

You want to vote where everybody knows your name:
anonymity, campaign context, and turnout among young adults*

by

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ABSTRACT

Recent research has demonstrated that voting is a habit that is learned (or not) during a formative period in the life of young adults. Learning to vote is costly, and these costs have been shown to depend in part on the extent to which young adults are engaged in social networks that help to motivate them politically and demystify the intricacies of the voting act. This paper asks why members of these networks would take the trouble to motivate young adults. It posits a connection between variations in motivating efforts and variations in the competitiveness of the electoral context, with more competitive elections stimulating greater efforts. It tests this conjecture using survey and aggregate data for U.S. presidential elections since 1968. The paper maps out a causal path that links electoral context with individual behavior patterns, illuminating a number of puzzles regarding turnout evolution among young adults.

Young adults are different. When it comes to electoral participation, it is taken for granted that they vote at lower rates, are less civic-minded, less politically engaged, and perhaps more alienated (Tiexeira 1992; Verba Schlozman and Brady 1995; Dalton 1999; Wattenberg 2000). Until recently it was also taken for granted that their level of electoral participation was declining (Lyons and Alexander 2000; Putnam 2000), though it was widely noted in press reports following the election of 2004 that young adults had turned out to vote at higher rates than at any time in thirty years. Yet the 2004 cohort does not stand out as much as these press reports might lead us to suppose. Figure 1 plots the turnout levels of successive electoral cohorts over time, using three-cohort moving averages to locate the turnout of each cohort.¹ There it can be seen that, although there has been a general downward movement in initial turnout rates, initial turnout of newly adult cohorts quite regularly moves up as well as down. Moreover, this illus-

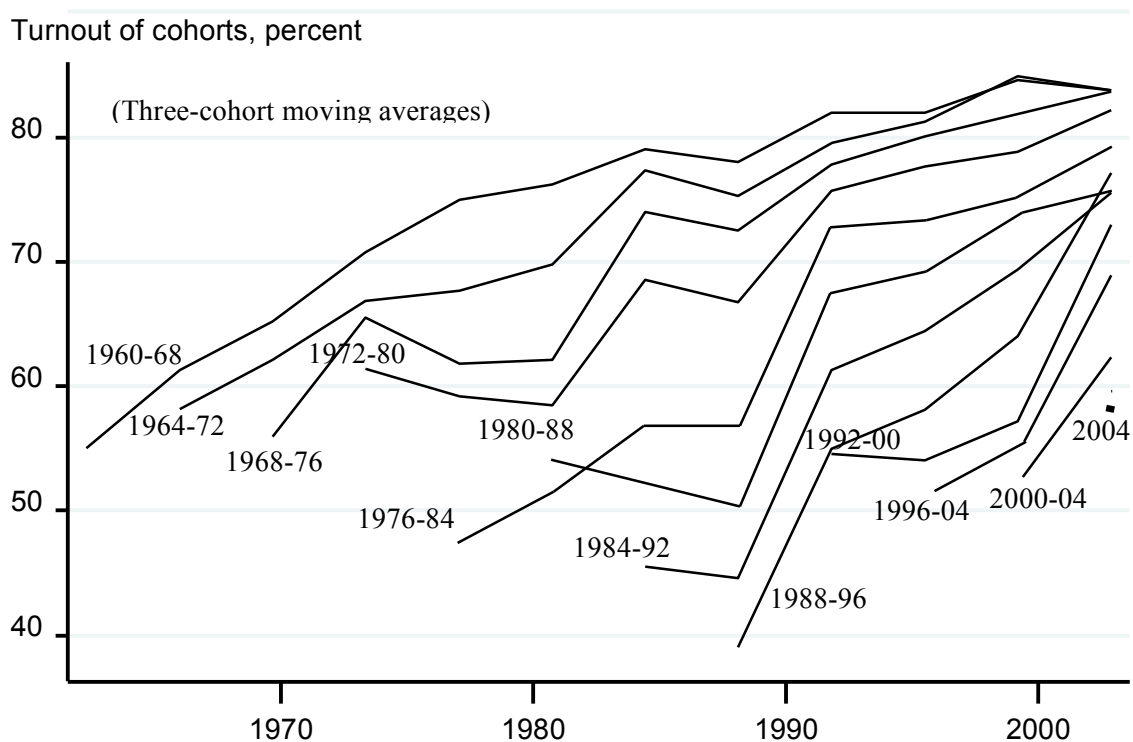


Figure 1 Evolution of U.S. turnout by cohort, 1960-2004, in three-cohort moving averages

Source: American National Election Studies 1960-2004 (unweighted data).

¹ The data are from the American National Election Studies and will be described later. Moving averages are required in order to smooth out irregularities due to sampling fluctuations when the number of respondents in each electoral cohort is quite small, but moving averages also mute the changes that would otherwise be seen from one cohort to the next.

tration shows notable turnout variability in each cohort continuing for several elections after young adults reach voting ages.

Still, young adults grow into older adults with the passage of time, and the most striking feature of the graph quite overshadows the volatility shown there. This is the dramatic increase in turnout shown by each cohort in succession over the course of its first few elections, before the trend for that cohort flattens out.

The graph thus illustrates the central puzzle in contemporary voter turnout studies, which is to understand the mechanism that overcomes what appears to be an 'initial vote hurdle' by transforming largely non-voting² young adults into largely voting mature adults. Implicitly asked in the title to Erik Plutzer's seminal article (2002), what is it that turns a young adult into a habitual voter?³ A related puzzle is to understand why the turnout evolution of younger cohorts varies so much compared to the relatively level turnout trajectories of older cohorts. Taken together, these two puzzles suggest that young adults respond to different forces (or respond differently to the same forces) than older adults do.

Conventional models of electoral participation at the individual level provide little help in understanding these matters. Though Figure 1 makes it clear that turnout is quite dynamic in more than one respect, traditional individual-level models only investigate it cross-sectionally. Above all, such models do not specifically consider the question of whether effects on younger adults are different than those on older adults.

In this paper I do address that question, combining National Election Study (NES) data for elections since 1968 with aggregate data pertaining to electoral competition in order to reconcile the dynamic elements of an aggregate view of turnout change with the static snapshots of conventional cross-sectional post-election surveys. I follow recent scholarship in accepting that people respond to group cues and to the specific social contexts in which they find them-

² Though the graph shows median initial turnout of around 50 percent, this grossly overstates the initial turnout of new cohorts (as the turnout of all cohorts at all levels is overstated in the graph) because of the well-known tendency of sample surveys to overstate the turnout rate (Traugott and Katosh 1979). I do not follow the frequent practice of weighting the data to actual turnout since this would enhance the appearance of overall fluctuations at the expense of fluctuations that differ as between particular ages and cohorts.

³ Green and Shachar (2000) were perhaps the first to find clear evidence of habitual behavior in regard to voter turnout (cf. Gerber, Green and Shachar 2003) but they do not focus on young adults. Plutzer does not fully answer his own implicit question, being concerned mainly to demonstrate that a transition to habitual voting does take place. In this research I build on Plutzer's insights to develop a model of individual-level electoral participation that accounts for the transition to habitual voting by young adults while also accounting for the turnout of older individuals.

selves at the time of an election (Uhlener 1989; Huckfeld and Sprague 1987, 1991, 1999; Morton 1991; Filer, Kenny and Morton 1993; Lake and Huckfeldt 1998; Shachar and Nalebuff 1999; Beck et al. 2002; Plutzer 2002; Franklin 2004; Hillygus 2005), but I further suggest that these contexts themselves vary across successive cohorts of young adults, giving rise to the variability noted earlier.

One way in which electoral contexts found on reaching adulthood might vary over time would be in terms of their competitiveness – some elections are more close-fought than others. Yet I do not suppose that young adults are themselves often aware of such variations. Rather I expect it to be their social networks that respond to the more truly political electoral context, making greater efforts to mobilize people when an election's outcome hangs in the balance (cf. Shachar and Nalebuff 1999). The role of the higher level political context is strongly suggested in Figure 1, which shows newly adult cohorts generally voting at higher rates in elections whose outcomes were at least somewhat in doubt (1980, 1992, 2000 and 2004).⁴ I suggest that this variability in the higher-level political context largely explains why the turnout trajectories of successive cohorts of young adults evolve differently. Some newly adult electoral cohorts immediately experience a highly competitive election, others not for an election or two. Some cohorts with initially high turnout evidently fail to cement their high turnout status and temporarily fall back, if subsequent elections prove less competitive. By fits and starts, however, most young adults eventually acquire the habit of voting, after which contextual effects have less influence.

This view of the evolution of electoral participation over the life course quite turns on its head the conventional view of where responsibility lies for low turnout among young adults. According to the view that I propose, if young adults fail to vote this is because they are not helped to do so, rather than because of alienation or deficiencies in civic virtue.

The idea that responsibility for young adults' turnout rates should be ascribed to their social circle rather than to themselves is underlined by research reported by Hillygus (2005), which finds that individuals who had not planned to vote are hardly affected by conventional mobilizing efforts by parties and candidates. However, they *are* affected by interactions with

⁴ Of course not only close elections see high turnout. The election of 1964 saw high turnout in support of an assassinated president's successor. The higher than usual initial turnout of the cohort that came of age in 1972 is probably due to the excitement associated with the lower voting age that came into force in that year. But it is noteworthy that elections that gave rise to a change in party control of the White House invariably saw higher turnout among incoming cohorts.

personal acquaintances.⁵ The importance of an individual's immediate circle of acquaintances and friends was mentioned by Uhlaner (1989), and also in passing by Verba Schlozman and Brady (1995: 460). It is central to Plutzer's (2002) analysis of young adults' transitions to habitual voting. In the next two sections I first elaborate my view of the social context required by young adults if they are to readily overcome the initial vote hurdle, and then develop my suggestion that this social context in turn responds to the higher-level political context of electoral competition.

Social networks, length of residence, and age

That the network consisting of friends and acquaintances should be important in establishing partisanship and getting out the vote has been suggested many times (for example, Huckfeldt and Sprague 1987, 1991, 1995; Lake and Huckfeldt 1998; Beck et al. 2002; Plutzer 2002; for a review of the literature on getting out the vote see Shaw 1999). Franklin (2004:52) proposes that motivations to vote are different for socially connected people than for the anonymous individuals of rational choice theorizing. Abrams, Iversen and Soskice (2006) suggest that people acquire political skills so as to participate effectively in the discussions and activities of their social circle.

I have already put forward a first corollary of these insights: that if social connections matter to voters in general then they will matter particularly to young adults. A second corollary is less obvious but no less important: that if social connections matter then it will also matter how long someone has lived in the same neighborhood. Highton and Wolfinger (2001) discovered the importance of residential stability for young adults incidentally to studying transitions to adulthood. They found that "compared to people who have moved into their current residence within a year of election day, those who have stayed put for at least three years have a voting rate nearly eleven percentage points higher" (2001:205).⁶

The reason is readily apparent. Plutzer (2002) has pointed out that learning to vote is costly. Anything that makes it more difficult for young adults to be identified and tagged in terms of likely partisanship will stand in the way of their being approached by like-minded individuals with helpful information and advice, raising the costs involved in mastering the

⁵ They are also affected by campaign advertising, which I will have reason to refer to later.

⁶ Squire, Wolfinger, and Glass (1987) used the same measure to indicate information about local politics, and information may play a role in the story told here. But my expectation of especially potent effects for young adults, if confirmed, would suggest that it is engagement rather than information that is the key aspect. Otherwise residential mobility would have the same effects for an older member of the electorate as for a young adult (see note 36).

intricacies of the voting act. Living in the neighborhood where they grew up, many will already have an appropriate support group (perhaps a set of older family members living in the same household), and others will readily be identified on the basis of family connections by those who might wish to help them overcome their initial vote hurdle. By contrast, young adults who have left the parental home and neighborhood (whether for educational or other reasons) will be disadvantaged when the time comes to vote. Young adults who are new in their new communities will resemble more the atomized and anonymous citizens of rational choice theorizing (Downs 1957; Riker and Ordeshook 1968) than the socially connected ones described by Plutzer (2002), Franklin (2004) and Abrams et al. (2006). If their new community is a college campus they will be particularly disadvantaged, since few fellow students will be connected to social networks with relevance to voting. In college surroundings, building a network of friends and acquaintances will seldom have the politicizing effect that would be expected in a less age-bounded community.

So it seems clear that established adult relationships will be enormously helpful to young adults making the transition to habitual voting. And established relationships are facilitated by lengthy residence in the same neighborhood – people generally become known to those around them progressively over the passage of time. Plutzer (2002) finds that interstate relocations interrupt the transition to habitual voting. Lengthy residence is the simple corollary of that finding. Highton and Wolfinger (2001:205) note that residential stability is highest among those who have not left home, but falls from 79% (late teens) through 59% (ages 20-21) to 36% (ages 22-24). My own analyses of NES data show length of residence rising again after the mid-twenties to match that of late teens by age 33. But for older voters length of residence is not expected to matter so much. They will generally have already learned the habit of voting during their own formative years (which is another way of saying that the costs of voting are less for habitual voters).

I am not the first to suggest that determinants of the vote may be different for different types of individuals. Gerber, Green and Shachter (2003) make this point in terms of analyzing those with a high propensity to turn out separately from those with a low propensity to turn out. Hilligus (2005) suggests that past failures to find consistent effects of campaign exposure might result from having failed to make a similar distinction between those who are likely to vote and those who are not. Her distinction, it is true, relates to the intention to vote, whereas my concern is to distinguish between young adults and more established members of the electorate. Still, the two ways of classifying the electorate clearly overlap, as shown by the individual-level correlation of 0.66 between being a young adult and claiming no intention to vote, using pre-election

questions asked of NES respondents from 1968 to 2004.

A strong indication that conventional models of electoral participation are deficient is provided by the large role often played in such models by respondents' age. Though many authors include the variable as though it had substantive meaning, it is actually an umbrella or container concept that needs to be unpacked into its underlying components. There are, of course, various things about people that change with age. Many of these things have effects on the likelihood that they will vote. People's education sometimes increases, their income generally goes up, their sense of efficacy, political knowledge, and interest may be enhanced. But all of these attributes have been measured and included in conventional models of electoral participation. As made clear by Strate, et al. (1989), if such variables supplied the reason why age was important then they would have replaced age as a predictor of the likelihood of voting in any model that included them along with age. The fact that age still plays a role in conventional models that contain these variables is a clear signal that something else about age remains undiscovered which, if it could be identified and included in an electoral participation model, might indeed render age redundant as a predictor of whether people cast a ballot. I suggest that to render age redundant we need to take account of differences between young adults and older adults in terms of their reasons for voting.

Learning to vote and electoral competition

Though the literature cited earlier makes it clear that social networks are centrally involved in the transition to habitual voting, by themselves they cannot explain the second feature in the evolution of young adults' turnout that was so marked in Figure 1: that progress towards acquiring the habit of voting is variable as between cohorts. A glance back at that illustration will show that, even though the general pattern is one of increasing turnout over the early years of a cohort's electoral experience, still some cohorts start higher than others and several actually see declining turnout over the course of their first few elections. Why is this? Put another way, if social networks are so important in bringing young people to the polls, why is it that they do this more effectively at some elections than at others?

An answer to this question is suggested in the comparative turnout literature where a recent study (Franklin 2004), focusing on aggregate election results over a fifty-year period in 22 democracies (including the United States), finds that turnout, especially of newly adult cohorts, appears to respond to the competitiveness of elections. Put simply, elections where there is doubt about which party will win (but whose policy implications are clear) see higher turnout among young adults than elections where one party is a well ahead (or whose policy

implications are unclear). The applicability of this finding to young voters in the United States might well be questioned, however.⁷ After all, young voters are precisely those least likely to be aware of such fundamental facts as whether an election is close-fought. The idea that they would react most strongly to variations in the competitiveness of their electoral situation might seem at first sight far-fetched.⁸

However, in the light of our expectation that young adults learn the habit of voting as a result not so much of their own efforts as of the efforts of those around them, the possible influence of electoral competition – nationwide and in particular congressional districts – appears more plausible. If learning to vote is costly, so is the effort to get out the vote. In a district that is safe for the incumbent candidate, or if the national electoral situation appears to be such that local efforts will make no difference to the outcome, why should people take the trouble to locate and assist potential young voters in their neighborhoods? On the other hand, in an election that offers a real chance of unseating incumbents, and especially if the local district race involves a true contest thought to be close, individuals will presumably be more likely to go out of their way to help those who otherwise might not vote. Indeed, without a hypothesized role for personal contacts responding to the level of electoral competition,⁹ it would be hard to understand how the aggregate-level findings could possibly apply to the United States (which they do) or how the early turnout trajectories of successive cohorts in Figure 1 could be as variable as we have seen them to be. A critical test of my conjecture will be to discover whether young voters are impelled to high turnout especially in districts where the congressional race is close. One might doubt whether young adults are aware of national politics, but they are surely even more ignorant of local politics. So if the local political situation is influential, this can only be because of the activities of others, whose efforts result in higher turnout by newly adult individuals.

Two levels of context are involved in this story: the individual young adult's immediate circle of acquaintances, family and friends, and also the more global district and national context

⁷ For voters in general, the assertion is hardly open to challenge. Past scholarship has made it clear that voters do respond to efforts by group leaders to mobilize support for a preferred party or candidate (Uhlener 1989; Morton 1991; Sachar and Nalebuff 1999) or perhaps to group loyalties (Filer, Kenny and Morton 1993; Coate and Conlin 2004) either or both of which are especially effective in boosting turnout when an election is close,

⁸ Franklin (2004) does suggest that young adults (those facing one of their first three presidential contests) would be most responsive to variations in the competitive situation because they have not yet acquired the habit of voting or non-voting. However, Franklin does not explain why unpoliticized individuals would even be aware of an election's competitive context. In this paper I propose an explanation that fills a gap in Franklin's exposition.

⁹ Recall that those not planning to vote do not respond to traditional mobilizing efforts but rather to appeals by friends, neighbors and associates (Hilligus 2005).

of electoral competitiveness. It is the interaction between these two different levels of context that is expected to provide the mechanism explaining both young adults' transitions to habitual voting and also the fits and starts in their progress towards that state.

In the next section I will develop my argument that conventional models of electoral participation are deficient, and present what I believe to be a more suitable model.

Model specification

If young adults respond differently than older voters do, a statistical model of electoral participation at the individual level should take a different form than has been customary. Conventional models incorporate independent variables concerned with resources (Verba and Nie 1972), mobilization (Rosenstone and Hansen 1993), and features (or perceived features) of the campaign (Verba, Schlozman and Brady 1995); and usually take a form similar to that shown in equation 1,

$$\text{Voting} = b_0 + [b_1][X_1] + [b_2][X_2] + [b_3][X_3] + e \quad (\text{Equation 1}),$$

whose notation designates sets of items by enclosing them in brackets. The variables in the set denoted X_1 measure the individual's resources of various kinds (most importantly education, time, and money),¹⁰ the variables in the set denoted X_2 measure factors that facilitate or motivate the individual's mobilization, and the variables in the set denoted X_3 measure aspects of the campaign, such as the extent to which it excites the potential voter's interest.

Because members of established cohorts will tend to vote even in elections that fail to motivate young adults, this model needs to be elaborated by interacting *all* influences that might affect the likelihood of voting with a variable that indicates whether each individual is a young adult or not. Such a model will have all predictors appearing twice, once un-interacted (as in equation 1) and once interacted with a young adults indicator, as shown in equation 2 by being placed between a set of parentheses so that all of them are multiplied by Young:¹¹

$$\text{Voting} = b_0 + [b_1][X_1] + \dots + [b_3][X_3] + b_4 \text{Young} + \text{Young} * ([b_{41}][X_1] + \dots + [b_{43}][X_3]) + e \quad (\text{Equation 2})$$

Effectively the variables in this equation are doing two different things. On their first appearance, the sets of variables denoted X_1 to X_3 are measuring effects that apply to established

¹⁰ Sometimes resource variables have been further subdivided to distinguish political engagement from other resources (Verba, Schlozman and Brady 1994), but this category overlaps with campaign processes that I wish to distinguish in this research.

¹¹ Note that each individual variable within the set of parentheses is multiplied by the young adults indicator before the model parameters are estimated (see Table 2).

members of the electorate. Though these individuals are no doubt largely set in the habit of voting, we saw in Figure 1 that their turnout does rise somewhat and is subject to muted fluctuations. The un-interacted independent variables attempt to account for these developments. On their second appearance, the sets of variables denoted X_1 to X_3 attempt to specify effects that distinguish young adults from older members of the electorate, particularly their rapid increase in electoral participation as they mature, and perhaps also their greater volatility as compared with older voters.

In practice one more set of variables needs to be included in the model, even though the variables concerned have not previously been prominent in individual-level investigations of US electoral participation. These are measures of electoral competitiveness found by Franklin (2004) to provide the main reason for the volatile turnout of younger cohorts. It seems likely that these effects are largely captured by individual-level measures of campaign characteristics, so that electoral competition mainly affects electoral participation indirectly,¹² but there is some possibility that one or more aggregate level variables will also be found to have direct effects. In that case they would need to be included in an electoral participation model.

It is my contention that, when direct and indirect effects are taken into account in this way, electoral context will prove more important than has hitherto been realized, having considerable effects on the electoral participation of young adults.

Hypotheses and data

Estimating the parameters of a model involving effects of social context would ideally employ rich data of the kind used by Hilligus (2005) and by Abrams et al. (2006) – data that contain details of the interactions between a respondent and his or her social circle.¹³ However, data of that kind exist only for a small number of elections and cannot be brought to bear in a study that hopes to track the influence of changes in electoral competitiveness over time. In such an endeavor we are forced to employ surrogate measures. In this study I use the congressional district as a surrogate for a respondent's immediate social circle, assuming that variations in district competitiveness correspond to variations in the motivations of members of that circle to influence young adults, and test the connection between social circle and individual by using

¹² This surmise calls for a separate analysis, which will be conducted in a separate section of this paper, in which campaign variables are seen as dependent on measures of electoral competition.

¹³ Even better would be data about the social circle itself (cf. Gerber, Green and Shuchler 2003; Huckfeldt and Sprague 1987, 1991, 1995). Unfortunately such studies have been conducted in only a few geographic locations, each at a single point in time, so that differences in electoral competitiveness could not be examined.

length of residence as a surrogate for personal contacts. Using these surrogates, the analysis can be performed by linking data on election outcomes in congressional districts with data from the American National Election Studies (NES) fielded following presidential elections since 1968.¹⁴ These contain a wide array of variables used in conventional models, including the length of time respondents have lived in their present neighborhoods, and the variables have been rendered comparable across election studies by the NES staff who maintain a cumulative file containing the resulting data.

There are several reasons for using a cumulative dataset rather than data from a single election. In the first place it is the only way to obtain adequate variability in electoral competition. At a single election, the competitiveness of that election is constant, and, to the extent that competitiveness is manifested in district-level variables and/or perceived features of the campaign, the variability of these measures will be less at any one election than over a series of elections. In more competitive elections these variables will take on more extreme values, in less competitive elections less extreme values, increasing their overall variance and their ability to influence electoral participation.¹⁵

An additional reason to employ a cumulative file is in order to obtain an adequate sample of young adults. American national election studies are small by international standards. The 2004 study, for example, interviewed only 1,212 respondents. The number of these respondents under 34 years old (the cut-off for young adults employed in this research, as described below) would be too few for reliable estimates to be made, especially when the primary use of the variable is as a component in a series of interaction effects.¹⁶

The NES cumulative file of course contains the age of each respondent, permitting voters to be distinguished on the basis of the year in which they first became eligible to vote and assigned to corresponding electoral cohorts. Based on earlier research (Butler and Stokes 1975; Franklin 2004) the cutting point adopted for distinguishing newer from more established electoral cohorts is the passage from the 3rd to the 4th presidential election that people experience as voting-age adults (operationalized as age less than 34). As shown in Figure 1, the chances that young Americans will exercise their franchise increase rapidly over the course of the first sixteen years in which they are old enough to vote. After that, shifts towards higher turnout are

¹⁴ Length of residence in the neighborhood was not measured before this date.

¹⁵ At any one election, variability in district-level competitiveness is restricted by the small number of districts (170 on average) within which interviews are conducted. This number is too small for analysis to yield significant effects on the intervening variables studied in this research.

¹⁶ A cumulative dataset does present a number of analysis problems that will be confronted later.

generally more gradual.

The primary hypotheses are (1) that effects on electoral participation are different for younger than for older members of the electorate (in particular that effects of residential mobility are greater for young adults) and (2) that campaign perceptions serve as intervening variables reflecting features of the electoral context – especially among young adults and particularly in interaction with length of residence. An assumption of the study that cannot be directly tested but for which I seek circumstantial support is that length of residence in the neighborhood is important because of the efforts made by acquaintances and friends to mobilize young voters. The plausibility of this assumption will be enhanced by finding that campaign perceptions are influenced by district competition. Since young adults are not themselves expected to be sensitive to district races, such effects would signal the activities of intermediaries at close to the individual level.

The variables available for analysis are listed in Table 1, where they are distinguished into categories as was done in Equations 1 and 2. Each variable is accompanied by its correlation with electoral participation and by other information.¹⁷ In addition to individual-level variables from the NES, also listed are aggregate-level variables measuring electoral competitiveness, namely the closeness of the race (margin of victory) in the congressional district where each respondent resides,¹⁸ whether that district is contested, the average margin of victory across all districts nationwide, and presidential margin of victory (all measured in terms of valid votes cast).¹⁹

All variables have been recoded where necessary so that larger values correspond to

¹⁷ Age was coded in terms of five sixteen-year categories (young, early middle age, late middle age, senior, and elderly), the last two of which correspond to ages over 65 and the first of which encompasses respondents' first three presidential elections. This first age category is also the variable used to generate interaction terms when investigating the difference between effects on young adults and effects on more established members of the electorate. A preliminary analysis was conducted using sixteen four-year age-groups, but this made virtually no difference to findings. Social class is measured in terms of an ordered status scale. Using separate dummy variables for the different class categories did not affect the coefficients for other variables.

¹⁸ Of course district residents should react (if they do) to the expected closeness of the district race but, in the absence of good polling data for congressional districts, the actual result is employed as a surrogate for the best information that could have been available. To the extent that district residents were reacting to less accurate information this will result in error that will make it more difficult to confirm hypotheses – a conservative research strategy.

¹⁹ These variables were for the most part taken from ICPSR study # DA7757 which contains district-level results up until 1990. For elections since 1990 district-level data were obtained from the web sites of Harvard's Gary King and the Federal Elections Commission. Presidential margin is taken from Stanley and Niemi (2005).

Table 1 Variables available in comparable terms for explaining U.S. electoral participation

Variable	Mean	Correlation with voting	Notes
<u>Electoral competition (aggregate level)</u>			(From aggregate data)
District margin of victory (0-1=100%)	.429	-.062	Difference between winning and next candidate
Mean district margin (0=31 to 1=45%)	.378	-.034	Average across all districts at that election (N=10)
District uncontested (0,1=yes)	.049	-.056	Whether the district election is uncontested
Presidential margin of victory (0-1=23%)	.364	-.019	Actual margin of victory in presidential race (N=10)
<u>Resource variables (X₁ variables)</u>			(From survey data)
Young age (0,1=18-33)	.306	-.168	Five 16-year age-groups were distinguished
Elderly age (0,1=82 and up)	.019	-.024	(Other age dummies yielded lower correlations)
Gender (0,1=male)	.440	.059	Recoded
Race (0,1=white)	.813	.082	Recoded
Education (0,1=some college or more)	.404	.222	Coded in two categories for easy interpretation
Married (0,1=yes)	.645	.137	Recoded
Occupation (0-1=most status)	.589	.186	Rescaled
Religion (0,1=protestant)	.394	.089	Recoded
Home ownership (0,1=owned)	.565	.192	Recoded
Income (0-1=highest)	.468	.239	Rescaled
Efficacy (0-1=highest)	.519	.221	Rescaled
<u>Mobilization variables (X₂ variables)</u>			(From survey data)
Church attendance (0-1=weekly or more)	.552	.175	Rescaled
Union member in household (0,1=yes)	.217	.058	Recoded
Rural residence (1,0=rural)	.382	.066	Recoded
Suburban residence (0,1=suburban)	.085	.049	Recoded
Length of residence (0-1=89 years)	.227	.087	(Young adults 0-1=33 yrs) in neighborhood, rescaled
<u>Campaign variables (X₃ variables)</u>			(From survey data)
Salience of major party (0-1=high)	.291	.258	Rescaled
Contacted by major party (0,1=yes)	.268	.192	Recoded
Strength of party ID (0-1=strong)	.598	.207	Rescaled
Interested in public affairs (0-1=high)	.597	.317	Rescaled
Interested in election (0-1=strong)	.520	.326	Rescaled
Cared who won (0-1=much)	.598	.235	Rescaled
Close presidential race expected (0,1=yes)	.687	.020	Recoded
Importance of party differences (0-1=high)	.541	.196	Recoded
Salience of house candidate (0-1=high)	.339	.329	Rescaled
Number of campaign activities (0-1=5)	.338	.246	Recoded
Affect towards major party (0-1=high)	.268	.034	Rescaled

Note: N=13,447 or more except for aggregate variables (N=1,840 for the two district-level variables; N=10 for Presidential margin and mean district margin). All correlations significant at the 0.001 level, except for Presidential margin of victory and Close presidential race expected, both significant at the 0.01 level.

Source: American National Election Studies, 1968-2004 post-election waves, with merged aggregate data (see n. 19).

higher probabilities of voting (except for age dummies and aggregate measures of competitiveness which retain their substantive meanings so that negative effects are possible), and rescaled where needed so as to range from 0 to 1. Thus a 1-point shift in the value of any variable corres-

ponds to a shift from the minimum to the maximum value found in the data, permitting estimated effects to be given a straightforward substantive interpretation that is comparable across variables.

Methodological concerns

The use of the cumulative NES file to study voting behavior at US elections over an extended period has not been common in recent years, perhaps due to concerns over pooling problems when surveys are combined over so long a time span.²⁰ Various tests for time-serial dependencies and heterogeneous effects employed residuals from the overall analysis. There was no correlation between these and year of survey,²¹ and no indication of significant interactions with independent variables during the early (until 1980) middle (1984-1992) and late (after 1992) periods.²²

²⁰ One reviewer suggests that another reason for disuse of this series is the “huge anomaly” encountered by researchers when faced with findings that did not show expected time-series movement on the basis of changes in relevant independent variables (such as education), and did show correspondingly large effects of year dummies. However, recent research has suggested a theoretical basis for these failures (Franklin 2004:16-20) and the findings of the present paper do show the expected time-series movements (see note 21).

²¹ Nor between these and a full set of year dummies. When all but one of the year dummies are included in the analysis, the resulting fixed effects model has coefficients that are little different from those presented in Table 2’s Model B (see Appendix, Table A1, Model C). A fixed effects model, however, removes the between year variance in electoral competition and is therefore not the one employed in the body of this paper. The test for time serial dependencies is not entirely satisfactory. The concern here is that variables treated as independent may actually be endogenous to prior vote (Plutzer 2002). Such dependencies are generally controlled in aggregate-level time-series models by including a lagged version of the dependent variable among the independent variables. Equivalent concerns in an individual-level analysis might be thought to call for inclusion of a variable indicating whether the respondent voted at the previous election or not. Since first-time voters cannot have voted at the previous election, this procedure requires either that they be omitted or that they be coded 0 (did not previously vote) on this variable, either of which procedures would make it hard to model a transition to habitual voting. An alternative is to include past vote only for established voters – the ones for whom time-serial dependencies are expected theoretically. Such a model is also presented in the appendix to this paper (Table A1, Model D) in order to demonstrate that the findings do not depend on the presence or absence of a control for time-serial dependencies. However, a model such as Model D dampens effects of independent variables for established cohorts, which might be thought to drive the findings concerning young voters. It also reduces the ability of the model to track expected time series movements, yielding significant effects for year dummies. My preferred model (Model B in Table 2) does not yield significant year dummies, even at the .05 level – thus demonstrating that its predictions do show expected time-series movements (see note 20).

²² In a more stringent test for heterogeneity in the data, a term was defined for each independent variable in interaction with each year dummy and all of these interaction terms were added, one at a time, to Table 2’s Model B thus testing 270 coefficients for evidence of heterogeneity over

Nevertheless, it seemed prudent to allow for the possibility of heterogeneity in effects by year when calculating statistical significance. For this reason I employ robust standard errors clustered by year. Because my models include effects of district-level variables I experimented with the use of hierarchical (mixed effects) models to take account of the lower N at the district level. However, with these data that lower N is still so large (N =1,746 at the district level) that this approach produced smaller standard errors even for district-level variables than when I calculated robust standard errors clustered by year. Evidently the clustering algorithm (not available with hierarchical models) yields more conservative estimates which I preferred.

Findings

Table 2 shows the results of an analysis that classifies respondents into those who voted and those who did not on the basis of logistic regression. The logistic coefficients and standard errors are accompanied by first differences, upon which I focus. Appearing in columns headed “dy/dx,” each of these shows the shift in the value of the dependent variable that would result from a change of one unit in the corresponding independent variable when all other independent variables are held at their mean values.²³ So the coefficients can be viewed as similar to b coefficients in OLS regression. Because each independent variable has been modified where necessary to yield values that range from 0 to 1, the coefficient for each independent variable can be interpreted as the proportion change in the likelihood of voting that would result from a shift in the value of that independent variable from its minimum to its maximum observed value, controlling for all other variables in the model. Because of the very large number of cases, I require available variables (see Table 1) to achieve significance at the 0.01 level, one-tailed, in at least one of the models in order to be included (an exception is made for age dummies

time. Using an effectively stepwise procedure, all of these interactions that proved significant were added to the full model and any that then proved not significant were eliminated. This process added one interaction to the model significant at the 0.001 level (in the 2000 election 'cared who won' had significantly less effect than at other elections). The tests also yielded three coefficients significant at the 0.01 level (approximately the one-in-a-hundred that would have been expected on the basis of chance) and 14 significant at the .05 level (approximately the one-in-twenty that would have been expected by chance). This extent of heterogeneity in the data does not appear worrisome. However, inclusion of all these terms in an extended version of Model B (not shown) made no difference (in the second significant digit) to effects reported for that model in Table 2.

²³ With so many independent variables, missing data is a problem, reducing the number of cases by almost two thirds with listwise deletion. Missing data on independent variables was therefore imputed by least squares estimation. An analysis with listwise deletion of missing data (Table A1, Model E) yields no notable differences in the effects of substantively interesting variables (though some of these effects reach significance only at the 0.05 level because of the smaller N).

Table 2 Logistic effects and differences in proportions voting (dy/dx) due to shifting independent variables from minimum to maximum when other such variables are held at their mean values

	Model A		Model B	
	dy/dx	Coeff. S.E.	dy/dx	Coeff. S.E.
Constant		-3.28 (.12)		-3.41(.14)
<u>Aggregate level competitiveness variable</u>				
District unopposed	-0.39	-.24 (.10)	-0.39	-.25(.10)
<u>Individual level resource variables</u>				
Young adult (0,1=aged 18-33)	-0.054	-.35 (.07)	-0.013	-.09(.15)†
Late middle aged (0,1=aged 50-65)	.002	.02 (.08)†		
Senior (0,1=aged 66-81)	.001	.01 (.12)†		
Elderly (0,1=aged 82 and up)	-0.080	-.47 (.22)	-0.070	-.42(.19)
Race (0,1=white)	.037	.25 (.04)	.037	.26(.04)
Education (0,1=some college or more)	.078	.53 (.07)	.055	.38(.07)
Married (0,1=yes)	.022	.15 (.05)	.023	.16(.05)
Occupation (0-1=high)	.085	.58 (.06)	.083	.57(.06)
Homeownership (0,1=owner)	.064	.44 (.06)	.065	.44(.06)
Income (0-1=highest)	.122	.83 (.09)	.159	1.09(.05)
Efficacy (0-1=highest)	.079	.54 (.07)	.078	.54(.07)
Religion (0,1=protestant)	.046	.31 (.13)	.049	.33(.13)
<u>Individual level mobilization variables</u>				
Church attendance (0-1=weekly)	.098	.66 (.09)	.116	.79(.09)
Union member in household (0,1=yes)	.029	.20 (.06)	.028	.19(.06)
Length of residence (0-1=20 yrs)	.181	1.23 (.16)	.162	1.11(.16)
<u>Individual level campaign variables</u>				
Salience of major party (0-1=high)	.107	.73 (.08)	.107	.73(.08)
Contacted by major party (0,1=yes)	.095	.64 (.07)	.109	.75(.06)
Strength of party ID (0-1=strong)	.110	.74 (.06)	.105	.72(.09)
Interested in public affairs (0-1=high)	.105	.72 (.10)	.139	.95(.14)
Interested in election (0-1=high)	.140	.95 (.13)	.108	.74(.08)
Cared who won election (0,1=yes)	.065	.44 (.10)	.064	.44(.10)
Importance of party differences (0-1=high)	.034	.23 (.06)	.034	.23(.06)
Number of campaign activities (0-1=5)	.233	1.62 (.10)	.229	1.60(.17)
<u>Individual level interactions with young adult indicator</u>				
Young * Education			.047	.32(.10)
Young * Length of residence			.059	.40(.16)
Young * Church attendance			-.052	-.35(.09)
Young * Income			-.101	-.69(.17)
Young * Contacted by major party			-.036	-.25(.07)
Log Likelihood		-7,179.89		-7,157.14
Pseudo R ²		0.267		0.269
Individual level number of observations	17,103		17,103	
District level number of observations	1,746		1,746	

Note: All coefficients (except †) significant at .01, one-tailed, robust standard errors clustered by year. between the younger category and this one. The model shows significant effects only of the youngest and oldest categories, which are thus the only ones included in Model B.

included for diagnostic purposes).²⁴ The coefficients presented in Table 2 derive, however, from analyses containing only the variables shown there.

The table has two models. Model A is a largely conventional participation model containing individual-level influences (any that proved significant) on the likelihood of voting. The model is unconventional in also including a contextual effect. Living in an uncontested district seems to reliably reduce turnout by some 4-5 percentage points. Another unconventional feature of the model is inclusion of multiple age dummies instead of a continuous age variable.²⁵ Age 34-49 is the reference category because our interest focuses on the transition considerable interest is the fact that neither of the nationwide measures of electoral competition listed in Table 1 prove significant in this model (though this is probably due at least in part to the small amount of variance in these measures in an analysis that only investigates ten different election years).

Model B shows that interactions with the 'young adult' indicator are essential to a proper model of electoral participation. Young adults behave differently from more established members of the electorate. While church attendance, income, and being contacted by a major party have less effect among young adults,²⁶ other variables help to explain how such individuals acquire the habit of voting. A substantial contribution is made by education, which for obvious reasons has more effect among younger people than among those aged 34 and up, and which serves to boost the turnout of educated young adults by some 10 percent when the two relevant effects (0.055 and 0.047) are summed. Even more important is length of residence in the neighborhood. The total effect of this variable for young adults is not as great as appears,

²⁴ In practice, apart from some age dummies, all predictors are significant at the 0.001 level in at least one model. National-level measures of electoral competition with significant effects in aggregate models (Franklin 2004), do not have significant direct effects in the analysis reported here (and so do not appear in Table 2). Only the variable denoting an uncontested district has a significant individual-level direct effect. However, in terms of effects of competitiveness on intervening variables, district marginality is the more important influence, as we will see.

²⁵ This is necessary since the lowest age category is also used as a component in the interaction of young age with variables found to have different effects on young voters. It is interesting to see that this is the category uniquely responsible for overall effects of age in conventional models. The only other significant age dummy does not contribute to this overall effect because it has the wrong sign (people over 82 years old unsurprisingly have greater difficulty getting to the polls). The two age dummies shown in Model B (and in Models C to E in Table A1 in the appendix) are the only age dummies to prove significant in any model.

²⁶ The effects on young adults must be added to the un-interacted effects higher in the table, so negative interactions imply smaller (rather than negative) effects on such individuals. That church attendance and income should have smaller effects on young adults suggests that the importance of conventional resource and mobilization variables has been overstated for such individuals. Their lesser responsiveness to major party contacting fits with past findings (Hilligus 2005).

because those aged under 34 cannot have lived more than 33 years in the same neighborhood. However, taking $33/89^{\text{th}}$ s (see Table 1)²⁷ of the 0.162 effect for established adults gives 0.06, which (added to 0.059) yields an 11.9 percent effect for young adults. It is to these effects of residential mobility that I now turn.

Social connections and the transition to habitual voting

The effect of length of residence for young adults is substantial (0.119, as calculated above), which is greater than the total effect of education (0.102 – the sum of 0.47 and 0.55). Young adults who had lived all their lives in the same neighborhood would be 12 percent more likely to vote than those who had recently moved there. I argued earlier that this variable would acquire its role from the opportunity that long-time residents have had to become enmeshed in social networks that expose them to motivating efforts by acquaintances and friends. Model B shows that the effects concerned are substantial and positive, for young adults, implying that those who are newly away from the parental home are in a bad situation to learn the habit of voting, confirming my first hypothesis. More importantly, these effects are strong enough (in conjunction with those of education) to account for the bulk of the transition to habitual voting observed in Figure 1, going far towards resolving the first of the puzzles that motivate this paper.²⁸

The effect of young age, significant in Model A, loses significance in Model B, which interprets the distinction between younger and older voters substantively. The lack of significance of this coefficient shows that we have indeed accounted for the effects that in conventional models have been attributed to respondents' age. In this respect the model meets what can be viewed as a benchmark test in accounting for age-related differences (cf. Strate et al. 1989).

Effects of electoral competitiveness on young adults

My second hypothesis holds that the extent of variability among new cohorts shown in Figure 1

²⁷ Length of residence has been scaled differently for young adults who cannot by definition have lived more than 33 years in the same neighborhood. So the variable used in the interaction with young adults was normalized to reach the value 1 after 33 years residence rather than after 89 (the base used for normalizing the effect for older individuals – see Table 1). The overall importance of length of residence on older adults is also somewhat exaggerated since very few respondents live 89 years in the same neighborhood.

²⁸ We do not have to account for the full rise in turnout (overstated in Figure 1 because of recall bias) of some 25 percent, since about half of the rise can be accounted for by other effects in Table 2 (such as increases in political efficacy) already included in past studies and evaluated for their contribution to the age affect by Strate et al. (1989).

is due largely to the effects of variations in electoral competition acting via the campaign variables included in our survey data. The idea here is that if electoral competition is felt by a young adult's immediate social circle, and members of this circle in turn make efforts to mobilize those young adults, such efforts will leave traces in the campaign variables measured in our surveys. I expect greater effects of electoral competition on campaign variables for young adults, and particularly for young adults who are long-time residents of their neighborhoods. Especially strong support for the suggested role of acquaintances and friends will come from finding that the electoral context most centrally concerned is that of the congressional district.

Since (except for party contacting) the campaign variables are measured at a quasi-interval level, I employ Ordinary Least Squares regression analysis to evaluate these effects (for contacting I use first differences from logistic regression analysis). Because I am not restricted to cases in which the respondent reported voting or not, I can employ all the cases available for the years we are studying – 19,564 cases at the individual level and 1,791 at the district level. As in the logistic regression analyses reported in Table 2, I have used robust standard errors clustered by year. Again this produced more conservative measures of significance, even for district-level variables, than did a hierarchical (mixed effects) model. In the findings I take account of coefficients that are significant at the 0.05 level or better, if only because otherwise no effects for established members of the electorate would prove significant. Since my objective is to test the relative effects for younger as opposed to older members of the electorate, the lower threshold for significance evens the playing field somewhat in evaluating these differences. I do nevertheless distinguish between different levels of significance when evaluating effects.

It should come as no surprise that variations in elections' character have indirect effects by way of campaign variables. It seems natural that, at a more competitive election, interest in politics goes up and so does major party salience. What might be somewhat surprising is that none of the effects concerned are effects of nationwide measures of electoral competition. These prove to have no place in a model that already contains district-level measures.²⁹ The extent of the indirect effects is suggested in Table 3, which summarize a more detailed table supplied in an Appendix to this paper. That table (Table A2) shows consequences for campaign variables of shifting each indicator of electoral competition (margin of victory in the district race and whether the race was contested) from its minimum to its maximum observed value,³⁰ with

²⁹ The correlation between presidential margin and average district margin at the election level in these data (N=10) is 0.64, so variations in district margin are to a large extent standing in for variations in competitiveness nationally.

³⁰ Note that measures of electoral competition have an inverse relationship with turnout: in safe

Table 3 Effects (absolute values) of electoral competitiveness on campaign variables, from OLS regression analysis (summarized from Table A2 in the appendix)^a

<i>Intervening variables</i>	Total effects of electoral competition for		
	Older cohorts	Young more mobile (not long-resident) cohorts	Young less mobile (long-resident) cohorts
Importance of party differences	0.045	0.128	0.206 (.096) ^b
Contacted by major party	0.070	0.070	0.168 (.168) ^b
Party attachment		0.146	0.146 (---)
Salience of major parties			0.144 (---)
Cared who won			0.112 (---)
Interest in the election			0.096 (.096) ^b
Interest in public affairs			0.065 (.065) ^b
Number of campaign activities		0.023	0.034 (.034) ^b
Total	0.114	0.274	0.822 (.476) ^b

Notes:

- Cell entries are totals from Table A2 of effects of moving district margin of victory and whether the district was contested from minimum to maximum (for interactions, totals involve adding all higher order terms), but showing absolute values to avoid confusion.
- Parenthesized entries are based on effects significant at the 0.01 level or better. Other entries are based on effects that are significant at the 0.05 level or better.

Source: Table A2 (presented here as absolute values – see note 30).

effects calculated separately for older cohorts, younger cohorts, and younger cohorts in interaction with length of residence.³¹

Table 3 summarizes the results straightforwardly in terms of total consequences of shifts

seats, values of these variables are high while turnout is low. So the role of campaign characteristics as intervening variables is shown by the strength of the negative effects on them in Table A2 (Table 3 shows absolute values, to avoid confusion).

³¹ The analyses include controls (not shown) for all resource and mobilization variables included in Table 2. Un-interacted coefficients can be taken at face value. Interaction effects, however, can only be interpreted in conjunction with the effects from which they are constructed, together with any higher-order interactions. The necessary additions give rise to Table 3, which contrasts effects for older cohorts with effects for younger and residentially mobile cohorts and with effects for younger and residentially stable cohorts. Margin of victory and length of residence are continuous variables (though normalized to vary between 0 and 1). Other independent variables are all binary. For binary variables, coefficients register the impact of the attribute in question (youth, or an uncontested district). For continuous variables, coefficients can be construed as the effects of differences between extreme values of each variable. Thus the coefficient for residence is the difference it makes to the dependent variable whether a young adult has lived no years in her present neighborhood or 33. In practice, most respondents (and most districts) do not take on extreme values of these variables.

from minimum to maximum in both measures of electoral competition for each campaign characteristic, again distinguishing between older, younger residentially mobile, and younger residentially stable respondents. Looking first at the general pattern, it is evident that the only campaign variables influenced by electoral competition across all three groups are major party contacting and the perceived importance of party differences, but these effects are stronger among younger cohorts and considerably stronger among younger cohorts who are long-resident in their neighborhoods. It is not surprising that if any variable was going to have effects on all voters it would be major party contacting, since this is outside the individual's control. And it is telling that the only other variable in this category should be the importance of party differences. Even those who are already strongly engaged politically appear to be affected in this respect by a highly competitive election.³² Looking at young adults in general, two additional campaign variables (party attachment and number of campaign activities) are significantly affected by electoral competition, and total effects of competition on campaign variables are more than twice as strong for younger than for older cohorts. However, none of these effects is significant at better than the 0.05 level.

It is when we turn to the long-resident young adults that we see really widespread effects of competitive context on campaign variables. In the final column of Table 3, every one of the eight campaign variables included in Table 2 are seen to be influenced by the competitiveness of the electoral context, five of them at the 0.01 level of statistical significance or better. A shift in electoral competitiveness from minimum to maximum in terms of district margin and of whether the district was contested would result in 'importance of party differences' shifting through more than a fifth of its range of possible values, and in 'contacted by major party,' 'salience of major parties,' 'cared who won,' and 'interest in the election' shifting through between 10 and 17 percent of their ranges of possible values.³³ Other campaign variables receive smaller but still significant effects. Applying these shifts to the effects of the variables in question, shown in

³² This effect for older voters would actually have been positive and significant at the 0.01 level had I conducted two-tailed tests, suggesting that older voters may see party differences as a reason to vote in the absence of other good reasons for doing so. Positive effects of district competition on party attachment (though not significant) lead to the same conclusion (cf. Franklin 2004:164).

³³ The stronger effects on 'contacted by major party' among young adults imply that parties are aware of the importance of this group. This might seem to contradict Hilligus' finding of lesser effects of contacting for those not planning to vote, but effects in Table 3 are effects *on* contacting by major parties, not effects *of* such contacting. Young voters are more likely to be contacted when the race in a district is tight, as makes sense. Such contacts are not necessarily effective (and my own findings in Model B confirm a lesser effect of contacting young adults).

Table 2's Model B, would result in up to a 6 percent change in participation for new cohorts,³⁴ depending on the exact mix of effects – enough (along with the direct effects of uncontested districts shown in Table 2)³⁵ to readily account for the variability in turnout evolution for different cohorts seen in Figure 1, and going far towards resolving the second of the puzzles that motivate this paper.

Anonymity and turnout

This paper has employed a multiple election case study to establish the importance of distinguishing young adults from older individuals when investigating effects on turnout, and to test the intuition that lengthy residence in the neighborhood is of prime importance in helping young adults overcome their initial vote hurdle. The powerful consequences of residential mobility for young adults strongly suggests the importance of living in a neighborhood long enough to become known to those who might attempt to motivate one's vote.³⁶ This finding dovetails nicely with other recent research findings (Beck et al. 2002; Plutzer 2002; Gerber, Green, and Shachar 2003; Hillygus 2005; Abrams et al. 2006), suggesting that length of residence is a precondition that makes it easier for friends and acquaintances to shepherd young adults into the habit of voting.

The role of the young adult's immediate social circle is not established in this research but assumed on the basis of past findings. Additional mechanisms (such as campaign advertising) may well play a role. But the mechanisms, whatever they are, are amplified by residential

³⁴ Inspection of Table A2 in the appendix reveals that almost all of these effects are those of marginality. Effects of uncontested districts are minor by comparison, accounting for only 0.11 of the total effects of electoral competition on campaign variables. Because it is hard to estimate effects on intervening variables of differential district competitiveness for those with differential residential mobility, the effects of moving electoral competition from its minimum to its maximum are more easily computed from a simpler model (not shown) that omits the interaction with length of residence. In the simpler model, total effects of electoral competition on campaign variables for all young adults are less than the effects shown for the long-resident young adults in Table 3, but still substantial (0.66 instead of 0.82) and the individual coefficients, multiplied out with the corresponding effects in Table 2, yield a total expected effect for young adults of 6.3 percent.

³⁵ The proportion of districts in these data that were uncontested varies from half or one percent in the 2000 election to 11 percent in the election of 1968, so this contribution is not insubstantial.

³⁶ The alternative suggestion (see note 6) that length of residence indicates respondents' information about their districts is rendered implausible by these findings because district characteristics have virtually no effect on campaign perceptions of older members of the electorate. Yet older voters who moved into a district should be just as ignorant of its politics as younger voters are.

stability and it is easy to understand why effects of social contacts would be enhanced in this way. The activities of a young adult's immediate circle of family, friends, and acquaintances thus provide a plausible link in a causal path by which district-level electoral competition conditions the transformation of young adults into habitual voters. Indeed, the finding that electoral competition district-by-district has effects particularly on long-resident young adults would be anomalous in the absence of a plausible linkage mechanism to explain such notable responsiveness. Because of the correlation between district level and national level turnout ($r = 0.64$ – see note 29) this causal path can also explain turnout variability among young adults over time, helping to explain the volatility we noted in the turnout trajectories of new cohorts.

Another untested but plausible implication of this research is that districts in which competition is muted will see many more voters maturing into habitual non-voters than districts in which competition is fierce. The idea that low turnout elections have consequences for habitual voting has already been suggested (Gerber, Green and Schacher 2003; Franklin 2004).

The title of this paper is deliberately ambiguous as to the direction of causality. Being known by name could lead people to feel an obligation to those with whom they have connections, or the link might (as I have supposed) run the other way. But, in either case, it seems to be anonymity (or the lack of it) that is important. For others to know who you are is apparently crucial if, as a new member of the electorate, you are going to make the transition to habitual voting. Anonymity is also the primary assumption responsible for the so-called "turnout paradox" (Grofman 1993)³⁷ which arises from the observation that people do vote even though, reasoning from first principles, they should have no incentive to do so. This paper's findings appear to confirm the intuition of Riker and Ordeshook (and of Downs before them) that anonymity would rob people of a motivation to vote. But anonymity, viewed as a condition rather than as an assumption, becomes a variable that appears to help explain whether people will learn the habit of voting or not.

It seems that anonymous individuals indeed have less reason to vote, unless they have already acquired the habit of voting. But the findings of this paper strongly suggest that those whose names are known, within supportive networks of individuals actively engaged with one-another on the subject of their vote intentions, would need a very good excuse for not voting.

³⁷ This assumption implies that potential voters lack knowledge of what other potential voters will do, an implication that makes it irrational for individuals to take account of the rewards of voting (since those rewards, if they are forthcoming, will be enjoyed whether the individual votes or not). I am not the first to call this assumption into question. Sources of knowledge for socially connected voters are analyzed at length by Huckfeldt and Sprague (1987, 1991, 1995).

APPENDIX

Table A1 Supplementary models to those in Table 2 (cell entries as described in Table 2)

	Model C		Model D		Model E	
	(fixed effects)		(with past vote)		(mssng data deltn)	
	dy/dx	Coeff. S.E.	dy/dx	Coeff. S.E.	dy/dx	Coeff. S.E.
Constant		-3.38(.15)		-3.79(.21)		-3.25(.22)
<u>Aggregate level competitiveness variable</u>						
District unopposed	-0.031	-.21(.11)†	-0.052	-.35(.10)	-.028	-.20(.20)†
<u>Individual level resource variables</u>						
(Not young)*Voted at previous election (0,1=yes)			.250	1.86(.35)		
Young adult (0,1=aged 18-33)	-.019	-.13(.16)†	.068	.55(.31)†	-.014	-.11(.19)†
Elderly (0,1=aged 82 and up)	-.072	-.44(.18)	-.103	-.63(.17)	-.064	-.43(.21)†
Race (0,1=white)	.039	.27(.04)	.024	.18(.04)	.038	.30(.06)
Education (0,1=some college or more)	.052	.37(.07)	.038	.28(.07)	.048	.37(.10)
Married (0,1=yes)	.024	.17(.05)	.020	.15(.05)	.015	.11(.06)
Occupation (0-1=high)	.079	.55(.06)	.073	.55(.07)	.064	.49(.10)
Homeownership (0,1=owner)	.063	.44(.06)	.054	.40(.08)	.057	.44(.09)
Income (0-1=highest)	.147	1.03(.06)	.121	.90(.13)	.135	1.04(.11)
Efficacy (0-1=highest)	.075	.53(.07)	.076	.57(.08)	.081	.62(.07)
Religion (0,1=protestant)	.051	.36(.13)	.041	.30(.13)	.018	.14(.13)†
<u>Individual level mobilization variables</u>						
Church attendance (0-1=weekly)	.112	.79(.10)	.090	.67(.13)	.103	.80(.12)
Union member in household (0,1=yes)	.030	.21(.07)	.021	.15(.07)	.031	.25(.08)
Length of residence (0-1=20 yrs)	.162	1.14(.16)	.119	.80(.16)	.170	1.32(.15)
<u>Individual level campaign variables</u>						
Salience of major party (0-1=high)	.098	.69(.07)	.074	.54(.09)	.079	.61(.12)
Contacted by major party (0,1=yes)	.099	.70(.08)	.075	.57(.06)	.094	.82(.07)
Strength of party ID (0-1=strong)	.105	.74(.06)	.087	.65(.06)	.085	.66(.09)
Interested in public affairs (0-1=high)	.099	.70(.10)	.081	.60(.08)	.067	.52(.13)
Interested in election (0-1=high)	.131	.92(.13)	.116	.87(.12)	.117	.91(.17)
Cared who won election (0,1=yes)	.058	.41(.09)	.050	.37(.08)	.060	.46(.09)
Importance of party differences (0-1=high)	.032	.23(.06)	.035	.26(.07)	.027	.21(.08)
Number of campaign activities (0-1=5)	.232	1.63(.18)	.208	1.59(.18)	.196	1.51(.17)
<u>Individual level interactions with new cohorts</u>						
Young * Education	.046	.32(.10)	.061	.45(.09)	.042	.36(.09)
Young * Length of residence	.063	.44(.17)	.064	.48(.15)	.054	.42(.20)†
Young * Church attendance	-.050	-.35(.09)	-.030	-.22(.12)†	-.042	-.32(.16)†
Young * Income	-.091	-.64(.18)	-.057	-.43(.18)	-.073	-.57(.30)†
Young * Contacted by major party	-.036	-.25(.08)	-.008	-.06(.07)†	-.052	-.36(.09)
Log Likelihood		-7,100		-6,608		-3,534
Pseudo R ²		.275		.325		.257
Individual level number of observations	17,103		17,103		8,724	
District level number of observations	1,746		1,746		1,710	

Note: Year dummies not shown in model C; listwise missing data deletion in Model E. All coefficients (except those marked †) significant at .01, one-tailed. Robust standard errors clustered by year (except for model C where year effects are registered by 9 year dummies).

Table A2 Effects of district competitiveness on various intervening variables for Table 3 (OLS regression coefficients, except for party contacting, with robust standard errors in parentheses)^a

<u>Independent variables</u>	<u>Salience of major parties</u>	<u>Importance of party differences</u>
Young adult (0,1=aged 18-33)	-.075 (.008)***	-.044 (.011)**
Residence in neighborhood (0-33 years)	-.035 (.007)**	-.020 (.021)
District winning margin (0-1=100%)	.001 (.017)	.028 (.009)
District uncontested (0,1=yes)	-.025 (.019)	-.045 (.019)*
Young * district margin	-.001 (.012)	.017 (.024)
Young * district uncontested	-.020 (.017)	-.045 (.018)*
Resident * Young * district margin	-.054 (.021)*	-.123 (.038)**
R ²	.152	.076
	<u>Interest in the election</u>	<u>Interest in public affairs</u>
Young adult (0,1=aged 18-33)	-.072 (.011)***	-.071 (.017)***
Residence in neighborhood (0-1=33 years)	.019 (.027)	-.011 (.011)
District winning margin (0-1=100%)	.001 (.019)	-.001 (.014)
District uncontested (0,1=yes)	.014 (.017)	.009 (.018)
Young * district margin	.019 (.023)	.032 (.024)
Young * district uncontested	-.038 (.030)	-.024 (.017)
Resident * Young * district margin	-.085 (.028)**	-.081 (.022)**
R ²	.101	.128
	<u>Contacted by major party^a</u>	<u>Cared who won</u>
Young adult (0,1=aged 18-33)	-.037 (.016)*	-.063 (.017)**
Residence in neighborhood (0-1=33 years)	.013 (.017)	.006 (.024)
District winning margin (0-1=100%)	-.070 (.032)*	-.004 (.023)
District uncontested (0,1=yes)	.004 (.026)	-.003 (.031)
Young * district margin	-.056 (.039)	-.010 (.026)
Young * district uncontested	.005 (.023)	-.011 (.035)
Resident * Young * district margin	-.103 (.032)**	-.064 (.032)*
R ²	.071	.046
	<u>Party attachment</u>	<u>Campaign activities</u>
Young adult (0,1=aged 18-33)	-.102 (.012)***	-.005 (.008)
Residence in neighborhood (0-1=33 years)	.080 (.015)***	.020 (.005)**
District winning margin (0-1=100%)	.012 (.012)	-.007 (.009)
District uncontested (0,1=yes)	.013 (.018)	.003 (.010)
Young * district margin	.007 (.028)	.024 (.014)
Young * district uncontested	-.057 (.028)*	-.021 (.009)*
Resident * Young * district margin	.012 (.035)	-.066 (.013)***
R ²	.056	.055

a. Effects on major party contacting are from logistic regression analysis (first differences). Each model also has controls for Elderly, Race, Education, Married, Occupation, Homeownership, Income, Efficacy and Religion. N = 19,564 (individual level); 1,791 (district level).

Note: Significant at *.05, **.01, ***.001 levels, one-tailed, based on robust standard errors clustered by year.

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