

# *Is Negative Voting an Artifact?*

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Negative voting occurs when voters respond more strongly to political actions or outcomes that they oppose than to comparable actions or outcomes they favor. This paper discusses the possibility that negative voting is an artifact. We develop a simple probabilistic model of constituent support that produces negative voting among some constituents purely as a function of the boundedness of probabilities. The model has two implications that will help to determine whether empirical findings about negative voting are real or artifactual. First, negative voting should characterize the behavior of a politician's previous supporters, whereas previous opponents should show positive voting. Second, negative voting should be stronger the higher the previous level of support for a politician. Given that incumbents almost by definition have more previous supporters than opponents, empirical studies should be more likely to find negative voting when analyzing the vote for incumbents, and negative voting should be more noticeable the higher the incumbent's previous level of support. An analysis of voting in 1982 and 1986 House races produces evidence consistent with these propositions.

## **Introduction**

Two thousand years ago a high-level Roman politician reportedly observed that "the evil that men do lives after them; the good is oft interred with their bones." Whatever the veracity of Shakespeare's dialogue, the fictionalized Antony espoused a familiar bit of political folk wisdom, namely, the belief that citizens evaluate their leaders asymmetrically, with negatives counting more heavily than positives. In more recent times Key (1966, p. 60) once alluded to the "journalistic supposition" that "the people only vote against, never for." And most recently, a number of political analysts have taken such sentiments and suppositions seriously enough to subject them to empirical scrutiny, with a number of confirmatory results.

To review briefly, Bloom and Price (1975) examine negative voting at the aggregate level, concluding that declining economic conditions hurt the congressional candidates of the in-party more than improving conditions help. Kernell (1977) attributes the national administration's regular mid-term loss of congressional seats to asymmetric variations in turnout and vote choice arising from negative voting. On the presidential level Lau's (1982, 1985) analyses suggest that negative evaluations of presidential candidates are relatively more important for voting decisions than positive evaluations. Cover (1986) attempts to replicate Kernell for House midterms in the 1980s,

reporting no support for negative effects on turnout, but significant effects on the vote. Thus, folk wisdom finds a reflection in systematic analyses.<sup>1</sup>

Negative voting is said to occur when circumstances unfavorable to the interests or preferences of constituents evoke a stronger electoral response than comparable favorable circumstances evoke. But while the behavior is easy enough to define, the individual-level processes that underlie it are not well understood. Most analysts draw on social-psychological studies and theories that identify asymmetries in human information processing, though Lau (1985) observes that various side implications of such theories are not consistently supported in experimental studies. Given the present state of the literature, the most prudent conclusion is that negative voting is an observed regularity with an as-yet uncertain explanation.

Elsewhere we have proposed an explanation for negative voting different from those rooted in social psychology. Specifically, within a principal-agent framework, we show that rational voters who seek to control a politician should adopt an electoral compensation scheme that possesses negative voting properties; that is, a scheme that punishes disapproved legislative behavior more severely than it rewards approved behavior. The framework for our earlier inquiry was that of constituents seeking to influence a legislator's vote on a controversial bill, but the framework bears other interpretations as well. While developing this model, however, we became aware of another possibility. If the model of constituent response is altered, negative voting continues to characterize the behavior of some constituents, but it is an artifact without substantive meaning or motivation. A discussion of this "artifactual" basis for negative voting is the purpose of this paper.<sup>2</sup>

<sup>1</sup>The evidence is by no means uniformly positive. Kiewiet (1983), for example, finds no evidence of asymmetry in the relative effects of positive and negative economic experiences and judgments on voting behavior. Moreover, not all the positive evidence reported is convincing. Unless we misunderstand his analysis, Cover appears to show only that those who disapprove of the president's performance are less likely to vote for candidates of his party than those who approve. We certainly believe that this is true, but the finding implies nothing about the comparative strength of approval and disapproval.

<sup>2</sup>Previous research has not ignored the possibility of artifact. Lau (1982) investigates the possibility that positive and negative evaluations (e.g., approve, disapprove) are not psychologically symmetric and that regression coefficients simply reflect the asymmetry. He rejects this possibility. In a different line of argument, Radcliff (1986) presents a compositional explanation for a negative voting artifact on the aggregate level. *All* declining income elections in the standard time series come before 1958, an era preceding the mid-1960s rise in the insulation of congressional incumbents from national forces. Radcliff reports that the effects of rising and declining state income are symmetric and significant in the pre-1960 period but symmetric and insignificant in the post-1960 period. When the periods are combined, however, the estimated impact of rising income is diluted by inclusion of the post-1960 elections; the estimated impact of declining income is not: hence, an artifactual asymmetry.

Before proceeding we emphasize that we are not claiming that all instances of negative voting are artifactual. Our alternative (principal-agent) theory most certainly is not artifactual. In that model negative voting is purposeful, an instrumentally rational means to a well-specified end. Nevertheless, we are increasingly inclined to accept the possibility that negative voting is more apparent than real. The principal contribution of the model developed in this paper is the identification of an empirically observable condition that divides voters into those who negative vote and those who do not and another condition that specifies variation in the strength of the negative voting artifact. Empirical findings consistent with these implications, which we provide, strengthen the case for an artifactual explanation, while contradictory evidence would reinforce the existing presumption that negative voting is a real phenomenon. Resolution of this question involves more than an academic exercise in political psychology, for some researchers have argued that negative voting underlies important aggregate regularities such as the in-party loss of congressional seats and that negative voting has implications for perennial concerns pertaining to political control and electoral accountability. To the extent that analysts accept such arguments, the question of negative voting by citizens takes on broader significance than it might first appear to have.

### The Framework

As a framework for analysis, consider a politician who must make a controversial decision, that is, a decision that finds some of his or her constituents on each side. The situation could be that of a member of Congress deciding whether to vote yea or nay on a roll call, a presidential candidate deciding which side of an issue to support, or a president deciding whether to take a major action. Denote the opposing groups in the constituency as  $G_1$  and  $G_2$  and label the politician's choice as one of supporting either  $G_1$  or  $G_2$ .

An important feature of our models is their incorporation of a simple notion of electoral history. We assume that at any point in time a politician thinks of constituents in terms of supporting and opposing groups (Fenno, 1978; Kingdon, 1966; Mayhew, 1974). Specifically, those constituents whose current probability of supporting the politician in the next election equals or exceeds one-half are defined as *supporters*, while those whose probability falls below one-half are defined as *nonsupporters*. Denote these probabilities  $p_{is}$  and  $p_{in}$ , respectively. We assume that as a result of previous elections, other issues, cross-cutting group memberships, and so forth, each group,  $G_i$  contains both supporters and nonsupporters. Thus, if  $G_i$  contains  $g_i$  voters,  $v_i$  are supporters, and  $(g_i - v_i)$  are nonsupporters.

TABLE 1  
Definitions and Notation

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$G_1, G_2$	= Two opposed groups
$g_i$	= Number of voters in $G_i$
$v_i$	= Number of supporters in $G_i$
$(g_i - v_i)$	= Number of nonsupporters in $G_i$
$p_{is}$	= Probability a supporter in $G_i$ votes for the politician, $p_{is} \geq .5$
$p_{in}$	= Probability a nonsupporter in $G_i$ votes for the politician, $p_{in} < .5$
$a_{is}, a_{in}$	= Increments in probability of support from agreeing with supporters and nonsupporters, respectively
$d_{is}, d_{in}$	= Decrements in probability of support from disagreeing with supporters and nonsupporters, respectively
$a_{is}, a_{in}, d_{is}, d_{in}$	$\geq 0$

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To simplify the analysis, assume that constituents are concerned only with what Mayhew (1974) terms “position taking”: they reward and punish the politician simply on the basis of his or her position relative to their preferred position. We could incorporate the additional possibility that the politician’s action helps to bring about the preferred outcome, but this would complicate the exposition and change none of the conclusions. So, assume that when a politician *agrees* with the position of a group, its members increment their respective probability of support, while *disagreement* with their position leads group members to decrement their probability of support. Specifically, suppose the politician agrees with  $G_i$ . Then, a group member who is a supporter increments  $p_{is}$  by  $a_{is}$ , while one who is a nonsupporter increments  $p_{in}$  by  $a_{in}$ . On the other hand, if the politician opposes the group, then a supporter decrements  $p_{is}$  by  $d_{is}$ , while a nonsupporter decrements  $p_{in}$  by  $d_{in}$ . Multiplying these increments and decrements by the number of members in the relevant groups yields the expected vote change that results from the position taken. We assume the politician acts to maximize his or her expected net gain. Table 1 summarizes the notation, and Table 2 outlines the politician’s choice problem.

The expected vote change function at the end of Table 2 summarizes the electoral consequences of the politician’s choice. One can examine each of the terms in this function to see how the politician’s choice responds to them. Results of this analysis appear in Table 3. For the most part there are few surprises: politicians respond to the size of  $G_i$  and the size of its rewards and punishments in the way common sense would suggest. The one mildly surprising finding is that politicians do not necessarily respond to the levels

TABLE 2  
Politician's Choice Problem

	Group Structure			
Choice	$v_1$	$g_1 - v_1$	$v_2$	$g_2 - v_2$
Support $G_1$	$p_{1s} + a_{1s}$	$p_{1n} + a_{1n}$	$p_{2s} - d_{2s}$	$p_{2n} - d_{2n}$
Oppose $G_1$	$p_{1s} - d_{1s}$	$p_{1n} - d_{1n}$	$p_{2s} + a_{2s}$	$p_{2n} + a_{2n}$

$$E(G_1) = v_1(p_{1s} + a_{1s}) + (g_1 - v_1)(p_{1n} + a_{1n}) + v_2(p_{2s} - d_{2s}) + (g_2 - v_2)(p_{2n} - d_{2n})$$

$$E(G_2) = v_1(p_{1s} - d_{1s}) + (g_1 - v_1)(p_{1n} - d_{1n}) + v_2(p_{2s} + a_{2s}) + (g_2 - v_2)(p_{2n} + a_{2n})$$
  

$$E(G_1) - E(G_2) = v_1(a_{1s} + d_{1s} - a_{1n} - d_{1n}) + g_1(a_{1n} + d_{1n}) - v_2(d_{2s} + a_{2s} - d_{2n} - a_{2n}) - g_2(d_{2n} + a_{2n}) \quad (1)$$
  

$> 0 \longrightarrow$  support  $G_1$   
 $= 0 \longrightarrow$  indifference  
 $< 0 \longrightarrow$  support  $G_2$

TABLE 3  
Comparative Statics of Political Choice\*

As _____ increases, the likelihood that the politician will favor $G_1$ _____	
$g_1$	increases
$g_2$	decreases
$v_1$	?
$v_2$	?
$a_{1s}$	increases
$a_{1n}$	increases
$d_{1s}$	increases
$d_{1n}$	increases
$a_{2s}$	decreases
$a_{2n}$	decreases
$d_{2s}$	decreases
$d_{2n}$	decreases

\*From signs of partial derivatives of equation (1) from Table 2.

( $v_i$ ) of previous group electoral support.<sup>3</sup> At first glance the analysis appears to hold no implication one way or the other for negative voting, but a closer look reveals that negative voting is implicit in the structure of this simple and empirically plausible model.

Consider the increments and decrements in support that result from the politician's choice. The probability axioms require that these increments and decrements be well behaved in the sense that the new probabilities of support must range between zero and one, inclusive. Thus, for existing supporters,  $p_{is} + a_{is} \leq 1$  and  $p_{is} - d_{is} \geq 0$ .

In words, no matter how much the current choice pleases an existing supporter, that voter's probability of support can not rise above one. And no matter how much the current choice outrages an existing supporter, that voter's probability of support can not drop below zero. Similarly, for existing nonsupporters,  $p_{in} + a_{in} \leq 1$  and  $p_{in} - d_{in} \geq 0$ , in exactly analogous fashion.

Now, remembering that supporters are those for whom  $p_{is}$  is at least .5, and nonsupporters are those for whom  $p_{in}$  is less than .5, the preceding sets of inequalities imply that

$$\begin{aligned} \max a_{is} &\leq .5 \\ \max d_{is} &\geq .5 && \text{(supporters)} \\ \\ \max a_{in} &> .5 \\ \max d_{in} &< .5 && \text{(nonsupporters)} \end{aligned}$$

Figure 1 illustrates these inequalities. In words, the maximum positive reaction of a supporter to a controversial choice is less than the maximum negative reaction to that choice—negative voting. But for nonsupporters, the situation is just the reverse. The maximum positive reaction is greater than the maximum negative reaction—positive voting. *These are the simple logical consequences of the definitions of supporters and nonsupporters and the axioms of probability.*

Of course, there is no particular reason why reactions to every political choice should be of maximum strength. But the same conclusions follow from much weaker assumptions. Consider Figure 2. Here we assume simply that the increments and decrements for supporters and nonsupporters follow a symmetric probability distribution centered on their possible range. Whatever the shape of this distribution (unimodal, bimodal, uniform, or

<sup>3</sup>The partial derivatives of equation (1) with respect to supporter rewards and punishments are greater in magnitude than the corresponding partial derivatives for nonsupporter rewards and punishments, indicating greater sensitivity to the reactions of supporters. But the absolute level,  $v_i$ , of previous support has no determinate impact.

FIGURE 1  
Negative Supporters and Positive Opponents, I

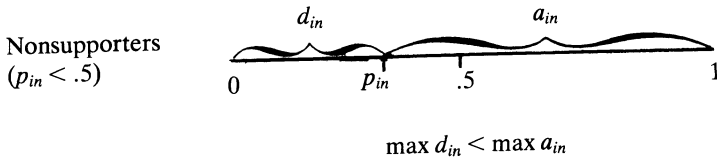
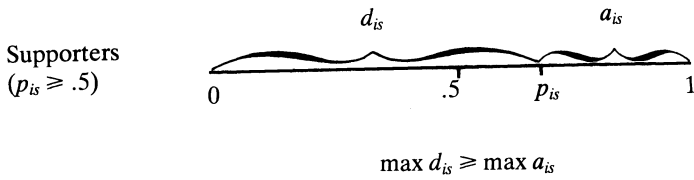
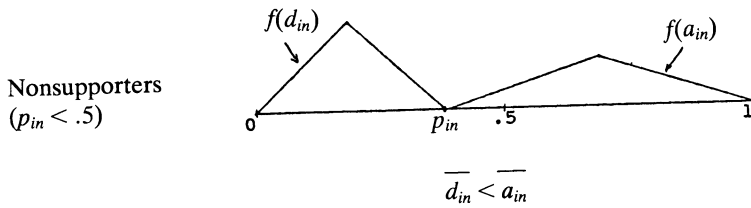
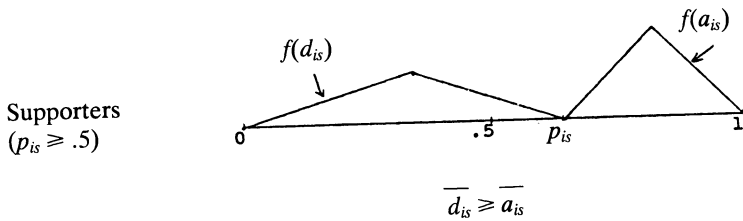


FIGURE 2  
Negative Supporters and Positive Opponents, II



whatever), the means of the increments and decrements yield a conclusion parallel to that drawn above:

$$\begin{aligned} \bar{a}_{is} &\leq \bar{d}_{is} && \text{(supporters)} \\ \bar{a}_{in} &> \bar{d}_{in} && \text{(nonsupporters)} \end{aligned}$$

On average, we should observe negative voting supporters and positive voting opponents! In aggregate data we should observe negative voting *only in those cases where politicians have larger numbers of preexisting supporters than nonsupporters*. Thus, one reason empirical studies find support for the negative voting hypothesis may be that they analyze the vote for *incumbents*, and almost by definition incumbents are politicians whose constituencies contain more supporters than opponents. Moreover, there is some irony here in that the potential for negative voting increases with the number of supporters a politician has: incumbents whose previous victories have been most impressive are those most subject to negative voting, perhaps another reason why few incumbents appear content to coast, regardless of their previous margins.<sup>4</sup> In sum, the empirical occurrence of negative voting should vary positively both with the prevalence of incumbents in the races analyzed and with the previous margins of incumbents in those races.

### Empirical Analysis

The argument detailed above yields implications that are amenable to empirical testing. But direct tests of these propositions require that supporters be differentiated from nonsupporters. This differentiation turns out to be surprisingly difficult in practice. Operationally, the most plausible way to proceed would be to use reported vote for a candidate in the earlier wave(s) of a panel study to identify his or her supporters and nonsupporters for purposes of analyzing voting behavior in a later wave. Some error will result because challengers will generally be different across the two waves, and former supporters may become nonsupporters for reasons not measured in the survey. But no better alternative is apparent.

Unfortunately, neither of the CPS/NES national panels (1956–60, 1972–76) covers elections in which the incumbent presidential candidate sought reelection. Whereas an Eisenhower vote in 1952 would be a plausible means of identifying Eisenhower supporters going into 1956, it strains credibility to use an Eisenhower vote in 1956 as an indicator of Nixon supporters

<sup>4</sup>Certainly our model does not imply that incumbents have a harder time winning elections than nonincumbents. The way for incumbents to avoid suffering from negative voting is to avoid casting unwise votes, taking unpopular positions, or otherwise creating the basis for negative evaluations. But if they do something that creates such an evaluation, the model suggests that they suffer relatively more for it on average than would a nonincumbent in a comparable situation.



going into 1960, let alone to treat a Nixon vote in 1972 as an indicator of Ford supporters going into 1976. One could rely on an earlier wave of a short panel (1980, the pre-post waves of other surveys), but the danger here would be that measures of previous support (such as vote intention) and reports of subsequent voting behavior would be simultaneously determined. Recall of previous vote is available, but most analysts now believe that such data simply can not be relied on. Thus, the design of a presidential-level study of negative voting is easy to imagine but not yet implemented. What we need, but do not have, is a 1976–80 or 1980–84 NES panel.

Turning to the congressional level, one could isolate those constituents whose representatives ran for election in two waves of a panel, record their vote in an earlier wave, and analyze voting behavior in a later wave. Unfortunately, panel mortality, incumbent mortality, and low congressional turnout exact a heavy toll in usable cases. Moreover, differences in on- and off-year contexts undercut this study design. And finally, prior to 1978 the NES surveys asked no questions about the congressional candidates other than vote. The 1972–76 NES panel study includes a presidential performance item, so one could replicate Kernell's analysis. But the impact of national forces on House elections has weakened since the mid-1960s (Fiorina, 1988), so such a test would not inspire much confidence.<sup>5</sup>

Even without panel data, however, an indirect test is possible. As suggested above, incumbents have more supporters than nonsupporters (at least they did at the preceding election). Consequently, given that our model predicts negative voting among supporters and positive voting among nonsupporters, one should expect to find stronger indications of negative voting when analyzing decisions to vote for incumbents than when analyzing decisions to vote for a party's candidates without regard for incumbency status. The logic underlying this claim should be clearly understood before proceeding further.

Assume that all contests have an incumbent and a challenger. Let  $p(I)$  be the probability that a citizen votes for the incumbent, and  $1 - p(I)$  be the complementary probability that the citizen votes for the challenger. Now consider  $p(R)$ , the probability that a citizen votes for the candidate of the incumbent presidential party (Republican at present). We can decompose  $p(R)$  into a combination of probability terms, including  $p(I)$  by defining  $(R)$ , the probability that the incumbent is a Republican, and  $1 - q(R)$ , the complementary probability that the incumbent is a Democrat. Then, by the ordinary conditional probability formula, we can express the probability of voting Republican as the probability of voting for the incum-

<sup>5</sup>Kernell's analysis ends with the midterm of 1966, just at the point where the influence of incumbency takes off and the effects of national forces in congressional elections begin to weaken.

bent times the probability the incumbent is a Republican plus the probability of voting for the challenger times the probability the challenger is a Republican. In our notation

$$\begin{aligned} p(R) &= p(I)q(R) + (1 - p(I))(1 - q(R)) \\ &= 1 - p(I) - q(R) + 2p(I)q(R) \end{aligned} \quad (2)$$

When all incumbents are Republicans ( $q(R) = 1$ ), then  $p(R) = p(I)$ , and a statistical model that estimates  $p(R)$  will be identical to one that estimates  $p(I)$ .<sup>6</sup> But, in general, the relationship between  $p(R)$  and  $p(I)$  shifts with the magnitude of  $q(R)$ .<sup>7</sup> And when less than half the incumbents are Republican, as at the present time,  $p(R)$  varies *negatively* with  $p(I)$ . Thus, according to our model, even if the vote for incumbents were characterized by negative voting, we would not expect to find negative voting when analyzing the vote for Republican candidates. Tables 4–6 provide evidence highly consistent with this logic.

Each of these tables contains probit estimates of the 1982 and 1986 vote for congressional candidates in incumbent-contested races, where the vote is postulated to be a function of the party identification of the citizen, the perceived job performance of the incumbent, and where indicated, the perceived job performance of President Reagan. Incumbent job performance is our principal vehicle for examining negative voting. Contemporary House elections are generally regarded as determined by candidate specific and district specific factors (Mann, 1978; Jacobson, 1987). We include Reagan performance in an effort to control for any national forces at work in the elections, and also because Kernell's evidence for negative voting in earlier congressional elections was based on analysis of the presidential performance item. All variables appearing in the estimations are dummy variables formed by trichotomizing the three basic variables. Depending on the model, party identification is divided either into the categories of those who share the incumbent's affiliation, pure independent, and those who share the challenger's affiliation, or into the categories of Democrat, pure independent, and Republican. Incumbent job performance and Reagan job performance are divided into the categories, *approve*, *don't know*, and *disapprove*. In the estimated equations the omitted categories of the dummy variables are *pure independent* and *don't know* about the incumbent's and Reagan's performance. Thus, the reference category against which marginal effects are estimated consists of those citizens with no party identification

<sup>6</sup>If all incumbents are Democrats,  $p(R) = 1 - p(I)$ , and predictors of  $p(R)$  would be equally good predictors of  $p(I)$ , but their signs would be reversed.

<sup>7</sup>That is, the partial of  $p(R)$  with respect to  $p(I)$  is positive, zero, or negative as  $q(R)$  is greater than, equal to, or less than .5.

TABLE 4  
Vote for Incumbent House Candidates

	1982		1986	
	1	2	1	2
Constant	.05 (.18)*	.07 (.28)	.20 (.77)	.20 (.78)
Same pid	1.26 (4.76)	1.15 (4.19)	.86 (3.33)	.79 (3.04)
Different pid	-.65 (-2.63)	-.53 (-2.05)	-.65 (-2.62)	-.58 (2.32)
Approve Inc.	.82 (4.84)	.75 (4.34)	1.02 (6.32)	1.01 (6.24)
Disapprove Inc.	-1.18 (-4.33)	-1.19 (-4.30)	-1.33 (-5.36)	-1.32 (-5.29)
Approve RR**	—	.16 (1.48)	—	.07 (.74)
Disapprove RR**	—	-.24 (-1.71)	—	-.26 (-2.04)
<i>n</i>	534	534	702	702
% c.p. (model)	84	85	89	89
% c.p. (null)	72	72	77	77

\**t*-statistics in parentheses.

\*\*Multiply by -1 for Democratic incumbents.

and no judgments about the performance of their incumbent representative and president.

In Table 4 the dependent variable is zero for those voting against the incumbent representative and one for those voting for. Given that Reagan approval and disapproval should affect incumbents differently, depending on whether they are Republicans or Democrats, we define a “switching” dummy variable that takes on a value of 1 for Republican incumbents and -1 for Democratic incumbents. The Reagan performance variables are multiplied by this dummy so that Reagan approval works for Republican incumbents and against Democrats, and disapproval works against Republican incumbents and for Democrats.

All four estimated equations show that incumbent performance judgments have a major impact on the vote—certainly not a surprising finding.<sup>8</sup> But note that the magnitude of the approval effect is only about 65 to 80 percent of the magnitude of the disapproval effect. When Reagan performance judgments are added to the first equation for each year, there is an insignificant improvement to the overall fit of the equations, and the approval terms are not significant at conventional levels. But again, there ap-

<sup>8</sup>Incumbent job performance judgments are excellent summary measures of incumbents' standing with their constituents. Such judgments have been shown to reflect both constituency service and policy considerations (Cain, Ferejohn, and Fiorina, 1987, ch. 6).

TABLE 5  
Vote for Republican House Candidates

	1982		1986	
	1	2	1	2
Constant	.36 (1.48)*	-.33 (-.67)	-.05 (-.24)	.86 (1.92)
Dem ID	-1.36 (-5.07)	-1.26 (-4.43)	-.71 (-2.84)	-.65 (-2.55)
Rep ID	.51 (1.86)	.41 (1.50)	.78 (3.04)	.77 (3.00)
Approve Inc.**	1.14 (10.6)	1.11 (10.1)	1.31 (14.6)	1.31 (14.4)
Disapprove Inc.**	-.83 (-3.49)	-.81 (-3.36)	-1.03 (-4.96)	-1.05 (4.99)
Approve RR	—	.84 (1.73)	—	-.87 (2.14)
Disapprove RR	—	.52 (1.04)	—	-1.16 (2.87)
<i>n</i>	534	534	702	702
% c.p. (model)	85	85	88	88
% c.p. (null)	57	57	54	54

\**t*-statistics in parentheses.

\*\*Multiply by -1 for Democratic candidates.

pears to be some modest effect of Reagan disapproval. Overall, the pattern is so clear that few would quarrel with an investigator who concluded that Table 4 showed evidence for negative voting, although the differences shown are not significant at conventional levels.<sup>9</sup>

Now consider Table 5. The estimates in this table are based on exactly the same data as those in Table 4—voters in races contested by incumbents. But the data are sliced in an alternative way. In Table 4 the dependent variable was vote challenger = 0/vote incumbent = 1, whereas in Table 5 the dependent variable is vote Democratic = 0/vote Republican = 1. Party ID is now trichotomized simply as Democrat, pure independent, and Republican. Reagan approval should have a simple positive effect, and disapproval, a simple negative effect. But incumbent performance must be multiplied by the Democratic/Republican switching variable (-1, 1) so that incumbent approval contributes to the Republican vote in Republican incumbent races and detracts from the Republican vote in Democratic incumbent races and vice versa for incumbent disapproval. Slightly less than half

<sup>9</sup>That is, while the individual approval and disapproval coefficients are evidently significant, the differences in their absolute magnitudes are in no case significant at the .10 level. None of the relevant negative voting studies report tests for differences in coefficients; their conclusions rest on "eyeballing" the coefficients.

the voters in each year are in districts with Republican incumbents, so equation (2) above indicates that the probability of voting for the incumbent (estimated in Table 4) should bear a slight negative relationship to the probability of voting for the Republican (estimated in Table 5). Consequently, the apparent evidence for negative voting presented in Table 4 should not be expected in Table 5.

Evidently, these expectations are met. The models reported in Table 5 do equally as good a job of predicting the individual vote as those in Table 4, but the coefficient pattern is very different. The analyst who framed the research question as "vote for candidates of the incumbent administration" would conclude that incumbent performance judgments have a major impact on the vote, but that, if anything, positive evaluations have a stronger impact than negative evaluations. The effect of Reagan evaluations, on the other hand, is insignificant in 1982, and approval has the wrong sign in 1986, while disapproval has the wrong sign in 1982.

The key to the discrepancy lies in the simple fact that negative voting characterizes decisions to support incumbents, not decisions to support candidates of the presidential party. Consider Table 6. Here we divide the sample into those voters with incumbent Democratic representatives and those with incumbent Republicans. From equation (2) we know that  $p(R)$  is now equal to  $p(I)$  in the Republican incumbent races and equal to  $1 - p(I)$  in Democratic incumbent races. Consequently, we should expect the absolute value of the approval coefficients to be less than the absolute value of the disapproval coefficients and expect that for Republicans the signs will be positive for approval and negative for disapproval, while for Democrats they will be the opposite. The results are quite consistent with these expectations, at least for the incumbent approval ratings. The pattern fails to emerge only among voters in 1982 Republican races; it emerges clearly among Democrats in both years. Interestingly, the reported vote for the incumbent is lowest (65 percent) in the case (1982 Republican incumbent races) where negative voting is not observed. Conversely, negative voting is strongest in the two cases (1982 and 1986 Democratic incumbent races) where the reported vote for the incumbent is highest (78 percent and 80 percent). This outcome is consistent with our model's implication that the potential for negative voting is higher the greater the incumbent's previous level of support, assuming that support levels in these elections were similar to those in previous elections.

In sum, with no convincing way of differentiating previous supporters from nonsupporters, we are unable to carry out a direct test of our model's prediction that supporters vote negatively, while nonsupporters vote positively. But given the simple and eminently plausible assumption that incumbents have more previous supporters than nonsupporters, we have been

TABLE 6  
Vote for Republican House Candidates

	1982		1986	
	Dem Inc	Rep Inc	Dem Inc	Rep Inc
Constant	-.06 (-.09)*	-.50 (-.64)	.83 (1.05)	.82 (1.45)
Dem ID	-1.39 (-3.90)	-1.16 (-2.26)	-.79 (-1.94)	-.53 (1.57)
Rep ID	.20 (.62)	.66 (1.23)	.83 (2.09)	.71 (2.05)
Approve Inc.	-.70 (-2.96)	.83 (3.10)	-1.10 (-4.62)	1.00 (4.31)
Disapprove Inc.	1.60 (3.79)	-.74 (-1.94)	1.46 (3.83)	-1.22 (-3.60)
Approve RR	.25 (.42)	1.27 (1.64)	-1.04 (-1.37)	.59 (1.19)
Disapprove RR	.04 (.06)	.71 (.90)	-1.40 (-1.83)	-.85 (-1.77)
<i>n</i>	281	253	368	334
% c.p. (model)	85	85	90	87
% c.p. (null)	78	65	80	75

\**t*-statistics in parentheses.

able to carry out an indirect test. We find considerable evidence that negative voting characterizes the decision to support incumbents; we find no evidence that it is a general feature of the congressional voting decision. Thus, the evidence is consistent with our artifactual model, though until we can directly observe the behavior of supporters and nonsupporters there remains the possibility that negative voting characterizes the vote for incumbents for some reason other than the differing behavior of these two groups. But whatever the ultimate verdict on this particular model, the evidence presented is not consistent with a *generalized* negativity effect.

The analyses we have reported have a number of implications for research designs used in the study of negative voting. If the analysis focuses on presidential candidates, one of whom is an incumbent (or surrogate), then negative voting is likely to emerge—the situation is analogous to that of Table 6 with either one Democratic or one Republican incumbent. If the analysis focuses on House candidates, however, the discovery of negative voting will depend on how one represents the voting decision. If the incumbent presidential party does not control the House, as at present, equation (2) indicates that support for the presidential party candidate varies negatively with support for the incumbent representative, and negative voting is unlikely to be found. But if the incumbent presidential party has a large majority in the House, as in 1966, then support for the presidential party

TABLE 7  
Party Defection and Presidential Approval  
(In Percentages)

Year	Differences in Loyalty Rates		Proportion of In-Party Incumbents
	In-Party Approvers Minus Out-Party Disapprovers	In-Party Disapprovers Minus Out-Party Approvers	
1946	-9	-12	46.0
1950	-2	-14	55.4
1954	-1	—	47.0
1958	-3	-8	38.2
1962	-8	-29	53.3
1966	-5	-12	63.1

SOURCE: Kernell (1977, Table 5).

candidate will vary positively with support for the incumbent representative, and one may uncover apparent negative voting in the former analysis, even though the phenomenon (or artifact) is limited to incumbent-contested races. Kernell's results are faintly suggestive of this possibility. Table 7 partially reproduces Kernell's Table 5. The first column shows the consistently greater party loyalty of out-party identifiers who disapprove of the president as compared to in-party identifiers who approve. The second column shows the consistently greater disloyalty of in-party identifiers who disapprove of the president as compared to out-party identifiers who approve. It seems fair to say that the weakest evidence for negative voting is in the 1954 and 1958 midterms, and the strongest in the 1946, 1962, and 1966 midterms. The third column of the table shows the proportion of all congressional candidates who were incumbents of the in-party for each election.<sup>10</sup> Evidently, there is a rough correlation between the appearance of negative voting and the proportion of in-party incumbents in that year's elections: two of the three lowest proportions were in 1954 and 1958, while two of the three highest proportions were in 1962 and 1966.

### Discussion

This paper raises the possibility that empirical studies that report evidence of negative voting are actually reporting a combination of floor and

<sup>10</sup>More precisely, one would want to know the number of voters in races with in-party incumbents. That number would be correlated with the number of such incumbents, but there could be considerable slippage in actual samples.

ceiling effects that logically must be present in analyses of probabilistic behavior. We have suggested two propositions that should hold if negative voting has such an artifactual basis. First, negative voting should occur among supporters of a politician, whereas nonsupporters should show evidence of positive voting. Second, the more supporters a politician has, the more evident will be any negative voting effects. Empirically, incumbent politicians almost by definition have more supporters than nonsupporters so that negative voting should be most evident in incumbent races, with the strength of the effect related positively to the size of the incumbent's previous margin. The evidence we have presented is consistent with this amalgam of theoretical and empirical hypotheses, though we do not claim that the evidence is conclusive.

Even if further investigation leads to the rejection of the artifactual explanation advanced in this paper, a number of questions about the basis and significance of negative voting remain. The most general of these is whether "real" instances of negative voting represent a psychological quirk of human beings, or whether negative voting is an intelligible means to some end, as argued in our earlier paper. The question here appears to be whether negative voting has an internal explanation in the psychology of voters, or whether it has a situational basis, being called forth as rational behavior in some contexts. While these possibilities are quite different, they may be difficult to distinguish empirically. For example, Lau (1985) outlines a "figure-ground" explanation of negative voting, suggesting that most people, most of the time live in positive worlds.<sup>11</sup> Thus, negative information stands out against a positive background and is processed and weighted accordingly. Alternatively, Barry Weingast (personal communication, 3 March 1983) suggests that negative voting is problematic only if viewed from a retrospective standpoint. From a prospective standpoint, if a voter supports a candidate in the expectation of favorable actions and outcomes, the actual realization of such actions and outcomes will elicit no gain in support. Only the failure of the candidate to deliver will elicit a change in support. Evidently, Lau's and Weingast's conclusions share a resemblance, though their underlying logic is quite different.

Given the suggested implications of negative voting for electoral accountability and control of politicians, the subject deserves more sustained attention than it has received. The import of the implications hinges on

<sup>11</sup>To be precise, "Most of us, most of the time, live in a positive world. We like a majority of the people around us, and we are satisfied with our jobs, our families, our neighborhoods, our experiences with government agencies, and our lives as a whole" (Lau, 1982, p. 372). Either Rand-McNally is right about Pittsburgh being one of the country's most livable cities, or Professor Lau has a remarkably optimistic outlook on life.



whether the phenomenon is artifactual, psychological, or situational, and the jury is still out.

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