association of Home Builders, says his group follows a similar policy. He points out that ''not giving money to opposing candidates is a policy our board has voted for'' but that it might occur once or twice an election cycle ''when a candidate is a member [of the association] or has extremely strong personal ties to the local association.'' In the 1994 election cycle there are no cases where opposing candidates are receiving money. Mary Anne Karpinsky of the Association of Trial Lawyers of America claimed that they only gave money to competing candidates ''in one in a thousand races'' and ''the only time that that occurs is if a particular candidate is a member.''

Kim Trupiano, the coordinator for PAC contributions for Phillip Morris, said that she was unaware of simultaneous contributions to opposing candidates in either the 1992 or 1994 election cycles and that ''it would have been a strange situation'' if it had occurred in the past. She added, ''We try to support those candidates who most support our ideals.'' Julie Stockdyk with Tenneco informed us that they have ''never done that [contributing to opposing candidates] to my knowledge.'' Greg Knopp, the director of the National Association of Automobile Dealers, noted that ''[o]ur bylaws prohibit us from giving to more than one candidate in a race.'' Chris Farrell, the director of the National Association of Retired Federal Employees' PAC, said that his organization made contributions to both sides in a race about .5 percent of the time over the 1990, 1992, and 1994 election cycles. He added that ''contributions to both candidates in a race is the same as contributions to neither'' and explained that this arose because of the conflicting views of their membership. After they had given money to one candidate, members might insist that the organization also give money to the other side to balance things off.

Steve Powell, political director of the United Food & Commercial Workers International Union, said that simultaneous contributions occurred ''less than one percent of the time.'' It only occurred in a couple of cases when there was an open seat and the local union recommended that the contributions be made to a different candidate than that approved of by the national union. Jay Whitman, associate general counsel for the United Auto Workers PAC, informed us that simultaneous contributions were ''very rare in the case of the UAW'' and that ''it is practically nonexistent'' for Congress. ''It's an elective process for who is endorsed, and they typically result in a clear decision. . . . If there are serious disagreements, no endorsement is made and then the PAC money just doesn't flow.'' Patty Lewis, office manager for the International Machinists & Aerospace Workers Union, provided a slightly different reason for simultaneous contributions. Such situations are ''extremely rare'' and that in ''only one instance in recent years were contributions given to two Democratic candidates [and that was] because no endorsement was made.''

We also talked to the representatives from Americans for Democratic Action, the American Dental Association, the National Rifle Association, the Realtor's PAC, Rockwell International Corp., and Lockheed Employees PAC, and we were told that they either had rules forbidding them from giving money to opposing candidates or if they ever did (and those cases involved at most a percent or two of the candidates), it was for reasons similar to those listed above. The answers appear to be the same whether one examines trade, corporate, ideological, or labor PACs.

These PACs were also virtually unanimous in their claim that they did not make contributions to candidates after they had announced their decision to retire from office. In the couple of cases where PACs admitted to having done this, they emphasized that even for them this practice was extremely rare and was done only under the most unusual circumstances.

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