Non-Voting and the Decisiveness of Electoral Victories

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Abstract

We re-examine the relationship between closeness and turnout by looking at aggregate-level variables and studying a large number of elections. We also attempt to estimate *how much* voter turnout is likely to change as a function of change in the closeness of an election. Specifically, we assume that in elections where one out of two or more candidates must be elected in each legislative district and the winning candidate is the one who obtains the most votes, turnout will be affected by the voters' expectation as to how close the elections are going to be, by the turnout in the previous election, as well as by the closeness of the previous election. We test our hypotheses using turnout and closeness data for all 13 general elections held in the UK since 1955 and all 42 congressional elections held in the US during the period 1920–2002. Our findings strongly support our hypotheses.

Keywords: close elections, decisiveness, rational choice calculations, turnout.

Non-Voting and the Decisiveness of Electoral Victories

1. Introduction

The percentage of citizens choosing to vote varies greatly from country to country, election to election, and constituency to constituency. Variation among constituencies has been the least explored of these differences, yet the variation is striking. For example, in the United Kingdom's General Election of 2001 (a contest with the lowest turnout since 1918), the mean turnout for all 659 constituencies was 59.2 percent of voting-age population, but the standard deviation among the constituencies was 6.6, ranging from a low of 34.1 percent in Liverpool, Riverside to a high of 81.3 percent in Mid Ulster. (The turnout results for these constituencies are reported in Butler and Kavanagh, 2002, and are confirmed by our data base as described in the Appendix). Based upon our estimates of the voting-age population, in the 2000 presidential election in the United States, the mean Congressional turnout among the 435 House districts[1] was 46.9 percent, with a standard deviation among the districts of 10.7, ranging from a low of 16.4 percent in the 33rd district of California to a high of 81.9 percent in the 6th district of Minnesota. Turnout among the 429 House districts[2] was substantially lower in the 2002 midterm election (35.6 percent), and variation among districts was smaller (the standard deviation was 9.2), but turnout still ranged from a low of 10.4 percent in the 12th district of New York to a high of 70.6 percent in the 6th district of Minnesota.

[1] Seven states with only one representative elect their member "At Large" (Alaska, Delaware, Montana, North Dakota, South Dakota, Vermont, Wyoming). For simplicity, we refer to these single-member states as "districts".

[2] In six of the 435 House districts (Florida districts # 10, 11, 12, 14, 20, 21) there was only a single candidate who according to Florida law was declared winning without election.

As Downs (1957) pointed out nearly half a century ago, it is often "rational" for citizens to abstain. From a rational-choice perspective, choosing to vote presents a "voting paradox." Although the cost of voting is low, the probability that a single voter will affect the outcome in a large election is negligible. Rational citizens, realizing that their probability of affecting the outcome is negligible, may choose to abstain. However, the larger the proportion of voters who are "rational" in this respect, the higher the voting power of individuals who do vote. As Downs recognizes, citizens may choose to vote because they believe it is their duty to ensure that some voters do participate. But when turnout is expected to be high, it becomes increasingly rational to abstain. It seems reasonable to hypothesize that the larger the electorate, the lower the turnout will be. At the same time, if electorates are "large enough," one should expect differences in size to have little independent effect on turnout because the voting power of individuals is always very low (see, for example, Aldrich, 1993; Ferejohn and Fiorina, 1974; Grofman, 1993). However, in a unique research project, Søberg and Tangerås (2003, p. 3) found that for small electorates, "ranging from 6 to 4,127, with an average of 384 of eligible voters", turnout tended to decrease with the size of the electorate.

In addition to the size of the electorate, citizens may also take into account the chances of the competing candidates. In deciding whether or not to vote, they make choices based upon their expectation that one of the candidates will score a decisive victory regardless of whether or not they vote. When citizens believe that the results of an upcoming election are a *fait accompli* they may conclude that their own participation is redundant and decide not to vote. These "rational" non-voters may be supporters of either the predicted winner or the predicted loser. However, we would expect the tendency to abstain to be greater among the supporters of a predicted loser. Supporters of predicted winners may be motivated to vote by bandwagon effects or by the anticipated

satisfaction of backing the winner. In this case, non-voting may turn into a self-fulfilling prophecy: by not voting, supporters of likely losers contribute to the decisiveness of the final results.

Non-voting due to expected decisiveness (or conversely, voting caused by the expected closeness of elections) has been examined in more than 30 studies. In a meta-analysis, Blais (2000) found that in 27 out of 32 such studies closeness of the election result was positively correlated with turnout. On the other hand, Duverger (1963) and Cox (1997) question the logic of rational voting or non-voting when there are only two candidates or in run-off elections, while Ferejohn and Fiorina (1975) criticize the logic of such behavior under any circumstances.

Of course, rational expectations about the size or closeness of the election are by no means the only factors that contribute to the decision as to whether or not to vote. Merriam and Gosnell (1924) made a systematic study of the causes of nonparticipation eight decades ago, and four decades ago Lipset (1960) and Dahl (1961) also pioneered the study of political involvement and participation. Abundant evidence shows that many of the social variables identified by Lipset and Dahl correlate with turnout. For example, members of lower socio-economic groups tend to be far less politically involved than those belonging to higher status groups. There is abundant cross-national evidence that turnout in lower strata neighborhoods tends to be lower than that in higher strata neighborhoods. Blais (2000), Blais and Carty (1990), Jackman (1987), Jackman and Miller (1995), and Powell (1986) are among the many scholars who have conducted comparative studies of turnout. In addition to the variables identified by Lipset and Dahl, they found political variables that influenced electoral participation, such as compulsory voting, proportional representation, the level of party competition, and unicameralism. It may be conjectured that such variables cause simultaneously both high/low political

involvement and decisiveness/closeness of electoral victories, or that "third" variables are essential as mediators. Hence, although the correlation between the decisiveness of election results and low turnout lends some support to the hypothesis that non-voting may result from the decisiveness of elections, this correlation does not conclusively prove a causal relationship.

Furthermore, as election results are known only after the election, one may argue that they cannot be a causal predictor of turnout. So although individual-level data on the relationship between voter expectations and individual-level turnout may be desirable, they may be inconclusive. However, in most cases there is no information on voters' predictions about election results; and inference from a correlation between actual results and turnout is based upon the tacit assumption that voters' anticipation of election outcomes is highly correlated with the actual results. Although there may be many voters who will not know how competitive their district is, we assume, nevertheless, that enough voters have a sufficiently accurate perception to create a relationship between actual decisiveness and turnout.

In addition to examining the correlation between decisiveness and levels of participation, we shall also examine the correlation between the decisiveness of victories in *previous* elections and levels of participation in following elections. We do this based on the assumption that citizens' decision to vote or abstain may be based upon the anticipation that the closeness of the upcoming elections would be similar to the closeness in previous elections. Moreover, inasmuch as a strong correlation is found between (perceived) decisiveness/closeness of elections and levels of participation, we will be able to estimate by means of regression analysis *how much* levels of participation in a given election increase/decrease as a function of change in the level of decisiveness/closeness both in a given election as well as in a previous elections.

2. Hypotheses

In view of the above, our first two hypotheses are:

1. The higher the decisiveness of an electoral victory in a given electoral district at a given time, the lower will participation tend to be.

2. The higher the decisiveness of an electoral victory in a given electoral district at a given time, the lower will the level of participation in the following election tend to be.

Our second hypothesis is based on the assumption that previous behavior serves as a good predictor of future behavior. But it is not easy to examine whether or not voters are making this assumption. Hence we advance our third and fourth hypotheses:

3. The higher the decisiveness of an electoral victory in a given electoral district at a given time, the more decisive will the victory in the same electoral district tend to be in the following elections.

4. The higher the level of participation in a given electoral district at a given time, the higher will the level of participation in the same district tend to be in the following elections.

Most previous analyses focus only on the relationships posited by the first hypothesis. But if we can find support for hypotheses 2, 3, and 4 as well, the argument that rational non-voting is caused by anticipating decisive victories will be strengthened considerably. Nonetheless, one could still argue that the predicted relationships occurred because of an additional variable that causes both decisiveness (or closeness) and participation (or non-participation). Therefore we will further strengthen our thesis by examining two additional hypotheses:

5. Decisiveness of electoral victories is better predicted when employing previous decisiveness and level of participation than when predicting on the basis of decisiveness alone.

6. Level of participation is better predicted when employing previous level of participation and decisiveness than when predicting on the basis of participation alone.

Support for these two final hypotheses will provide powerful evidence that rational non-voting results from the anticipation that the electoral result is about to be decisive.

3. The data base

Our data base consists of all 13 general elections to the UK's House of Commons during the period 1955–2001[3] and all the 42 biennial elections to the US House of Representatives during the period from 1920 until 2002[4]. In the case of the UK our decision to begin with the 1955 General Election was largely driven by the data: the data necessary to compute turnout for constituencies are readily available only for the elections held since 1955. In the study of US elections, on the other hand, we were compelled to create our own data set regarding turnout since there is no available data file for the population of Congressional districts. Consequently, we began our investigation with the 1920 elections, the first since women were enfranchised throughout the US.

We chose the UK and the US because both these countries employ the same electoral procedure for electing the lower chamber of their legislatures: single-member constituency systems with first-past-the-post (FPTP) criterion of winning.[5] Arguably, this

[3] These 13 elections were conducted in 1955, 1959, 1964, 1966, 1970, February 1974, October 1974, 1979, 1983, 1987, 1992, 1997, and in 2001.
[4] At the time of writing the November 2004 US elections had just occurred. We intend to include the results of these elections here when the official election reports become available.
[5] Louisiana (which currently elects seven representatives) is an exception. It uses a nonpartisan primary with a runoff if no candidate receives a majority.

electoral procedure is the most susceptible to rational non-voting, and hence the most suitable for testing our hypotheses.[6]

In the Appendix we list the sources and some particular characteristics of the data in each of these two countries.

Finally, a word is in order regarding the operational definition we used for measuring the degree of closeness (or decisiveness) of an election. Various authors have used different measures for this variable. Thus, for example, Søberg and Tangerås (2003, p. 8) measure "expected closeness" of a referendum by using the formula $1/|\omega - 0.5|$, where ω and $1 - \omega$ denote, respectively, the proportion of the electorate who voted in favor of the proposition and the proportion who voted against it. However, if we require that a measure of closeness must be defined for any value of ω, it is clear that this measure fails to do so because it is undefined when $\omega = 0.5$.

We believe that a more intuitively meaningful measure of closeness, C, for the type of elections that we are concerned with, is given by the formula

$$C = 2y / (x + y)$$

where x is the number of votes polled by the winning candidate, and y is the number of votes polled by the runner up. As is expected from an index, this relative measure of closeness ranges between 0 (when a single candidate obtains all the votes) and 1 (when there is a tie between the two leading candidates). Decisiveness is then defined to be

$$D = 1 - C = (x - y) / (x + y).$$

[6] If the cost of participating in an election is negligible, it may be argued that under the FPTP procedure it is rational for a voter to participate in an election only if she feels that there is a reasonable chance that her vote will be decisive, i.e., given the manner in which all other voters have cast their votes, that her vote will either create or break a tie. However this chance is extremely small even for a moderately large number of voters. In contrast, it can be argued that under (list) proportional representation (PR) systems it is always rational for a voter to participate and vote for his favored party because (ignoring the common threshold requirement) the number of seats each party gets in the legislature is very nearly proportional to the number of votes it received in the election. Consequently under PR each vote has a reasonably high probability of increasing the number of seats allocated to the party for which it was cast.

4. Findings

In plurality (First Past the Post) contests when the number of voters is large enough, the expected difference in the proportion of votes given to the two leading candidates serves as a good indicator for the probability of decisiveness of electoral outcomes on both the intuitive and the mathematical levels.

Tables 1 and 2 represent Pearson coefficients of linear correlation (r) between level of participation in the same elections and decisiveness of electoral victories in the same elections and in previous elections in House of Representatives and in House of Commons elections. These tables also display the slopes of the linear regression lines where the dependent variable is the anticipated level of participation in a given election and the independent variable is, alternatively, the (perceived) decisiveness in the given election or the decisiveness in the previous election.

Insert Tables 1, 2 about here

As all the coefficients in these tables are negative, our first two hypotheses are indeed supported: the higher the decisiveness of an electoral victory in a given electoral district at a given time, the lower the level of participation tends to be; and the higher the decisiveness of an electoral victory in a given electoral district at a given time, the lower the level of participation in the following election tends to be.

The mean value of the correlation coefficient between participation and decisiveness in the *same* elections (-0.61 in the US case and -0.38 in the UK case) is slightly stronger than the mean correlation coefficient between participation in a given election and decisiveness in the *previous* election (-0.53 in US elections and -0.35 in UK elections).

One possible conclusion one can draw from the slightly stronger correlations between participation and decisiveness in the same elections is that voters tend to base their decision on whether to participate or to abstain in given elections more on indicators of closeness regarding these elections than on indicators of closeness regarding previous elections in the same district.

It is also interesting to note that over time the investigated correlation coefficients tend to become weaker in the US, but there is no such tendency in the UK. Thus, Pearson's coefficient of linear correlation, *r*, between the year of elections and the correlation coefficient for decisiveness-participation was 0.83 (N=42) in the US, i.e., the later the election the less extreme *r* tends to be. The corresponding coefficient in the UK was negligible (-0.08, N=13).

Although there has been a gradual decline in the US in the strength of the correlation between decisiveness and participation, there also appears to be a more pronounced decline after 1960, the year when turnout reached an all-time high during the entire 82-year period we investigated. This change occurred at the same time as other changes in the electoral behavior in the US: the year 1960 was just before party identification in the US began to weaken.[7] Moreover, after the Voting Rights Act of 1965 the turnout of black voters rose dramatically in the South and, with many whites beginning to switch to Republican candidates, turnout rose in Southern Congressional districts. Since the South used to have substantially lower turnout than the rest of the US, constituency-level variation in the US as a whole declined.

We wish also to point out that the 1983 election in the UK, the year of Thatcher's greatest triumph, is a clear outlying election in which the relationship between

[7] It is generally agreed that party loyalties in the US began to decline between 1964 and 1966, reaching an all-time low in 1978. See in this connection Abramson, Aldrich, and Rohde (2003, pp. 174-175) for the complete results regarding black and white voters.

decisiveness of electoral victory and level of participation was much lower than in any election during the investigated period (see Table 2 column 2). Even voters who lived in competitive districts should have known that the Conservatives were very likely to win the 1983 General Election, for throughout the entire campaign polls showed the Conservative party with a massive lead over Labour (see Butler and Kavanagh, 1984, p. 126). On the other hand, pre-election polls consistently predicted a Labour victory in 2001 (Butler and Kavanagh, 2002, pp. 123-125), which seems to have contributed to low national turnout, while the relationships in Table 2 are the highest among all 13 elections.

Although the correlation coefficients displayed in columns 2-3 of Tables 1-2 demonstrate strong associations between election closeness and turnout, these coefficients give no hint as to the *magnitude* of these effects, i.e., by *how much* the level of participation is likely to decrease as a function of a 1-unit increase in the level of decisiveness? Given the level of participation and decisiveness for each constituency (district) in every election and the strong (linear) association between these variables, it is possible to answer this question by constructing a linear regression line of the general form $y = a - bx$ where y, the dependent variable, represents the anticipated level of participation in a given election, x, the independent variable, represents the level of decisiveness either in the given election or in the previous election, a is a constant representing an estimate of the level of participation when $x = 0$, and b is the (negative) slope of the regression line estimating by how many units the level of participation (y) is likely to be reduced when there is a 1-unit increase in the level of decisiveness (x).

Thus, for example, the linear regression equation for the 2000 US congressional elections is

$$y = 0.548 - 0.195x$$

when x represents the (perceived) level of decisiveness in these elections. This implies that according to this equation one can predict that the level of participation (y) in these elections would be 54.8 percent if voters expected an extremely close election ($x = 0$), and that for every 1-unit increase in the level of decisiveness one can expect a reduction of 0.195 units in the level of participation; if decisiveness would have been maximal ($x = 1$) then it would be anticipated that the participation proportion in these elections would have reached 0.353, or 35.3 percent.

Similarly, the regression equation obtained for the 2000 US congressional elections is

$$y = 0.514 - 0.106x$$

where y represents the predicted level of participation in the 2000 congressional elections and x represents the level of decisiveness in the previous (1998) congressional elections.

In the fourth and fifth columns of Tables 1-2 we display only the (negative) coefficients (b) of the independent variable (x) which represents, alternatively, the level of decisiveness in the given election (fourth column of Tables 1-2) or the level of decisiveness in the previous election (fifth column of Tables 1-2).

For all regression equations in UK elections, as well as for all but two regression equations in US elections (those for the 1934 and 1938 elections), we obtained that the magnitudes of the a (constant) and b (slope) variables were always higher when the independent variable (x) represented the level of (perceived) decisiveness in a given election than when the independent variable represented the level of decisiveness in the previous election.

Overall we obtained that the mean slopes of the regression lines for the US congressional elections were -0.326 when the independent variable represented the level

of decisiveness in the given election and -0.292 when it represented the level of decisiveness in the previous election. The respective mean slopes obtained for the UK elections were -0.142 and -0.133. This implies that the anticipated reduction in the level of participation in a given US congressional elections is, on average, more than twice as large as that in UK elections when there is a 1-unit increase either in the perceived level of decisiveness of the given election or in the level of decisiveness of a previous election. These results also imply that (perceived) closeness matters but not a lot: we would expect, on average, an extremely close elections (a perceived tie) to increase turnout by about 3 points in the US and by about 1 point in the UK, compared with an election in which one party leads by 10 points.

Tables 3 and 4 present Pearson coefficients of linear correlation between decisiveness of electoral victories and decisiveness of victories in the previous elections; and level of participation and level of participation in the previous elections in US elections to the House of Representatives and in UK elections to the House of Commons.

Insert Tables 3, 4 about here

Whether or not voters are making this assumption, on the basis of tables 3 and 4 we can definitely state that previous behavior serves as an excellent predictor of future behavior. Hence our third and fourth hypotheses are clearly supported: the higher the decisiveness of an electoral victory in a given electoral district at a given time, the more decisive the victory in the same electoral district will tend to be in the following elections; and the higher the level of participation in a given electoral district at a given time, the higher will the level of participation in the same district will tend to be in the following elections.

All correlation coefficients in Tables 3 and 4 are positive and tend to be much stronger than the negative coefficients of Tables 1 and 2. The mean of the participation coefficients (0.85 in the UK and 0.84 in the US) is higher than the mean of the decisiveness coefficients (0.76 in the UK and 0.67 in the US).

It should be noted however that over time voters tend more easily to adopt behaviors that are different from their past behavior. The later the elections the weaker the correlation between past and present behavior tends to be. The Pearson's coefficient of linear correlation between the year of elections and the correlation coefficient between decisiveness and decisiveness in the previous elections, is -0.69 in US elections (N=33) and -0.39 in UK elections (N=12). The Pearson's coefficient of linear correlation between the year of elections and the correlation coefficient between participation and participation in the following elections, is weaker: -0.5 in the US and -0.33 in the UK.

Tables 5 and 6 present the additional contribution of participation to the Pearson coefficients of linear correlation between decisiveness of electoral victories and decisiveness of victories in the previous elections; and additional contribution of decisiveness of electoral victories to the Pearson linear coefficients of correlation between level of participation and level of participation in previous elections in the US and UK cases investigated. Thus, for example, according to Table 3 the Pearson correlation coefficient between the decisiveness of the 2000 congressional election and that in the 1998 election is 0.542. If one employs a linear regression model in which the decisiveness of the 2000 election is considered as the dependent variable and both the decisiveness of the 1997 elections and the percent of participation in the 2000 elections are considered as the independent variables, then the Pearson correlation coefficient between these independent variables and the dependent variable rises to 0.628, or by 15.87 percent. This percentage appears in the first row and second column in Table 5.

Similarly, according to Table 3 the Pearson correlation coefficient between the percent of participation in the 2000 congressional election and that in the 1998 election is 0.768. If one employs a linear regression model in which the percent of participation in the 2000 election is considered as the dependent variable and both the percent of participation in the 1998 elections and the decisiveness in the 2000 elections are considered as the independent variables, then the Pearson correlation coefficient between these independent variables and the dependent variable rises to 0.792, or by 3.13 percent. This percentage is listed in the first row and last column of Table 5.

Insert Tables 5, 6 about here

Given the very strong impact of past behavior, there is not much room left for contribution of additional variables as predictors of the investigated behaviors. The stronger the relationship between past behavior and present behavior, the weaker could be the additional contribution of 'third' variables. In fact, over time, the Pearson's *r* between the additional contribution of participation and the initial correlation between decisiveness and decisiveness in previous elections is -0.79 in the US and -0.80 in the UK, whereas the Pearson's *r* between the additional contribution of decisiveness and the initial correlation between participation and participation in following elections is -0.9 in the US and -0.76 in the UK.

It seems therefore that our fifth and sixth hypotheses are also supported. Decisiveness of electoral victories is better predicted when employing previous decisiveness *and* level of participation than when predicting on the basis of decisiveness alone. The mean additional contribution of participation is 13.15 percent in Congressional elections and 5.7 percent in House of Commons elections, with a peak of 53.2 percent in the US and a peak of 55.8 percent in the UK. Similarly, the level of

participation is better predicted when employing previous level of participation *and* decisiveness than when predicting on the basis of previous participation alone. The mean additional contribution of decisiveness is 3.9 percent with a peak of 16.3 percent in the US, and 2.1 percent with a peak of 18.8 percent in the UK.

The relationship between additional contribution of decisiveness and additional contribution of participation is quite weak. The Pearson's coefficient of the correlation between these two additional contributions over the years is only 0.47 in the US and only -0.13 in the UK.

Participation contributes on average to the prediction of decisiveness (as an additional variable to past behavior) more than the mean additional contribution of decisiveness to the prediction of participation. Hence, there is support for our conjecture that non-participation based on anticipated decisiveness is higher amongst supporters of expected losers and that it acts as a self-fulfilling prophecy.

Comparison between midterm Congressional elections and those held in presidential years shows that relationships in midterm elections are slightly stronger. Thus, the mean *r* between closeness of races and participation in midterm elections is -0.62 compared with -0.60 in presidential years. It is interesting to note that the correlation between participation and closeness tends to decline at a similar pace for Congressional elections held in presidential years and for those held in midterm years. The Pearson correlation between the year of elections and the respective correlation between closeness and participation in that year is 0.78 for elections held in presidential years compared with 0.88 for elections held in midterm years.

The relationships tend to be stronger in the US than in the UK. Thus, the mean *r* between level of participation and closeness of electoral victories is -0.61 for Congressional elections (-0.62 for midterm elections and -0.60 for elections held in

presidential years) but only -0.38 for House of Commons elections. Likewise, the mean additional contribution of participation to the correlation between closeness of electoral races and closeness of races in previous elections is 5.7 percent in the UK compared with 13.1 percent in the US (17.2 percent in midterm elections and 8.9 percent for elections held in presidential years). Similarly, the mean additional contribution of decisiveness of electoral victories to the correlation between participation and participation in previous elections is 2.1 percent for the UK House of Commons elections and 3.9 percent for the US House of Representatives elections (3.8 percent in midterm elections and 4.0 percent for elections held in presidential years).

The main reason for these phenomena is probably the much higher variation in turnout in US Congressional districts compared with UK constituencies. Over the years, the mean turnout per constituency in the UK is 73.7 percent with a standard deviation of only 6.1 percent, while the mean turnout per Congressional electoral district in the US is 44.4 percent (50.6 percent in presidential years and 38.2 percent in mid-term elections) with a standard deviation of 18.0 percent (16.2 percent in Congressional midterm elections and 17.7 percent in Congressional elections held in presidential years).

5. Discussion

The relationship between election closeness and turnout is an important subject which has generated a wide-ranging scholarly literature. As our re-examination of this subject is based on an extremely comprehensive data set that extends back over many decades in both the UK and the US, it enables us to draw quite general conclusions. Nevertheless, although our findings lend strong support to all six of our hypotheses, we think that the following issues ought to be further examined.

First, are there alternative explanations for these findings? In particular, can one interpret these findings without reference to rational choice arguments? As is well known, the most important recent critique of rational-choice theory in political science is the book by Green and Shapiro (1994) which contains a whole chapter on the “paradox of voter turnout”. In view of this critique we think it is fair to say that our findings do not definitively demonstrate the existence of rational non-voting. However, we do argue that our six hypotheses could not easily be generated without making assumptions about voter rationality.

Nevertheless, it may be argued that the (Downsian) rational choice theory we examine is entirely at the individual voter’s level, i.e., that we attribute "rationality" considerations only to voters in the sense that their turnout decisions are entirely influenced by their own expectations about election closeness and that we ignore, both in our hypotheses and in our empirical analysis, other "rational" relevant agents, such as the role of party organizations in canvassing and get-out-the-vote efforts in those districts where political leaders anticipate close elections. Using a rational choice perspective, Jacobson and Kernell (1981, pp. 35-39) report that contributions in congressional campaigns are greater when they are expected to be close and, as Jacobson notes (2001, p. 104), in close elections a major effort is usually made to get out the vote. And in their study of the 1983, 1987, and 1992 General Elections, Pattie, Johnston, and Fieldhouse (1995, p. 969) argue that “Local party campaigners are rational in their use of funds, spending most of it in seats where competition is close and least where there is little hope of winning.” Moreover, they argue that campaign funding is closely associated with constituency turnout (p. 975).

We readily admit that the logic of the rational choice theory does indeed apply both to the anticipated behavior of parties as well as to the anticipated behavior of

individual voters. If we would have had the relevant data and could thus be able to focus our attention on parties' behavior in addition to voters' behavior, we would have hypothesized, for example, that parties devote more resources, and perhaps also nominate higher quality candidates, in order to motivate as many of their members to vote in those districts where, on the basis of polls and/or past closeness, the upcoming elections are expected to be close. However, as we did not have the necessary data regarding parties' behavior, we could not control for their behavior in examining (aggregate) voters' behavior. And it is difficult to see how such data could be collected over the lengthy time period we have analyzed. Nevertheless, since it is the individual voter, not his party or other factors, who ultimately decides whether to vote – all that is needed to show in order to support the Downsian rational choice theory pertaining to voters' behavior is that there exists a substantial positive correlation between (perceived) closeness of an election and turnout. This we have indeed shown.

Furthermore, the mean *r* for the correlation between the level of participation in given elections and the level of participation in previous elections is usually very high. It reached the value of 0.837 in the US (N=33) (cf. Table 3, second column) and 0.848 in the UK (N=12) (cf. Table 4, second column). These correlations between past and present behavior can be caused by a number of third variables mentioned in our Introduction. Despite these very strong results, the mean *r* between past and present turnout *and* decisiveness of electoral results is even higher: 0.868 in the US and 0.863 in the UK. The mean additional contribution of closeness of electoral races to the correlation between the present and past levels of participation is 3.9 percent for US House of Representatives elections (cf. Table 5, second column), and 2.1 percent for UK House of Commons elections (cf. Table 6, second column). It seems to us that the best way to interpret this additional contribution is the decisiveness of electoral victories anticipated by voters.

Second, it might be useful to explore the type of individual-level data that would support or fail to support our findings. We are convinced that, at least with respect to the US, no individual-level data exists to test the investigated relationships on the level of Congressional districts. National Election Study surveys conducted in the US do contain questions about how close the respondent thinks a presidential election will be, and sometime also questions about how close the respondent thinks various other elections will be in his state. In most elections, respondents who think the election will be close are more likely to vote than those who think the winner will win "by quite a bit" (Abramson, Aldrich, and Rohde, 2003, pp. 90-91) – a finding consistent with our hypotheses.

Third, past participation and decisiveness of electoral victories explain on the average 75.7 percent of the variance in participation in a given election in the US and 75.4 percent of the variance in participation in a given election in the UK. It may therefore be worthwhile in future research to look for other variables that may account for the remaining variance in the level of participation.

Fourth, it is interesting to investigate under what circumstances, if at all, when the national contest is clearly seen as a likely landslide, this may erode the relationships between decisiveness and turnout at the district level. As we have already mentioned, it seems that this indeed occurred in the 1983 general elections in the UK: the correlation coefficient between decisiveness and turnout was the weakest of all investigated UK elections. On the other hand, no such relationship occurred in 2001. Indeed, there are enough cases where polls have been wrong – which may, in turn, lead voters to ignore polls and hold on to the belief that the national contest may still be competitive. So the more general question that ought to be explored is: under what particular circumstances is voters' behavior more likely to be influenced by polls' predictions?

Finally, in contrast to general elections in the UK, where voters are asked to select only the person who will represent their constituency in the House of Commons, Congressional elections in the US are held simultaneously with other – sometime many – contests (e.g., presidential, senatorial, or gubernatorial races). Hence one may wonder how these additional elections, if they were taken into consideration, would affect the strength of relationship between decisiveness and turnout in the investigated Congressional elections. We conjecture that taking into consideration these additional elections might yield only slightly stronger relationships between these variables because, as we have already stated above, past participation and decisiveness account already for most of the variance in turnout in any given election.

Acknowledgment. We would like to thank Shawn Nicholson for his assistance in compiling US Congressional districts' population data.

Appendix

We list here the detailed sources and some particular characteristics of the data in each of the two investigated countries.

US

The election results in each of the 435 US Congressional districts for each of the 42 investigated Congressional elections are officially published in a special report entitled *Statistics of the Congressional [and Presidential] Election of [date]*. This report is compiled from official sources by the Clerk of the House of Representatives; it is downloadable from the internet at <http://clerk.house.gov>. The report lists for each Congressional district in each state the names of the candidates, their party affiliation, and the number of votes they polled in the election, provided an election was held.[8] It also lists the number of write-ins which we chose to ignore in our calculations.

However, in the US there is no official source that lists, for each Congressional election, the number of enfranchized voters in each Congressional district, state, or even in the US at large. Without this information it is impossible to compute the exact rate of participation in any given election. Consequently we decided to use the number of persons of voting-age – for which official figures do exist – as a proxy for the number of enfranchized voters. However, the number of persons of voting-age is not officially published for each Congressional district and election. Information regarding age distribution in the US is collected in the national census taken only once every ten years – and published by the Census Bureau for each state, and sometime also for Congressional districts. This fact forced us to use estimates for the number of voting-age persons

[8] As mentioned in fn 2, it is possible that when there is only a single candidate and no write-ins s/he will be declared elected outright without election. In this case only the name of the winning candidate is listed.

residing in each Congressional district for those elections that did not occur on a census year.

Having established (from census data and other sources listed below) the number of persons of voting age residing in a given Congressional district in census year *x* and in the next census year *x*+10 (e.g. in the years 1990 and 2000), we assumed that the annual rate of growth (or decline) in the number of voting-age persons in that district during the entire decade remained constant, and we used the common formula of compound interest rate to estimate the number of voting-age persons in that district for each election year during the decade.[9] Of course we used this estimation method only for those districts whose boundaries did not change between two consecutive censuses. Moreover, this estimation method disregards completely non-citizen residents who are not eligible to vote in any state, as well as the increasing number of felons and ex-felons who are ineligible to vote (Manza and Uggen, 2004).

The data regarding the voting-age population in the Congressional districts from 1920 through 1950 come from various editions of the *Official Congressional Directory* (Washington, D.C.,: U.S. Government Printing Office, 1921 through 1949). These directories provide the total population of each district as of the most recent census. However, there are no data on the voting-age population of each district. This can be estimated by calculating the percentage of the population of each state that was of voting age. This, in turn, can be calculated because the size of voting-age population for each state was reported for the 1920 and 1930 censuses. Unfortunately, the 1940 census provided information for each year of age separately, which we considered impractical to

[9] To obtain the constant annual rate of growth (or decline) of the voting-age population in a given district between two consecutive censuses we used the formula $r = (N_{10} / N_1)^{0.1} - 1$, where r denotes the constant annual rate, and N_1 and N_{10} are the voting-age population at the beginning and at the end of the decade, respectively. Having thus obtained r, we use the compound interest rate formula $N_n = N_1 (1+ r)^n$ to obtain the number of voting-age persons in the district for every year n in which a (biennial) Congressional election was conducted during the decade (n = 2,4,6,8).

use. We therefore employed the 1930 percentages for 1940. In making these estimates we were forced to assume that the percentage of the population of voting age was the same in every district within the state.

The data on the population of each state, as well as the population of voting age for the 1920 census, are available in: U.S. Department of the Census, *Fourteenth Census of the United States Taken in the Year 1920, Volume III, 1920: Composition and Characteristics of the Population by States* (Washington, D.C.: U.S. Government Printing Office, 1922), Table 9.

The data on the population of each state, as well as the population of voting age for the 1930 census, are available in: U.S. Department of Commerce, Bureau of the Census, *Fifteenth Census of the United States: 1930, Volume 3*. (Washington, D.C.: U.S. Government Printing Office, 1931), Tables 32, 47.

The population for each state in 1940 is widely available in numerous sources, including the *Statistical Abstract of the United States*.

Beginning in 1952, we have information on the voting-age population of Congressional districts. For the elections during the 1950s we used: U.S. Department of Commerce, *Data District Data Book (Districts for the 87th Congress)* (Washington, D.C.: U.S. Government Printing Office, 1961), Table 1.

For the 1962 through 1970 elections, most of the results come from U.S. Department of Commerce, *Congressional District Data Book (Districts of the 88th Congress) (Washington, D.C.: U.S. Government Printing Office*, 1963), pp. 7-547. However, there was a great deal of redistricting during the 1960s and we needed to employ district data books through the 92nd Congress.

For elections during the 1972 through 1980, we used: U.S. Department of Commerce, *Congressional Data District Book, 93d Congress* (Washington, D.C.: U.S. Government Printing Office, 1973), pp. 6-539.

The official count for the total population of each Congressional district for the 1982 through 1990 elections is reported in: Philip D. Duncan (ed.), *CQ Press, Congressional Quarterly's Guide to Politics in America, 1992: The 102nd Congress* (Washington, D.C.: CQ Press, 1991), pp. 9-12. This source reports the population of each district as of the 1980 census and the 1990 census. The voting-age population of each Congressional district is reported in Alan Ehrenhalt (ed.), *Politics in America: Members of Congress in Washington and at Home* (Washington, D.C.: CQ Press, 1985), pp. 14-1706. These figures are as of the 1980 census.

The official count for the total population of each Congressional district for the 1992 through the 2000 election is reported in: Brian Nutting and H. Amy Stern (eds.), *CQ's Politics in America: The 107th Congress* (Washington, D.C.: CQ Press, 2001), pp. xxv-xxviii. This source reports the population of each district as of the 1990 and the 2000 census. The voting-age population of each Congressional district is reported in Philip D. Duncan (ed.), *Congressional Quarterly's Politics in America, 1994: The 103rd Congress* (Washington, D.C.: CQ Press, 1993), pp. 22-1697. These figures are as of the 1990 census.

The total population and the voting-age population in all Congressional districts on the 1st of April 2000 are available in CQ Press, *Congressional Districts in the 2000s: A Portrait of America* (Washington, D.C.: CQ Press, 2003), pp. 21-987. However, although the year 2000 is the year in which the 107th Congress was elected, the number and the boundaries of the districts provided in this source are those established for the election of the 108th Congress in 2002. So in the 32 states in which the number of

districts did not change between 2000 and 2002 we adopted the voting-age population for each district as specified in this source. But for the 18 states in which the number of districts did change between 2000 and 2002 we obtained the number of voting-age population in each district by multiplying the population of each district (as appearing in pp. xxv-xxviii of the Nutting and Stern book) by the proportion of the voting-age persons in the *entire state* (available in pp. 21 – 987 of *Congressional Districts in the 2000s: A Portrait of America*).

Estimates of the resident population by age and state for the 108th Congress (elected in 2002) are available in Table No. 20 (p. 24) of the *Statistical Abstract of the United States: 2003* (U.S. Bureau of the Census, September 2003). To obtain the voting-age population in each district in 2002 we multiplied the voting-age population of each district in 2000 (according to its boundaries in 2002 that were available from the Nutting and Stern book) by the percent growth (or decline) between 2000 and 2002 of the voting-age population of the respective state.

UK

Our data source for the 11 UK elections held during the period 1955-1992 is: Daniel Dorling, *British General Election Results, 1955-1992* [computer file]. Colchester, Essex: UK Data Archive, University of Essex [distributor], 18 August 1993, Study No. 3061. This computer file was compiled from the following sources:

BBC/ITN, The *BBC/ITN Guide to the New Parliamentary Constituencies* (Chichester: Parliamentary Research Services, 1983).

Butler, D.E. and Kavanagh, D., *The British Election of February 1974* (London: Macmillan, 1974).

Curtice, J., *UK General Election Results, 1955-1970 and Associated Information* (computer file). (Colchester: ESRC Data Archive Study No.1799. 1983).

Latham, L.J., *British General Elections, 1955-1979* (computer file) (Colchester: ESRC Data Archive Study No.1677. 1991).

Payne, C., *British General Election Results, October 1974 and May 1979* (computer file) (Colchester: ESRC Data Archive Study No.1601. 1983).

Our data source for the two British elections held in 1997 and 2001 is: Pippa Norris, *The British Parliamentary Constituency Database, 1992-2001* (computer file, 11 June 2001). This computer file is downloadable from the internet at: <http://ksghome.harvard.edu/~.pnorris.shorenstein.ksg/Data/Data.htm>.

Norris states that the data in this computer file pertaining to the June 7th 2001 election were compiled from the results listed [the following day?] at <http://news.bbc.co.uk> and that this source was double-checked against the listing provided by *The Independent* on Saturday 9th June 2001.

It should be noted that Norris's database only includes British seats, not those in Northern Ireland. We obtained the data for the Northern Ireland seats for the 1997 and 2001 elections from the ARK website at <http://www.ark.ac.uk/elections> .[10]

Contrary to the US data sources, the above-mentioned data files that we used to analyze the UK elections include, for each constituency, not only the names of the candidates, their party affiliation, and the number of votes they polled, but also the total number of enfranchized voters. Hence the computation of the participation rate for each constituency in every election was straightforward, without any need for approximations: number of persons who voted divided by number of persons who are enfranchized.

[10] ARK (the Northern Ireland Social and Political Archive) is a joint resource of the two Northern Ireland universities whose goal is to make social science information on Northern Ireland available to the widest possible public.

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TABLE 1. Pearson Coefficients of Linear Correlation (*r*) Between Level of Participation in a Given Election and Decisiveness of Electoral Victories in the Same and in the Previous Election in US Elections to the House of Representatives; Anticipated Unit Reduction in Participation due to 1-Unit Increase in Decisiveness in Same and Previous Elections

Date of Elections	Level of Participation and Decisiveness of Electoral Victory in the Same Elections	Level of Participation and Decisiveness of Electoral Victory in the Previous Elections	Anticipated Unit Reduction in Participation per 1-unit Increase in Decisiveness in Same Elections	Anticipated Unit Reduction in Participation per 1-unit Increase in Decisiveness in Previous Elections
2002	-0.421	–	-0.149	–
2000	-0.463	-0.288	-0.179	-0.106
1998	-0.471	-0.343	-0.160	-0.136
1996	-0.412	-0.185	-0.178	-0.069
1994	-0.352	-0.294	-0.117	-0.111
1992	-0.334	–	-0.150	–
1990	-0.535	-0.279	-0.202	-0.112
1988	-0.521	-0.366	-0.208	-0.148
1986	-0.497	-0.263	-0.170	-0.087
1984	-0.537	-0.422	-0.197	-0.159
1982	-0.474	–	-0.166	–
1980	-0.467	-0.417	-0.236	-0.200
1978	-0.510	-0.352	-0.208	-0.149
1976	-0.525	-0.539	-0.235	-0.225
1974	-0.647	-0.423	-0.260	-0.186
1972	-0.589	–	-0.281	–
1970	-0.611	-0.466	-0.268	-0.207
1968	-0.571	-0.471	-0.276	-0.219
1966	-0.548	-0.433	-0.268	-0.213
1964	-0.505	-0.549	-0.327	-0.346
1962	-0.552	–	-0.472	–
1960	-0.692	-0.671	-0.525	-0.475
1958	-0.772	-0.616	-0.471	-0.418
1956	-0.675	-0.689	-0.458	-0.441
1954	-0.762	-0.695	-0.423	-0.389
1952	-0.724	–	-0.446	–
1950	-0.614	-0.662	-0.506	-0.440
1948	-0.624	-0.714	-0.439	-0.429
1946	-0.714	-0.707	-0.419	-0.445
1944	-0.807	-0.715	-0.503	-0.424
1942	-0.755	–	-0.374	–
1940	-0.765	-0.758	-0.509	-0.492
1938	-0.788	-0.750	-0.506	-0.519
1936	-0.772	-0.713	-0.513	-0.432
1934	-0.736	-0.716	-0.406	-0.421
1932	-0.748	–	-0.413	–
1930	-0.770	-0.638	-0.363	-0.335
1928	-0.650	-0.624	-0.413	-0.375
1926	-0.725	-0.607	-0.340	-0.292
1924	-0.736	-0.673	-0.403	-0.356
1922	-0.750	-0.560	-0.344	-0.292
1920	-0.564	–	-0.333	–

TABLE 2. Pearson Coefficients of Linear Correlation (*r*) Between Level of Participation in a Given Election and Decisiveness of Electoral Victories in the Same and in Previous Elections in UK Elections to the House of Commons; Anticipated Percent Reduction in Participation due to Increased Decisiveness in Same and Previous Elections

Date of Elections	Level of Participation and Decisiveness of Electoral Victory in the Same Elections	Level of Participation and Decisiveness of Electoral Victory in the Previous Elections	Anticipated Unit Reduction in Participation per 1-unit Increase in Decisiveness in Same Elections	Anticipated Unit Reduction in Participation per 1-unit Increase in Decisiveness in Previous Elections
2001	-0.640	-0.657	-0.236	-0.217
1997	-0.500	-0.251	-0.171	-0.104
1992	-0.283	-0.224	-0.110	-0.087
1987	-0.233	-0.175	-0.079	-0.074
1983	-0.143	-0.225	-0.057	-0.073
1979	-0.225	-0.496	-0.077	-0.164
10/1974	-0.535	-0.462	-0.202	-0.207
2/1974	-0.396	-0.211	-0.168	-0.083
1970	-0.286	-0.420	-0.130	-0.172
1966	-0.524	-0.450	-0.210	-0.196
1964	-0.345	-0.242	-0.138	-0.092
1959	-0.350	-0.356	-0.117	-0.121
1955	-0.451	–	-0.150	–

TABLE 3. Pearson Coefficients of Linear Correlation (*r*) between Decisiveness of Electoral Victories in US Elections to the House of Representatives and Decisiveness of Victories in the Previous Elections; and Level of Participation and Level of Participation in the Previous Elections

Date of Elections	Decisiveness of Electoral Victories and Decisiveness of Victories in the Previous Elections	Level of Participation and Level of Participation in the Previous Elections
2000	0.542	0.768
1998	0.585	0.796
1996	0.658	0.804
1994	0.542	0.823
1992	–	–
1990	0.387	0.757
1988	0.483	0.738
1986	0.507	0.713
1984	0.576	0.746
1982	–	–
1980	0.506	0.831
1978	0.457	0.840
1976	0.564	0.829
1974	0.491	0.800
1972	–	–
1970	0.670	0.856
1968	0.582	0.789
1966	0.508	0.713
1964	0.627	0.588
1962	–	–
1960	0.841	0.926
1958	0.744	0.944
1956	0.794	0.921
1954	0.780	0.929
1952	–	–
1950	0.856	0.958
1948	0.808	0.905
1946	0.838	0.943
1944	0.780	0.878
1942	–	–
1940	0.878	0.926
1938	0.868	0.924
1936	0.867	0.929
1934	0.820	0.837
1932	–	–
1930	0.691	0.878
1928	0.751	0.859
1926	0.708	0.826
1924	0.710	0.826
1922	0.610	0.847

TABLE 4. Pearson Coefficients of Linear Correlation (*r*) Between Decisiveness of Electoral Victories in UK Elections to the House of Commons and Decisiveness of Victories in the Previous Elections; and Level of Participation and Level of Participation in the Previous Elections

Date of Elections	Decisiveness of Electoral Victories and Decisiveness of Victories in the Previous Elections	Level of Participation and Level of Participation in the Previous Elections
2001	0.888	0.623
1997	0.362	0.846
1992	0.826	0.899
1987	0.822	0.939
1983	0.630	0.873
1979	0.585	0.941
10/1974	0.882	0.847
2/1974	0.713	0.684
1970	0.769	0.859
1966	0.881	0.931
1964	0.829	0.875
1959	0.897	0.866

Note: The total number of constituencies changed slowly over the years. Specifically, there were 630 constituencies in the five elections held during the period 1955–1970, 635 constituencies in the three elections held during the period 1974–1979, 650 constituencies in the two elections held during the period 1983–1987, 651 constituencies in the elections held in 1992, and 659 constituencies in the two elections held during the period 1997–2001. Comparisons between any two consecutive elections were limited to the constituencies that existed in both.

TABLE 5. Additional Contribution (Percent) of Participation to the Pearson Coefficients of Linear Correlation Between Decisiveness of Electoral Victories in US House of Representatives Elections and Decisiveness of Victories in the Previous Elections; and Additional Contribution (Percent) of Decisiveness of Electoral Victories to the Pearson Linear Coefficients of Correlation Between Level of Participation and Level of Participation in Previous Elections

Date of Elections	Additional Contribution of Participation to the Correlation Between Decisiveness of Victories and Decisiveness of Victories in Previous Elections	Additional Contribution of Decisiveness of Victories to the Correlation Between Level of Participation and Level of Participation in Previous Elections
2000	15.87	3.13
1998	13.33	4.77
1996	5.32	1.24
1994	4.61	2.43
1992	–	–
1990	53.23	8.32
1988	26.09	8.81
1986	26.82	6.87
1984	14.93	10.05
1982	–	–
1980	14.03	3.25
1978	29.98	2.50
1976	10.82	2.65
1974	40.94	6.62
1972	–	–
1970	11.64	2.69
1968	15.12	6.34
1966	23.03	9.82
1964	2.87	16.33
1962	–	–
1960	1.19	0.00
1958	11.69	0.64
1956	2.52	0.43
1954	7.44	1.51
1952	–	–
1950	2.69	0.10
1948	2.48	0.0
1946	1.19	0.21
1944	9.10	4.21
1942	–	–
1940	1.94	0.97
1938	2.99	1.19
1936	3.11	0.75
1934	3.05	2.15
1932	–	–
1930	17.66	4.21
1928	4.66	1.16
1926	12.99	5.45
1924	11.97	5.81
1922	28.69	4.37

TABLE 6. Additional Contribution (Percent) of Participation to the Pearson Coefficients of Linear Correlation Between Decisiveness of Electoral Victories in UK House of Commons Elections and Decisiveness of Victories in the Previous Elections; and Additional Contribution (Percent) of Decisiveness of Electoral Victories to the Pearson Linear Coefficients of Correlation Between Level of Participation and Level of Participation in the Previous Elections

Date of Elections	Additional Contribution of Participation to the Pearson Linear Coefficients of Correlation Between Decisiveness of Victories and Decisiveness of Victories in the Previous Elections	Additional Contribution of Decisiveness of Electoral Victories to the Pearson Linear Coefficients of Correlation Between Level of Participation and Level of Participation in the Previous Elections
2001	0.34	18.78
1997	55.80	0.12
1992	0.73	0.11
1987	0.61	0.11
1983	0.00	0.57
1979	0.85	0.11
10/1974	1.25	1.65
2/1974	6.17	1.75
1970	0.13	0.12
1966	1.36	1.50
1964	1.57	0.23
1959	0.00	0.23

Note: See note to Table 4.