State Electoral Context and Voter Participation: Who is Mobilized by What?

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Abstract

We model Current Population Survey data with HLM to resolve estimation problems found in studies of how state-level electoral competition affects individual level turnout. We test if voters assumed to be least interested in politics are most likely to be mobilized by competitive elections that stimulates interest. We find that electoral competition, as a contextual force, was consistently associated with individual level turnout. We show that multiple forms of election activity mobilize American voters. These results demonstrate that electoral forces that mobilize voters are multi-faceted and variable across time and place. Our major contribution to the understanding of voter turnout in America is to provide theoretical and empirical support for the idea that competitive elections do not have a neutral effect on the composition of an electorate. Electoral competition tends to have a greater propensity to mobilize voters in groups know to have lower levels of political interest: the young, and the less educated.

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Introduction

A large body of theory and research has improved our understanding of individual-level (demographic and attitudinal) characteristics that distinguish voters from non-voters (for reviews see Wolfinger and Rosenstone 1980; Rosenstone and Hansen 2003). Likewise, scholars have identified the important effects of state-level institutions such as registration laws (e.g. Highton and Wolfinger 1998; Nagler 1991; Squire et al 1987). A limited number of studies have also identified effects of electoral activity and / or electoral competition on turnout (Patterson and Caldeira 1983; Cox and Munger, 1989; Jackson 2002; 1997).

There is, however, limited empirical work examining how state-level electoral context interacts with individual-level forces to affect participation. Drawing from Bowler and Donovan (nd) we propose that the mobilizing and demobilizing effects of a state's electoral context have different effects on specific categories of citizens. We expect the mobilizing effects of competitive campaigns are contingent on an individual's level of education and age, as these factors are likely associated with political interest. We propose that citizens with higher education and older citizens, respectively, having greater political interest, are more likely to be habitual voters (Franklin 2004; Fowler 2006), and thus are more likely to vote regardless of the mobilizing effects of campaigns. Younger citizens, and the less educated, having less political interest[1] and being less likely to be habitual voters, may be more likely to be affected by the mobilizing effects of campaigns.

[1] For example, the 2004 NES shows that the 7 category NES measure of education and the 3 category measure of interest in political campaigns have a strong association (Chi Square 79.9, p. < .000. Thirty-five percent of respondents with a high school degree reported being "very" interested, compared to 60% of those with a BA degree, and 76% of those with an advanced degree. Voters younger than 32, likewise, were less interested (43%) than voters over 32 (55%), Chi Square 17.5, p. < p. .000.

State-level Electoral Competition and the Composition of the Electorate

Variation in the composition of a state's electorate has consequences on state policy, and the composition of state electorate may be shaped by voter turnout (Hill et al 1995; Hill and Leighley 1992, also see Key 1949). The policy consequences of variation in turnout may not simply be a function of higher aggregate turnout generally, but of lower turnout for distinct groups of voters (Hill and Leighley 1994; Hill, et al 1995). This begs the question of what mechanism leads some groups to turnout at higher rates than others. Upon finding limited effects of political mobilization on turnout in an off-year state election, and no effects of mobilizing institutions[2] on the composition of state electorates, Hill and Leighley (1994:145) pointed out a puzzle: what factors, other than presidential elections, affect the composition of the electorate? They concluded that differences in demographic group turnout rates are largely a function of aggregate socio-economic factors,[3] rather than the effect of political mobilization. Patterson and Caldeira (1983), in contrast, found a stronger relationship between political mobilization and aggregate state level turnout in two other off year elections.

Party mobilization efforts (Rosenstone and Hansen 2003; Powell 1986) are know to be associated with higher voter turnout in the US and other democracies. A large body of cross-national research also demonstrates the consistent effects that closely contested elections have on increasing voter turnout (e.g. Jackman 1987; Blais and Dobryzunska 1998; Franklin 2004). Blais (2000: 60) finds that closeness predicted turnout in 27 of 32

[2] Hill and Leighley's (1994) list of mobilizing institutions included party competition, closeness of elections, party organization strength, party activist ideology, unionization, voter registration restrictiveness and campaign spending.
[3] Hill and Leighley (1994) cite the importance of state income levels and state ethnic homogeneity.

studies testing for the effect, yet many individual-level models of turnout in the US give the mobilizing effects of elections limited attention (a major exception being the work of Robert Jackson).

Given the robust relationship between electoral competitiveness and variation in *aggregate* turnout levels, we suggest that the mobilizing forces of electoral competition may indeed affect the demographic composition of state electorates. This part of our argument is not novel, and is somewhat similar to Campbell's (1966) "surge and decline thesis" which proposes that highly salient presidential elections mobilize 'peripheral' voters. Most empirical studies of 'surge and decline' find there is no evidence of significant and consistent differences in the composition of midterm and presidential electorates (Campbell 1991).[4] We propose that there is a pool of non voters and peripheral voters (voters who are not regular, habitual voters) who have low levels of interest in politics, and / or low levels of political information. Absent active campaigns that generate information and increase interest, these voters may abstain from participating. In addition to presidential contests, active campaigns of all sorts disseminate greater amounts of information and facilitate more individual-level campaign contacts. This can act to stimulate interest and mobilize less interested, peripheral voters. If voters with less interest are distinct demographically, and if electoral activity mobilizes these voters more than others, then competitive elections may have consequences not only for increasing turnout, but for altering the composition of the electorate.

This is not a rational-choice model of turnout. Such models assume that the relationship between electoral competition and turnout is a product of voters having more

[4] Campbell (1991) claims the 'surge' in presidential years comes from partisans of the winning party, not from "impressionable peripheral independents."

incentive to vote in close races because they calculate that their vote has a higher probability of being decisive in a close contest (e.g., Downs 1957; Green and Shapiro 1994). We assume that electoral competition in the form of closely fought state-level contests, in the form of higher proportions of state and federal offices being contested in a state, and via more frequent use of state ballot measures, all result in a context of greater political information and campaign activity. Greater electoral competition thus increases free media coverage of politics, and increases exposure to political messages from 'paid media' and campaigns (i.e., spending on TV ads, direct mail, door-to-door canvassing, phone-banks, etc.). Electoral competition in any form, other things being equal, may increase the likelihood that an individual will be exposed to the mobilizing effects of campaigns (see Cox and Munger 1989).

It is clear that the potential mobilizing effects of competitive elections varies across the states. The geographic distribution of campaign resources and activity in presidential and congressional races, for example, is grossly skewed. A dearth of competitive races means that residents of most states and most US House districts will see nothing from federal campaigns, while people in competitive presidential states are inundated with thousands of commercials and dozens of candidate visits.[5] In addition to regular temporal cycles associated with mid-term elections, in any year campaign activity within a state may also vary dramatically with incumbent state office-holder retirements, with quality challengers emerging, with re-districting, and with ballot initiative use.

Who is Mobilized by Competitive Elections?

Little is known about which voters may be mobilized by variation in such campaign activity, nor about how the differential effects of mobilization might alter the

[5] See Center for Voting and Democracy study, 2005.

composition of the electorate. There are reasons to expect that active campaigns, and easing of voting regulations, may have little effect on the composition of electorates. Schier's (2000) study of contemporary American elections stresses that many modern campaign activities are actually designed to reach (to activate) a base of known, habitual participants rather than mobilize peripheral voters. Berinsky's survey (2005) of research on the effects of voting reforms also suggests that eliminating barriers to voting (e.g. easier registration, voting by mail, Internet voting, etc.) largely increases turnout of people demographically quite similar to those who already vote.

Bowler and Donovan (nd) propose an interest-elasticity theory of voter participation to explain how competitive elections may alter the composition of an electorate. They assume that elections themselves affect levels of political interest, and that people with less interest respond to the costs of voting differently than people with more interest. Citizens with high levels of interest are assumed to have a steep relationship between the costs of voting, and turnout, while those with low interest have a flatter curve. By stimulating interest, competitive elections alter the slope of the relationship between the costs of voting and turnout. Easing rules about voting might increase participation among voters having a steep relationship between costs and voting (e.g. those with pre-existing interest in politics). Interest stimulated by electoral competition, in contrast, may alter the relatively flat relationship between costs and voting among those with less interest. Disinterested voters are thus expected to be more likely to be mobilized by competitive elections generally. Bowler and Donovan find evidence in National Election Study data suggesting that the competitiveness of a state's 2004 presidential election contest was associated with higher turnout for people with low

levels of political interest, but competitiveness was not associated turnout among people reporting high political interest. However, as we explain below, there are serious limits to using NES survey data to model how electoral competition affects who votes.

Modeling the Effects of State Context on an Individual's Decision to Turnout

Much existing research on the mobilizing effects state-level campaign activity, campaign spending, closeness of elections, and the presence of US Senate and gubernatorial elections on turnout have been constrained by data and modeling problems. Academic surveys that have rich attitudinal measures (e.g. the NES) are ill-suited for modeling the effects of state electoral context, as such surveys are not designed to capture representative samples in each state. Aggregate data are well-suited for measuring state-level electoral context, but ill-suited for identifying which individual voters are affected by electoral mobilization. Hill and Leighley's puzzle (1994) about the lack of an effect of mobilization on electoral composition, as well as weak individual-level empirical support for the original surge and decline thesis, may be the product of such measurement issues.

Previous studies have not been well positioned to assess how variation in state-level electoral competition may mobilize different sorts of voters. Our understanding of the effects of electoral context has been constrained by the fact that many individual-level studies place a priority on identifying the effects of voter registration rules. Many such studies either omit measures of the competitiveness of elections and campaign activity (Squire et al 1987; Highton and Wolfinger 1998; Brians and Grofman 1999; Highton and Buris 2002; Timpone 2002; Jackson 2003; Highton 2005; also see Highton and Wolfinger 2001 estimating youth turnout) or include a single dummy variable or a single index variable as a control for state-level electoral context (Nagler 1992; Oliver 1996;

Brians and Grofman 2001).[6] Other studies have an exclusive concern with turnout at presidential elections and thus omit measures of state elections (Leighley and Nagler 1992a).

Studies that do account for state level electoral competition typically find significant effects even when relying on single-item dummy measures and competitiveness indices as controls (e.g. Nagler 1992; Leighley and Nagler 1992b; Oliver 1996; Brians and Grofman 2001). Work by Jackson (1996; 1997; 2002) provides some of the most detailed evidence establishing that state-level campaign activity affects turnout in presidential and midterm elections, but none of these studies are designed to sort out which voters may be mobilized by campaigns.

We avoid some of the modeling problems inherent in this type of research by merging individual-level data from the Current Population Survey (CPS) with detailed measures of each state's electoral context. The CPS contains 50 robust state samples of individual-level data.[7] We employ hierarchical linear modeling (HLM) to test the impact of competitive elections on voter turnout using the 2000, 2002 and 2004 CPS.[8] Multilevel models are needed because the assumption of independence of all observations is violated when data are grouped by states; that is, observations from one state are generally more similar than the observations from another state. HLM accounts for this while allowing us to model the interaction of key individual-level factors with state-level measures of electoral context. Specifically, we model how the effects of state election context on

[6] Nagler (1992) included a dummy for states with gubernatorial contests. Oliver included a dummy for states with an "active" party. Brians and Grofman (2001) included an index of competitiveness built from democratic presidential candidate's share of the two-party vote.

[7] In 2004, for example, state sample sizes ranged from a high of 6007 California respondents and 4179 New York respondents to a low of 984 respondents from Missouri. Unlike many surveys, the CPS includes robust samples from all fifty states, including Alaska (1316) and Hawaii (1289). Similar state samples are found in the 2000 and 2002 CPS.

[8] CPS November Supplement on Voting conducted in 2000, 2002 and 2004 by the U.S. Census Bureau.

individual turnout varies for people with different levels of education and age. We also estimate logit models of turnout for sub-samples of respondents divided by categories of age and education as an additional test.

Hypotheses and Data

We filtered out respondents who were ineligible to vote (non-citizens and those younger than 18 years of age) from the CPS sample in order to model whether a respondent reported voting.[9] Use of the CPS may reduce over-reporting of voting. In 2000, 60% of CPS respondents reported voting (compared to 73% recorded by the 2000 NES) when actual voter eligible population turnout was 55%. In 2002, 48% of CPS respondents reported voting, compared to 62% in the NES sample (actual VEP turnout was 40%). In 2004, 65% of CPS respondents reported voting, compared to 77% recorded by the NES, when actual voter eligible population turnout was 60%.[10] Table A1 in the Appendix demonstrates that non-voters were significantly less educated, younger (by 7 years in presidential years and 10 years in the midterm), and less affluent than voters.

State (Level 2) Variables

Our primary explanatory variables represent competitiveness of elections and campaign activity in a respondent's state. We expect our measures of electoral competition are associated with greater turnout, particularly among young voters and those with less formal education. The effects of various election forces may operate differently in mid-term and presidential years, as the generic mobilizing capacity of a

[9] Following the CPS published reports, we code respondents indicating they did not vote (question pes1) as non voters, as well refused, don't know and no response. Respondents reporting "yes" on question pes1 were coded as voters. 2000 of 81,574 valid respondents, 49,389 reported voting. In 2002 of 97,684 valid respondents,_47,377 (48.5%) reported voting. In 2004 of 95,408 respondents, 62,328 reported they voted.

[10] For voter eligible turnout (VEP) rates in the three elections see MacDonald, Michael (2007). United State Election Project. Online: http://elections.gmu.edu/voter_turnout.htm.

presidential contest may swamp the effects of other election stimuli. Our measures of the mobilizing effects of state-level electoral context include vote margin in presidential elections (1-vote margin between the top 2 candidates), senatorial races (1-vote margin) and gubernatorial races (1-vote margin).[11] Higher values indicate a more competitive election.[12] For example, the competitiveness of the 2000 presidential elections ranged from a low of .593 to a maximum of 1.00 in Florida. Where possible, we replace these with direct measures of campaign activity, including presidential campaign visits to a states, the number of presidential television advertisements, and presidential television spending per capita in a state.[13] These presidential campaign variables are highly correlated with one another and with presidential vote margin and are thus modeled individually.

We also measure per capita total spending (in $10,000s) in US House races in a respondent's state.[14] The CPS does not include county or zip code geographic identifiers, so we cannot match respondents to their congressional district. However, given that media markets straddle multiple districts we expect total state spending in US House races captures some of the potential for these campaigns to mobilize voters. We also represent the effect of congressional campaign activity with a measure of the percent of

[11] The presidential margin of victory raw data come from president elect (www.presidentelect.org); the data for both the gubernatorial margin of victory and the senatorial margin of victory come from *The Almanac of American Politics* (various years).
[12] For margin of victory, the difference between the percent of votes for the winner and the percent for the loser are turned into decimals, by placing the difference in the formula 1-(%for winner-% for runner up).
[13] We have these data for 2004 only. Center for Voting and Democracy CMAG data (get cite).
[14] This variable measures total US House campaign expenditures for the entire state reported to the FEC (by the campaign – it does not include PAC spending) divided by the 2000 population of that state. Source: http://www.fec.gov/finance/disclosure/ftpsum.shtml.

uncontested US House races in a respondent's state.[15] The correlation between these two measures of House race is low, so both can be included in the same models.[16]

Ballot initiatives and referenda create their own campaigns and media attention. Spending on ballot propositions often exceeds campaign spending in major candidate races. Previous research has found states with more initiatives on their ballot have higher aggregate turnout (Smith and Tolbert 2004). We represent the effects of ballot initiatives by the total number of initiatives appearing on a respondent's state ballot in each year.

The level 2 component of the model also includes the number of days before and election needed to register to vote (closing date), ranging from 0 to 30 days prior. We expect respondents residing in states with more restrictive closing dates had a lower probability of voting (Wolfinger and Rosenstone 1980). To account for the possibility that state socioeconomic context affects individual propensity to participate (Hill and Leighley 1999), we include measures of the state percent who were high school graduates, state percent Latino, and percent African American.

Individual (Level 1) Variables

The CPS includes detailed measures of occupation status. We use the CPS industry and occupation job categories to represent a respondent's primary occupation.[17] A binary variable was created for each occupation, with production and construction as the reference category. We expect those with higher status occupations were more likely to have voted. As an additional control, we include variables measuring whether the

[15] The percent of uncontested US House races per state come from Fairvote (www.fairvote.org).
[16] In the 2004 CPS, for example, the Pearson r correlation between the percent of uncontested US House races per state and spending in US House races was -.137.
[17] These include: 1) management, business, and financial, 2) professional and related, 3) service, 4) sales and related, 5) office and administrative support, 6) farming, fishing, and forestry, 7) construction and extraction, 8) installation, maintenance, and repair, 9) production, 10) transportation and material moving, and 11) armed forces.

respondent was a government employee (federal, state, local) coded 1, with all others coded 0. We expect government workers to have an increase probability of voting. The models also include a binary variable measuring military veteran (or currently in the military), coded 1 with non-veterans coded as 0. Residential mobility (Squire et al 1987) is also accounted for; respondents living at the same address for fives years or longer are coded 1, and those less than five years 0.

We also account for gender, race, age and education. We expect that higher educated, wealthier, and older individuals, respectively, were more likely to vote other things being equal. Age is measured in years. To measure any nonlinear effects of declining participation among the oldest citizens, a square term for age is also included. Educational attainment is measured on a 16-point ordinal scale, with 10 (some college, no degree) being the mean value.[18] Annual family income is measured on a 13-point ordinal scale in 2000 and 2002, and a 16-point scale in 2004, ranging from 1 (less than 5k) to 16 (150k and over).[19] Average total family income in the samples over the three years was between 35 and 40k (score 10), which is consistent with the population. A binary variable measures gender, with males coded 1, as females may have higher turnout rates than men (Leighley and Nagler 1992).

CPS data include large and representative samples of African-Americans and Latinos (over 10,000 respondents from each minority group per survey). Three binary

[18] Education**:** 1=Less than 1st; 2=1st-3rd grade; 3= 5th-6th grade; 4=7th-8th grade; 5=9th grade; 6=10th; 7= 11th; 8=12th grade, no diploma; 9= high school grad-diploma or equivalent; 10=some college, no degree; 11=associate degree-occupational/vocational; 12=Associated degree-academic program; 13=Bachelor's degree; 14=Master's degree (ma, ms, meng, med, MSW); 15=Professional school degree (md, dds, dvm); 16= Doctorate degree (PhD, EdD).

[19] Income categories: 1= less than 5k; 2=5k-7,499; 3=7,500-9,999; 4=10k-12499; 5=12500-14999; 6=15k-19,999; 7=20k-24999; 8=25000-29999; 9=30000-34999; 10=35k-39,999; 11=40k-49999; 12=50k-59999; 13=60k-74999; 14=75000 or more. In 2004, categories also included: 14=75k-99,999; 15=100k-149,999; 16=150k and over.

variables represent whether the respondent is an African-American, Latino or Asian or Pacific Islander (respectively), with white non-Hispanic as the reference group. Because marriage and having children may increase community ties and political participation (Putnam 2000) we include binary variables for married respondents and those with a child under the age of 18 residing at home, respectively. Geography/location is measured with binary variables for urban and suburban residents, with rural residents and those that did not identify their location as the reference group.[20]

Multilevel Models

As noted, HLM is used to analyze (separately) the probability of voting in 2000, 2002 and 2004.[21] Multilevel models control for random effects (variation) across geographic levels, allowing for valid estimates of contextual effects. In this case individual-level phenomena are not fixed, but vary across space. Multilevel models also account for the error structures at both the individual and state level. The dependent variable fluctuates as well and is a function of multilevel influences. By allowing the dependent and independent factors to vary across context, we may derive more accurate statistical estimates than standard analyses of turnout restrained at one level of analysis. Written as a population model, the level 2 variables are used to predict the intercept *and* slope coefficients for the level 1 model.[22] Our multilevel models thus consist of an

[20] Urban: From Geography-MSA/central city status. All those who said "Central City" were coded 1; everyone else 0. Change: in 2004, Central city status was called "Principal city".
Suburban: From Geography-MSA/central city status. All those who said "Balance On MSA" were coded 1; everyone else 0. Change: in 2004, Balance on MSA was called "Balance metropolitan."

[21] We estimate hierarchical (multilevel) random coefficient models using a binominal Bernoulli distribution and logit link function in HLM 6.0. Population-average model with random effects and robust standard errors in parentheses. Models were run to convergence, without centering around the mean. Age and education were allowed to vary randomly with level-2 variables.

[22] Level 1 model: Logit $(P_{ij}) = \beta_{0j} + \beta_{1j}X_{ij} + r$, where Logit (P_{ij}) measures the probability of voting taking into account the level 1 and 2 variables, X indicates a vector of individual level predictors of turnout, β_{0j} measures the level 1 intercept and β_{1j} the coefficients for the level 1 variables. Level 2 Intercept Model: β_{0j}

individual-level equation (level 1) and a state-level equation (level 2). The level 1 and level 2 equations are:

$$Logit\ (P_{Yij}) = \beta_0 + \beta_{01}\ (Income) + \beta_{02}\ (Education) + \beta_{03}\ (Age) + \beta_{04}\ (Age\ Squared) + \beta_{05}\ (Male) + \beta_{06}\ (African\text{-}American) + \beta_{07}\ (Latino) + \beta_{08}\ (Asian\text{-}American) + \beta_{09}\ (Married) + \beta_{010}\ (Children) + \beta_{011}\ (Governor\ worker) + \beta_{012}\ (Military\ Veteran) + \beta_{013}\ (Residential\ Mobility) + \beta_{014}\ (Urban\ Resident) + \beta_{015}\ (Suburban) + \beta_{016}\ (Management) + \beta_{017}\ (Professional) + \beta_{018}\ (Service) + \beta_{019}\ (Sales) + \beta_{020}\ (Secretarial) + \beta_{021}\ (Farming) + \beta_{022}\ (Transportation) + \beta_{i1}(Age) + \beta_{i2}(Education) + \varepsilon$$

and,

$$\beta_0 = \beta_{00} + \beta_1\ (Competitive\ Presidential\ Race) + \beta_2\ (Competitive\ Senate\ Race) + \beta_3\ (Competitive\ Governor\ Race) + \beta_4\ (Spending\ US\ House\ Races) + \beta_5\ (Percent\ Uncontested\ US\ House\ Races) + \beta_6\ (Number\ of\ Ballot\ Initiatives) + \beta_7\ (Closing\ Date\ Voter\ Registration) + \beta_8\ (Educational\ Attainment) + \beta_9\ (Percent\ black) + \beta_{10}\ (Percent\ Latino) + \varepsilon$$

An advantage of multilevel data is the ability to investigate cross-level hypotheses or multilevel interactions. In our case, we are interested in how exposure to competitive elections affects voter turnout for people at different ages and at different levels of education (two factors known to be associated political interest). We seek to understand the direct effect of individual and state level explanatory variables, and to determine if the state factors moderate the individual-level relationships. Our models include two additional random effect components, denoted as β_{i1} and β_{i2} above. Stated more directly, the effects of age and education on the probability of voting may vary depending on state residence, and exposure to competitive elections. Technically, we "turn on" random effects in our models for age and education; that is, we allow the covariates for individual level age and education to vary across the state contextual (level 2) variables.

$= y_{00} + y_{01}Z_j + u_{0j,}$ where Z indicates a vector of level 2 (state) variables. Level 2 Slope Model: $\beta_{1j} = y_{10} + y_{11}Z_j + u_{1j,}$ where Z indicates a vector of level 2 (state) variables (See Hox 1995).

Findings

Table 1 presents a summary of the results from our HLM estimates. We find significant evidence that exposure to competitive elections of all sorts boosts the probability of voting at the individual level. As expected the effects of close gubernatorial and US Senate races, as well as contested US House races and ballot initiatives, appear most pronounced in the lower information environment of the midterm election. Residence in a state with more competitive US House races (measured by campaign spending) also increased the probability of voting in 2000, and residence in a more competitive presidential state increased the probability of voting in 2004. Across all election years, residing in a state with more ballot initiatives increased the probability of voting - this result holds when the analysis is constrained to only those states having ballot initiatives.

Table 1 and Table 2 about here

In these multi-level models that properly account for effects of competitive elections, state laws regulating voting (closing date) were found to predict turnout only in the presidential races (when a greater volume voters may be mobilized, regardless of electoral competition), but not in the midterm election. This suggests that when the overall mobilizing effects of elections are comparatively weak (e.g. non-presidential years), barriers to voting (closing date) may have less consequence for turnout than the lack of competitive US House districts.

In Table 2, individual level predictors of voting are in the expected direction in each election: female, higher educated, wealthier and older citizens were more likely to report voting. Other factors held constant, African Americans voted more than non-

Hispanic whites, while Latinos and Asian Americans had a significantly lower probability of voting. Married individuals were more likely to vote, while respondents with children were more likely to vote only the midterm election. Geographic factors also appear to matter, as urban voters were more likely to vote than rural voters (the reference category), while in midterm elections suburban voters were less likely to vote. Residential stability increased the probability of voting, as did government employment and military veteran status. Higher occupation status was also associated with voting.

Coefficients at the bottom of Table 2 report the random effect components for each model in the three election years, including the level 1 intercept and error terms for individual level age and education (allowed to randomly vary across the level 2 variables). We see the Chi-Square test is statistically significant for each of these components, indicating that the effects of age and education on the probability of voting do vary significantly with exposure to competitive elections at the state level.[23]

Figure 1 and Figure 2 and Figure 3 about here

We translate our HLM estimates (from Table 2) into probability simulations of reported turnout in order to demonstrate how the effects of state-level electoral competitiveness on individual turnout varies by a respondent's education and age. These simulations are displayed as graphs that illustrate the probability of an individual voting at different levels of electoral competitiveness, holding all other variables in the model constant at their mean/modal values. The graphs show that exposure to various forms of competitive elections often had a greater effect on turnout of the young and low-educated than among older and more educated voters. For example, Figure 1 illustrates that

[23] Because of the number of the large number of explanatory variables, only one or two random effects can be included, or else HLM will fail to converge (Raudenbush and Bryk 2002; Hox 1995).

citizens with a high school degree reported a .625 probability of voting in 2000 if they lived in a state with the lowest levels of campaign spending (per capita) in US House races, while an identical respondent living in a state with the highest House race spending reported a .70 probability of voting. In contrast, someone with a BA degree in living in a state with the least active House campaigns reported a .81 probability of voting, whereas an identical respondent in a state with the most active House races reported a .875 probability. Thus, the mobilizing effect of active House races were most pronounced among those with less education. Figure 2 illustrates similar disproportionate effects of House spending in 2000 on turnout of younger voters. The most active House election context was associated with a .08 increased probability of turnout for 32 year olds, compared to a .05 increase among 58 year olds. Figure 3 illustrates the disproportional effect of that ballot initiatives had on increasing turnout of the less educated in 2000.

Figure 4, 5, and 6 here

Figures 5, 6 and 7 illustrate similar effects, and demonstrate that the mobilizing effects of elections did not always have a larger impact on the less educated during the 2002 midterm. Although the differences in the mobilizing effects of campaigns often appear subtle, the effects of each form of electoral competitiveness were estimated from a additive models and thus each may be cumulative. Furthermore, the figures illustrate that the potential for electoral competitiveness to change a *marginal non-voter into a marginal voter* (that is, moving a respondent from below .5 to above .5 on the y-axis of these figures), is most pronounced among those we assume have the lowest political interest: the young and those with the least formal education. Figure 4 and Figure 7 show this most clearly. Figure 4 illustrates that a respondent with a high school degree in a

state with no ballot initiatives had a . 46 probability of reporting voting in 2002. An identical respondent in a state with five initiatives had a .52 probability, and the same respondent in a state with seven initiatives had a .54 probability of voting.

Figures 7 and 8 about here

Figure 7 displays the disproportionate mobilizing effects of the 2004 presidential contest. Here we see that residence in the most competitive presidential state was associated with a .09 increased probability of a high school educated respondent reporting voting, compared to a .05 increase for someone with a BA. The ability for a competitive election to change a marginal non-voter into a marginal voter can also be seen in Figure 7 Someone with a 10th Grade education residing in the least competitive presidential state in 2004 had a .46 estimated probability of reporting she voted, compared to .55 probability for an identical respondent in the most competitive state. Figure 8 shows similar disproportionate mobilizing effects of state initiatives on turnout among the less educated in 2004.

Effects of Competitive Elections on the Young and Less-Educated

The HLM results support our hypothesis that exposure to competitive races has an attenuated effect on the probability of voting among groups we assume to have less interest in politics. We replicated our HLM analysis estimating turnout among CPS sub-samples of the young (bottom quartile of population, 32 years of age and younger) and the low-educated (high school graduates and below), and compare these to estimates of reported turnout among well educated and older voters. Table A2 and Table A3 in the Appendix display logistic regression estimates from these sub-samples for the three election years. Tables 3a-c display the predicted probabilities from these models (King,

Tomz, and Wittenberg 2000) that a respondent reported voting in the 2000 election; Tables 4a-c displays similar predicted turnout for 2002, and Tables 5a - 5b for 2004. Results of these logit analyses are largely consistent with our HLM findings. Electoral competitiveness often produced a much larger increase the probability that young and less educated respondents reported voting.

Effects of Presidential Campaign Activity on Voting

Table 6 replicates the HLM models displayed in Table 2 with logistic regression estimations, but in place of the presidential vote margin substitutes three direct measures of presidential campaign activity: 1) number of presidential visits in a state, 2) presidential television advertisements and 3) presidential television spending per capita. We see that exposure to any of these three measures of heightened campaign activity significantly boosts the probability of voting for the population as a whole. This analysis illustrates that campaign activity associated with competitive elections (rather than the vote margin per se) drives turnout.

Conclusion

With large, robust state samples, these CPS data modeled with HLM provide for a refined and robust analysis of the effects of electoral competition on turnout. We find that electoral competition, as a contextual force, was consistently associated with individual level turnout. This finding alone is not all too surprising - however we are able to show that multiple forms of elections mobilize American voters. These results illustrate how the electoral context a citizen resides - namely, exposure to competitive forces that stimulate political interest - should be seen as multi-faceted and variable across time and place. In any given place, at any point in time, a unique set of elections

is likely to stimulate a voter's interest: local races, state legislative races, contests for statewide office, ballot measures of various sorts, and presidential elections. The more competitive these contests are, the more likely it is that people will vote.

Our major contribution to the understanding of voter turnout in America is to provide theoretical and empirical support for the idea that competitive elections do not have a neutral effect on the composition of an electorate. Electoral competition tends to have a greater propensity to mobilize voters in groups know to have lower levels of political interest: the young, and the less educated. This finding has important implications for the study of the class composition of electorates. Some suggest that active campaigns may alter the composition of an electorate by mobilizing less affluent voters. These arguments are either agnostic about the mechanism by which episodic, short-term electoral competition mobilizes peripheral, lower income voters; or they assume such voters respond to episodic class-based campaign appeals. Our theory grounded in political interest is not entirely inconsistent with this, but it offers a mechanism to explain how competitive elections might alter the class composition of electorates independent of any assumptions about less affluent voters responding to class-based appeals.

This study also has important implications for normative discussions about American voter turnout generally. Our results illustrate that state laws placing barriers to voting are only part of the story - potentially a small part - about why so many people fail to vote. Competitive elections are an important mobilizing force, but safe one-party districts and modern incumbent advantages have made competitive elections a sort of endangered species. Any serious discussion of voter turnout needs to consider this.

Table 1: Summary Effects of Competitive Elections and Closing Date on Turnout based on HLM Models reported in Table 1 (Voters vs. Non-Voters)

State Contextual Factors	2004 Presidential Election	2002 Midterm Election	2000 Presidential Election
Closing Date	√ (-)		√ (-)
Competitiveness			
Presidential Race (1-Vote Margin)	√ (+)	_____	
Senate Race (1-Vote Margin)		√ (+)	
Governor Race (1-Vote Margin)		√ (+)	
Percent Uncontested US House Races		√ (-)	
Spending Per Capita US House Races			√ (+)
Initiatives on Ballot	√ (+)	√ (+)	√ (+)

√=statistically significant predictor of voting at a 95 percent confidence interval. Number in parentheses is the direction of the relationship. Holding constant education, age, race/ethnicity, income, gender, martial status, children, veteran status, residential mobility, government employment, geographic residence (urban, rural, suburban), occupation and state contextual factors (percent high school graduates in respondent's state, percent black population, percent Latino population).

Table 2: Probability of Voting (Total Population) using Hierarchical Linear Modeling

	2000	2002	2004
	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)
Level 2 Effects (State)			
Competitive Elections			
President (+)	.221	--	.854***
	(.270)	--	(.258)
Senator (+)	.014	.266***	-.135**
	(.084)	(.080)	(.067)
Governor (+)	-.007	.184**	.067
	(.079)	(.085)	(.061)
Spending in U.S. House Races (+)	.063*	.016	.022
	(.035)	(.027)	(.016)
Percent of U.S. House Races Uncontested (-)	-.175 (.147)	-.279* (.144)	.017 (.172)
Number of Initiatives State Ballot (+)	.025***	.048**	.040**
	(.005)	(.018)	(.016)
State Context			
Closing Date to Register to Vote (-)	-.009**	-.004	-.012***
	(.004)	(.004)	(.003)
Percent High School Graduates	.019*	.013	.003
	(.010)	(.011)	(.008)
Percent Black	-.007	-.001	-.001
	(.005)	(.005)	(.003)
Percent Latino	-.007*	-.009*	-.006*
	(.004)	(.005)	(.003)
Level-2 Intercept	-6.142***	-6.397***	-4.442***
	(.863)	(1.018)	(.696)
Level 1 Effects (Individual)			
Education	.235***	.217***	.265***
	(.007)	(.006)	(.007)
Income	.071***	.055***	.069***
	(.004)	(.003)	(.004)
Age	.035***	.043***	.004
	(.004)	(.004)	(.005)
Age Squared	$-.003^{-2}$	$-.003^{-2}$	$.002^{-1}$***
	($.004^{-2}$)	($.004^{-2}$)	($.005^{-2}$)
Male	-.164***	-.043**	-.176***
	(.018)	(.018)	(.015)
Married	.411***	.385***	.379***
	(.020)	(.021)	(.030)
Child	-.016	.049**	-.013
	(.029)	(.024)	(.028)
Black	.435***	.370***	.449***

	(.070)	(.039)	(.074)
Hispanic	-.131***	-.158***	-.233***
	(.043)	(.042)	(.053)
Asian	-.941***	-.729***	-1.083***
	(.098)	(.095)	(.088)
Urban	.089*	.066	.147***
	(.046)	(.052)	(.048)
Suburban	-.012	-.107***	.014
	(.046)	(.036)	(.034)
Residential Mobility (5 years at residence or more)	.484*** (.025)	.594*** (.025)	.466*** (.019)
Military Veteran	.129***	.079***	.163***
	(.038)	(.022)	(.032)
Government Employee	.391***	.456***	.446***
	(.032)	(.036)	(.042)
Occupation			
Management	.333***	.251***	.455***
	(.033)	(.032)	(.040)
Professional	.392***	.192***	.394***
	(.041)	(.033)	(.039)
Service	-.010	-.074**	.132***
	(.037)	(.030)	(.037)
Sales	.259***	.191***	.277***
	(.037)	(.041)	(.030)
Secretarial	.297***	.171***	.346***
	(.033)	(.035)	(.039)
Farming	.180**	.274***	.088
	(.076)	(.064)	(.121)
Transportation	-.156***	-.057	-.139***
	(.051)	(.050)	(.043)
Random Effects			
Variance component	.281***	.315***	.376***
Age (u^1)	.00001***	.00001***	.00001 ***
Education (u^2)	.001 ***	.002 ***	.002 ***
-Log likelihood function	-90440.00	-109700.00	-104100.00
Level-1 N	64,243	77,619	74,044
Level-2 N	50	50	50

The dependent variable is whether the respondent voted, coded as 1 if yes and 0 otherwise. Hierarchical linear models estimated using HLM 6.0. Random coefficient models using a Bernoulli distribution and logit link function. Population-average model with random effects, unstandardized logistic regression coefficients and robust standard errors in parentheses. Models were run to convergence, without centering around the mean. Age and education were allowed to vary randomly with level-2 variables. Reliability estimates for random effects (level 1 intercept, age and education) above critical threshold. * p<.1; ** p<.05; *** p<.01.

Table 3a: Probability of Voting in 2000 varying Campaign Spending in US House Races (dollars per capita) in a Respondent's State

Spending in US House Races (in Dollars per capita)	Young Sub-sample (32 years or younger/bottom quartile)	Older Sub-sample (58 years or older/top quartile)
Minimum=$.922	.44 (.021)	.82 (.008)
Bottom 25%=$1.530	.45 (.019)	.83 (.006)
50%= $2.065	.46 (.018)	.84 (.006)
Top 75%= $2.660	.47 (.018)	.84 (.006)
Maximum=$6.032	.54 (.034)	.88 (.018)
First Difference (min to max)	+.10	+.06

Table 3b: Probability of Voting in 2000 varying Campaign Spending in US House Races (dollars per capita) in a Respondent's State

Spending in US House Races (in 10,000s dollars per capita)	Low Educated Sub-sample (high school graduate or lower)	High Educated Sub-sample (college degree or higher)
Minimum=$.922	.60 (.016)	.89 (.009)
Bottom 25%=$1.530	.61 (.012)	.89 (.009)
50%= $2.065	.62 (.010)	.89 (.007)
Top 75%= $2.660	.63 (.011)	.89 (.007)
Maximum=$6.032	.70 (.030)	.88 (.021)
First Difference (min to max)	+.10	+0

Table 3c: Probability of Voting in 2000 varying the Number of Initiatives on the Ballot in a Respondent's State

Number of Initiatives on statewide ballot	Young Sub-sample (32 years or younger/bottom quartile)	Older Sub-sample (58 years or older/top quartile)
0	.46 (.018)	.83 (.007)
1	.46 (.018)	.84 (.006)
3	.47 (.018)	.84 (.006)
5	.58 (.018)	.85 (.007)
7	.49 (.019)	.86 (.007)
First Difference (min to max)	+.03	+.03

Table 4a: Probability of Voting in 2002 varying the Number of Initiatives on the Ballot in a Respondent's State

Number of Initiatives on statewide ballot	Low Educated Sub-sample (high school graduate or lower)	High Educated Sub-sample (college degree or higher)
0	.46 (.012)	.76 (.014)
1	.47 (.011)	.77 (.011)
3	.49 (.013)	.79 (.009)
5	.52 (.019)	.81 (.011)
7	.54 (.025)	.83 (.014)
First Difference (min to max)	+.08	+.07

Table 4b: Probability of Voting in 2002 varying Competitiveness of the Senate Race in a Respondent's State

Competitiveness of Senate Race (1-vote margin)	Low Educated Sub-sample (high school graduate or lower)	High Educated Sub-sample (college degree or higher)
No Senate Race=.0	.44 (.012)	.74 (.015)
Low=.70	.48 (.012)	.79 (.011)
Moderate=.80	.49 (.013)	.79 (.012)
High=.90	.49 (.015)	.80 (.013)
Very High=.99	.50 (.016)	.80 (.013)
First Difference (min to max)	+.06	+.06

Table 4c: Probability of Voting in 2002 varying Competitiveness of the Governor's Race in the Respondent's State

Competitiveness of Governor Race (1-vote margin)	Low Educated Sub-sample (high school graduate or lower)	High Educated Sub-sample (college degree or higher)
No Governor's Race=.0	.44 (.020)	.74 (.021)
Low=.70	.47 (.011)	.77 (.011)
Moderate=.80	.48 (.011)	.78 (.011)
High=.90	.48 (.012)	.78 (.011)
Very High=.99	.48 (.012)	.78 (.010)
First Difference (min to max)	+.04	+.04

Table 5a: Probability of Voting in 2004 varying Competitiveness of the Presidential Race in a Respondent's State

Competitiveness of Presidential Race (1-vote margin)	Low Educated Sub-sample (high school graduate or lower)	High Educated Sub-sample (college degree or higher)
Very Low=.545	.62 (.023)	.92 (.009)
Low=.70	.65 (.015)	.93 (.006)
Moderate=.80	.67 (.012)	.94 (.004)
High=.90	.68 (.012)	.94 (.004)
Very High=.99	.70 (.014)	.94 (.004)
First Difference (min to max)	+.08	+.02

Table 5b: Probability of Voting in 2004 varying Competitiveness of the Presidential Race in a Respondent's State

Competitiveness of Presidential Race (1-vote margin)	Young Sub-sample (32 years or younger/bottom quartile)	Older Sub-sample (58 years or older/top quartile)
Very Low=.545	.49 (.029)	.87 (.008)
Low=.70	.53 (.019)	.87 (.008)
Moderate=.80	.55 (.015)	.87 (.008)
High=.90	.58 (.016)	.87 (.008)
Very High=.99	.60 (.021)	.87 (.008)
First Difference (min to max)	+.11	+0

Table 6: Probability of Voting (Total Population), with Presidential Competitiveness Variables, 2004

Level 2 Effects (State)	*Presidential Visits* Coef. (S.E.)	*Television Ads* Coef. (S.E.)	*Television Spending* Coef. (S.E.)
Competitive Elections			
Presidential Visits (+)	.006*** (.002)	--	--
Presidential Television Advertisements (+)	--	$.006^{-3***}$ ($.002^{-3}$)	--
Presidential Television Spending (+)	--	--	.005-3*** ($.001^{-3}$)
Senator (+)	-.122 (.081)	-.119 (.083)	-.108 (.086)
Governor (+)	.005 (.067)	-.004 (.067)	-.015 (.067)
Spending on U.S. House Races (+)	.016 (.018)	.011 (.017)	.008 (.018)
Percent Uncontested U.S. House Races (-)	-.313* (.171)	-.317* (.178)	-.321* (.182)
Number of Initiatives (+)	.035** (.015)	.036** (.015)	.035** (.015)
State Context			
Closing Date to Register to Vote (-)	-.010*** (.003)	-.010*** (.003)	-.010*** (.004)
Percent High School Graduates	.006 (.007)	.008 (.008)	.008 (.007)
Percent Black	.002 (.004)	.002 (.004)	.002 (.004)
Percent Latino	-.004 (.004)	-.004 (.004)	-.004 (.004)
Level 1 Effects (Individual)			
Education	.257*** (.008)	.257*** (.008)	.257*** (.008)
Income	.069*** (.004)	.069*** (.004)	.069*** (.004)
Age	.004 (.005)	.004 (.005)	.004 (.005)
Age Squared	$.002^{-1***}$ ($.005^{-2}$)	$.002^{-1***}$ ($.005^{-2}$)	$.002^{-1***}$ ($.005^{-2}$)
Male	-.179*** (.016)	-.178*** (.016)	-.178*** (.016)
Married	.377*** (.031)	.377*** (.031)	.377*** (.031)
Child	-.015	-.014	-.015

	(.028)	(.028)	(.028)
Black	.459***	.459***	.459***
	(.076)	(.076)	(.076)
Hispanic	-.195***	-.195***	-.195***
	(.051)	(.051)	(.051)
Asian	-1.133**	-1.134***	-1.138***
	(.078)	(.078)	(.077)
Urban	.144***	.148***	.145***
	(.056)	(.056)	(.056)
Suburban	.012	.015	.013
	(.036)	(.036)	(.036)
Residential Mobility (5 years at residence or more)	.466***	.466***	.466***
	(.020)	(.020)	(.020)
Military Veteran	.162***	.162***	.162***
	(.032)	(.032)	(.032)
Occupation			
Government Worker	.444***	.444***	.444***
	(.043)	(.043)	(.044)
Management	.457***	.457***	.457***
	(.041)	(.041)	(.041)
Professional	.400***	.400***	.400***
	(.040)	(.040)	(.040)
Service	.128***	.128***	.128***
	(.039)	(.039)	(.039)
Sales	.267***	.267***	.267***
	(.030)	(.030)	(.030)
Secretarial	.348***	.348***	.347***
	(.041)	(.041)	(.041)
Farming	.059	.058	.056
	(.124)	(.125)	(.125)
Transportation	-.149***	-.149***	-.149***
	(.044)	(.044)	(.044)
Constant	-3.964***	-4.036***	-4.023***
	(.636)	(.647)	(.630)
N	74044	74044	74044
Wald Chi^2	16286.95	14294.55	13810.39
Pseudo R^2	.17	.17	.17

The dependent variable is whether the respondent voted, coded as 1 if yes and 0 otherwise. Unstandardized logistic regression coefficients, with robust standard errors in parentheses. Probabilities based on two-tailed tests. Standard errors adjusted by clustering by state. * p<.1; ** p<.05; *** p<.01.

Appendix

Table A1: Basic Demographics of Voter and Non-Voter Samples

	2000		2002		2004	
	Voters	Non-voters	Voters	Non-voters	Voters	Non-voters
Mean Education	Associate's degree –Vocational	High school graduate	Associate's degree –Vocational\	High school graduate	Associate's degree –Vocational	High school graduate
Mean Age	49.173	42.281	51.389	41.999	48.927	43.265
Mean Income	40,000 – 49,999k (Score 10.5)	30,000 – 34,999K (Score 8.9)	40,000 – 49,999k (Score 10.8)	35,000 – 39,999k (Score 9.5)	40,000 – 49,999k (Score 11.1)	30,000 – 34,999K (Score 9.2)

Table A2: Probability of Voting, Sub Samples of Low and High Educated

	2000		2002		2004	
	Low Educated	*High Educated*	*Low Educated*	*High Educated*	*Low Educated*	*High Educat*
Level 2 Effects (State)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)
Competitive Elections						
President (+)	-.141	.966**	--	--	.733***	.843**
	(.296)	(.420)	--	--	(.277)	(.391)
Senator (+)	.029	.049	.227***	.341***	-.123	-.109
	(.084)	(.086)	(.075)	(.095)	(.091)	(.120)
Governor (+)	-.063	.189	.171*	.271**	-.028	.059
	(.099)	(.128)	(.096)	(.113)	(.073)	(.099)
Spending in U.S	.086**	-.024	.024	.012	.023	-.030
House Races (+)	(.040)	(.052)	(.032)	(.035)	(.019)	(.032)
Percent of U.S. House	-.189	.008	-.329*	-.218	-.063	-.087
Races Uncontested (-)	(.184)	(.234)	(.196)	(.167)	(.264)	(.186)
Number of Initiatives (+)	.018***	.016	.050***	.069***	.045***	.030**
	(.006)	(.013)	(.016)	(.020)	(.016)	(.014)
State Context						
Closing Date to Register (-)	-.011***	-.018***	-.004	-.008	-.012***	-.010**
	(.004)	(.005)	(.004)	(.005)	(.004)	(.004)
Percent High School	.021*	.011	.014	.003	.012	-.002
Graduates	(.011)	(.013)	(.013)	(.014)	(.009)	(.015)
Percent Black	.008	.010	$-.004^{e-1}$	-.005	.001	-.007
	(.005)	(.007)	(.005)	(.007)	(.004)	(.007)
Percent Latino	-.001	.001	-.006	-.013***	-.002	-.015**
	(.003)	(.006)	(.004)	(.005)	(.003)	(.005)
Level 1 Effects (Individual)						
Income	.084***	.072***	.068***	.045***	.084***	.075***
	(.006)	(.009)	(.005)	(.007)	(.005)	(.008)
Age	.050***	.061***	.049***	.067***	.021***	.024*
	(.004)	(.011)	(.005)	(.008)	(.006)	(.014)
Age Squared	$-.002^{e-1}$***	$-.003^{e-1}$***	$-.001^{e-1}$***	$-.003^{e-1}$***	$.003^{e-2}$	$.001^{e-2}$
	$(.005^{e-2})$	$(.001^{e-1})$	$(.005^{e-2})$	$(.009^{e-2})$	$(.006^{e-2})$	$(.001^{e-1}$
Male	-.151***	-.282***	-.118***	.010	-.224***	-.214**
	(.027)	(.052)	(.024)	(.034)	(.021)	(.041)
Married	.421***	.422***	.432***	.334***	.397***	.375***
	(.030)	(.067)	(.033)	(.050)	(.035)	(.077)
Child	.014	.058	-.017	.108**	.001	-.017
	(.037)	(.071)	(.042)	(.054)	(.039)	(.064)
Black	.502***	.278*	.396***	.330***	.540***	.058

	(.078)	(.167)	(.058)	(.105)	(.082)	(.140)
Hispanic	-.208***	-.449***	-.238***	-.368***	-.335***	-.456**
	(.050)	(.095)	(.065)	(.106)	(.075)	(.139)
Asian	-.719***	-1.197***	-.547***	-.862***	-.918***	-1.493**
	(.100)	(.116)	(.128)	(.166)	(.106)	(.084)
Urban	.049	.053	.039	.080	.137**	.014
	(.069)	(.104)	(.069)	(.092)	(.064)	(.089)
Suburban	-.011	-.092	-.097*	-.216***	.010	-.039
	(.062)	(.091)	(.053)	(.075)	(.047)	(.072)
Residential Mobility (5 years at residence or more)	.478***	.506***	.583***	.706***	.470***	.480**
	(.030)	(.070)	(.034)	(.044)	(.030)	(.053)
Military Veteran	.237***	.090	.245***	.102	.318***	.113
	(.042)	(.083)	(.037)	(.075)	(.047)	(.097)
Occupation						
Government Worker	.468***	.189**	.548***	.342***	.592***	.308**
	(.049)	(.077)	(.041)	(.049)	(.054)	(.068)
Management	.344***	.372***	.312***	.165***	.524***	.351**
	(.061)	(.084)	(.049)	(.057)	(.054)	(.107)
Professional	.653***	.431***	.550***	.153***	.511***	.370**
	(.104)	(.080)	(.092)	(.058)	(.067)	(.074)
Service	.029	-.103	-.067**	-.220*	.188***	-.085
	(.048)	(.128)	(.033)	(.113)	(.043)	(.120)
Sales	.349***	.091	.241***	.112*	.357***	.116
	(.058)	(.094)	(.060)	(.058)	(.051)	(.080)
Secretarial	.460***	.115	.238***	.073	.409***	.281**
	(.048)	(.113)	(.050)	(.082)	(.052)	(.111)
Farming	.088	.468*	.354***	.342	-.006	.518
	(.098)	(.268)	(.083)	(.216)	(.126)	(.803)
Transportation	-.162**	.334	-.027	-.144	-.057	-.243
	(.064)	(.375)	(.062)	(.193)	(.047)	(.210)
Constant	-4.710***	-3.171***	-5.055***	-2.880**	-3.538***	-.409
	(.911)	(1.213)	(1.228)	(1.241)	(.806)	(1.452)
N	29797	15782	34958	19810	32573	19636
Wald Chi^2	6321.37	3521.46	6379.44	4584.25	5354.50	3624.5
Pseudo R^2	.11	.10	.13	.12	.10	.10

The dependent variable is whether the respondent voted, coded as 1 if yes and 0 otherwise using the CPS. Unstandardized logistic regression coefficients, with robust standard errors in parentheses. Probabilities based on two-tailed tests. Standard errors adjusted by clustering by state. * p<.1; ** p<.05; *** p<.01. Low educated defined as a high school diploma or less. High educated sample defined as those respondents with a bachelor's degree or higher. High educated defined by those with a college degree or higher. All Wald Chi^2 values are significant at p<.000.

Table A3: Probability of Voting, Sub Samples of Young and Old Respondents

	2000		2002		2004	
	Young	*Old*	*Young*	*Old*	*Young*	*Old*
Level 2 Effects (State)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)	Coef. (S.E.)
Competitive Elections						
President (+)	.325	-.006	--	--	.991***	.388
	(.303)	(.316)	--	--	(.368)	(.472)
Senator (+)	-.027	.131	.279***	.161*	-.003	-.128
	(.093)	(.080)	(.065)	(.094)	(.095)	(.110)
Governor (+)	.026	-.140	.229***	.134	-.020	.184*
	(.089)	(.092)	(.076)	(.115)	(.105)	(.109)
Spending in U.S	.081**	.090**	.024	.018	-.021	.044
House Races (+)	(.033)	(.039)	(.027)	(.037)	(.022)	(.032)
Percent of U.S. House	-.067	-.128	-.266**	-.343	-.102	.198
Races Uncontested (-)	(.148)	(.213)	(.121)	(.211)	(.186)	(.336)
Number of Initiatives (+)	.016**	.028***	.068***	.043**	.023	.063***
	(.007)	(.008)	(.013)	(.020)	(.016)	(.022)
State Context						
Closing Date to Register (-)	-.017***	-.010**	-.008	-.006	-.013***	-.012***
	(.005)	(.004)	(.005)	(.005)	(.004)	(.004)
Percent High School	.015	.019*	.012	.012	.012	.002
Graduates	(.012)	(.010)	(.012)	(.016)	(.012)	(.011)
Percent Black	.011**	.006	.002	-.003	-.001	-.001
	(.005)	(.005)	(.005)	(.007)	(.005)	(.005)
Percent Latino	.001	-.002	-.010**	-.002	-.003	-.005
	(.004)	(.004)	(.004)	(.005)	(.005)	(.004)
Level 1 Effects (Individual)						
Education	.282***	.205***	.257***	.183***	.316***	.220***
	(.012)	(.009)	(.014)	(.006)	(.011)	(.011)
Income	.058***	.058***	.035***	.042***	.043***	.065***
	(.006)	(.008)	(.005)	(.007)	(.005)	(.008)
Male	-.159***	-.099*	-.033	-.141***	-.206***	-.197***
	(0.027)	(.055)	(.033)	(.043)	(.025)	(.043)
Married	.315***	.578***	.354***	.505***	.213***	.544***
	(.050)	(.053)	(.045)	(.046)	(.074)	(.046)
Child	.023	-.324**	.086*	-.417***	-.009	-.551***
	(.043)	(.163)	(.049)	(.135)	(.061)	(.148)
Black	.380***	.415***	.397***	.229***	.420***	.377***
	(.093)	(.095)	(.093)	(.082)	(.089)	(.119)
Hispanic	-.260***	.113	-.167**	-.010	-.433***	.136
	(.048)	(.129)	(.069)	(.097)	(.065)	(.122)
Asian	-.776***	-1.032***	-.369***	-.777***	-1.062***	-1.203***
	(.124)	(.134)	(.111)	(.294)	(.088)	(.182)

Urban	.137*	-.041	.136	-.081	.297***	.028
	(.072)	(.068)	(.088)	(.084)	(.072)	(.072)
Suburban	-.037	-.072	-.159**	-.161**	.055	-.035
	(.063)	(.065)	(.074)	(.080)	(.067)	(.050)
Residential Mobility (5	.331***	.540***	.553***	.696***	.375***	.496***
years at residence or more)	(.047)	(.064)	(.059)	(.051)	(.047)	(.045)
Occupation						
Military Veteran	.256***	.175**	.170*	.306***	.212*	.248***
	(.081)	(.073)	(.088)	(.052)	(.116)	(.058)
Government Worker	.289***	.205	.493***	.488***	.388***	.257*
	(.064)	(.129)	(.065)	(.079)	(.082)	(.138)
Management	.308***	.177*	.320***	.220**	.323***	.266**
	(.065)	(.107)	(.067)	(.103)	(.078)	(.132)
Professional	.314***	.241*	.146**	.105	.349***	.198
	(.070)	(.145)	(.067)	(.141)	(.059)	(.140)
Service	.017	-.113	-.034	-.368***	.099*	-.092
	(.052)	(.124)	(.070)	(.098)	(.056)	(.110)
Sales	.194***	.229*	.155***	-.054	.200***	.171
	(.067)	(.124)	(.057)	(.107)	(.045)	(.121)
Secretarial	.251***	.505***	.148***	.065	.235***	.274**
	(.048)	(.136)	(.053)	(.090)	(.062)	(.123)
Farming	.088	.107	.231*	.303**	-.033	.169
	(.100)	(.176)	(.137)	(.130)	(.206)	(.421)
Transportation	-.040	-.381***	-.051	-.173	-.036	-.400***
	(.099)	(.139)	(.140)	(.125)	(.084)	(.151)
Constant	-5.194***	-3.507***	-5.505***	-3.069**	-5.131***	-2.157**
	(.911)	(.901)	(1.074)	(1.423)	(1.032)	(1.041)
N	16409	15838	19358	19226	17930	19163
Wald Chi^2	3925.05	8846.69	3689.24	8076.63	3750.40	3116.52
Pseudo R^2	.11	.13	.09	.11	.12	.14

The dependent variable is whether the respondent voted, coded as 1 if yes and 0 otherwise using the CPS. Unstandardized logistic regression coefficients, with robust standard errors in parentheses. Probabilities based on two-tailed tests. Standard errors adjusted by clustering by state. * p<.1; ** p<.05; *** p<.01. Young sample defined by the bottom quartile for age, which was 32 years of age and younger. Old sample defined by the top quartile for age, which was 58 years of age and older. All Wald Chi^2 values are significant at p<.000.

Fig. 1 Predicted Probability of Voting (2000) Varying Education Level and Per Capita Spending on U.S. House of Representatives Races in Respondent's State

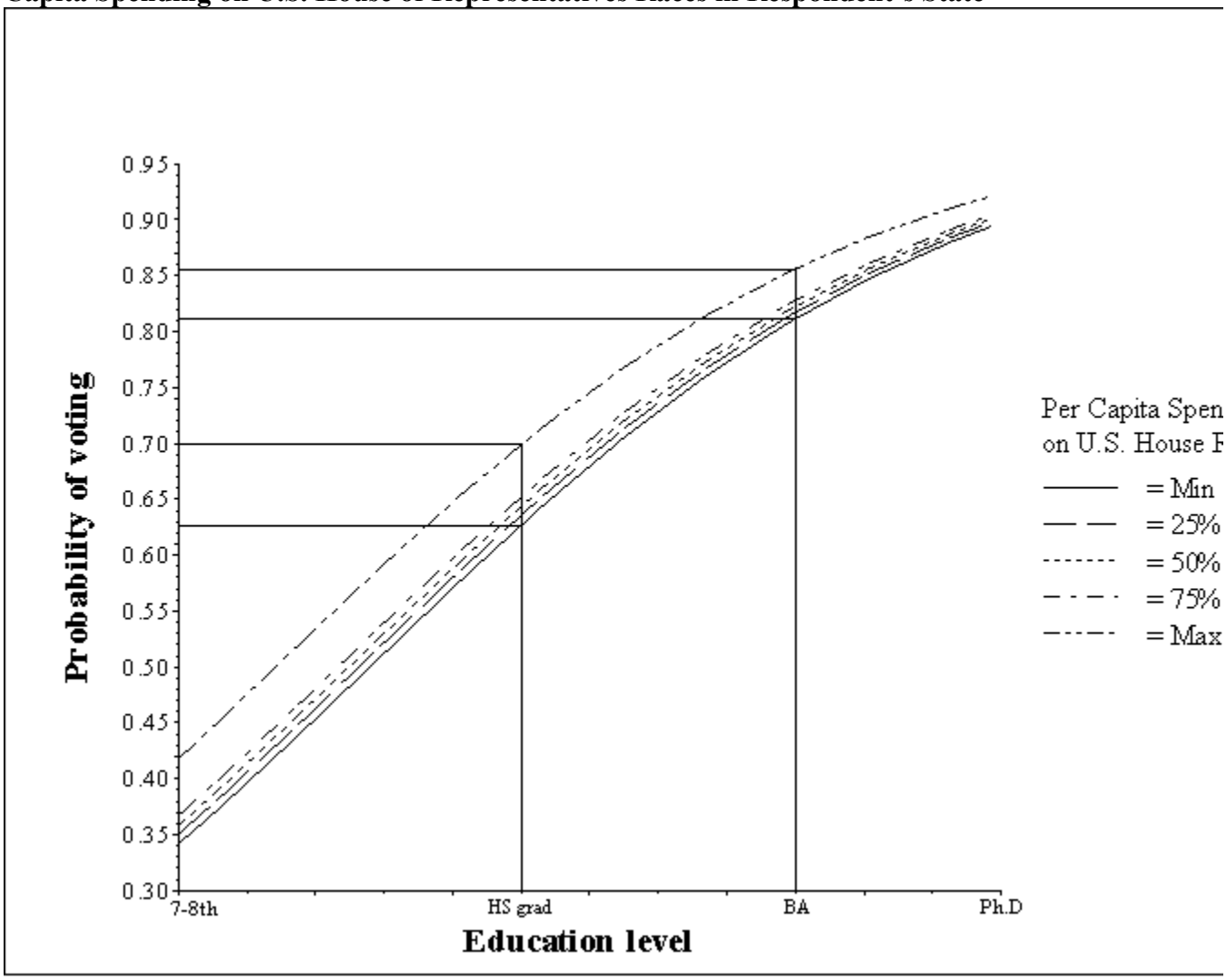


Fig. 2 Predicted Probability of Voting (2000) Varying Age and Per Capita Spending on U.S. House of Representatives Races in Respondent's State

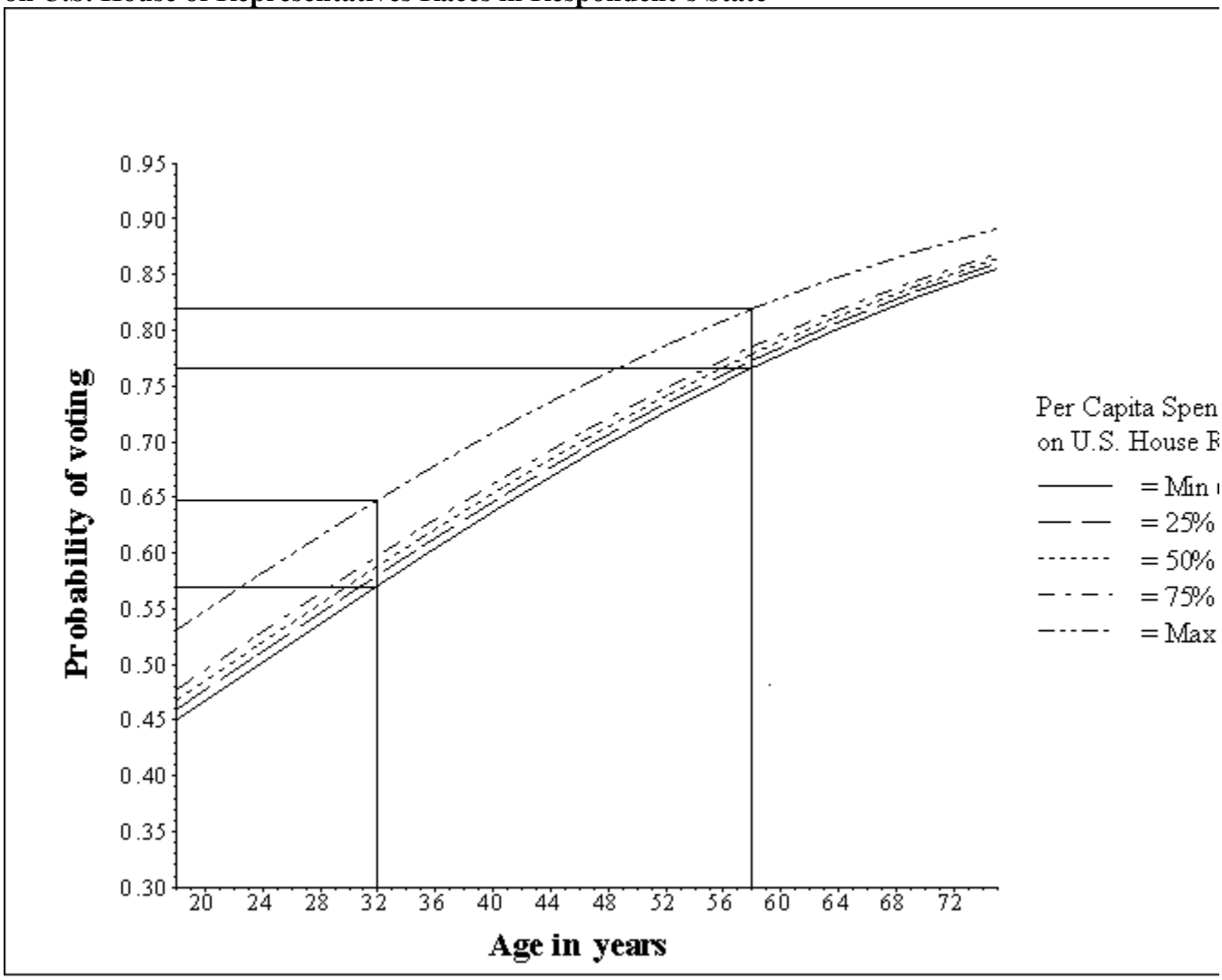


Fig. 3 Predicted Probability of Voting (2000) Varying Education Level and Number of Initiatives on State Ballot

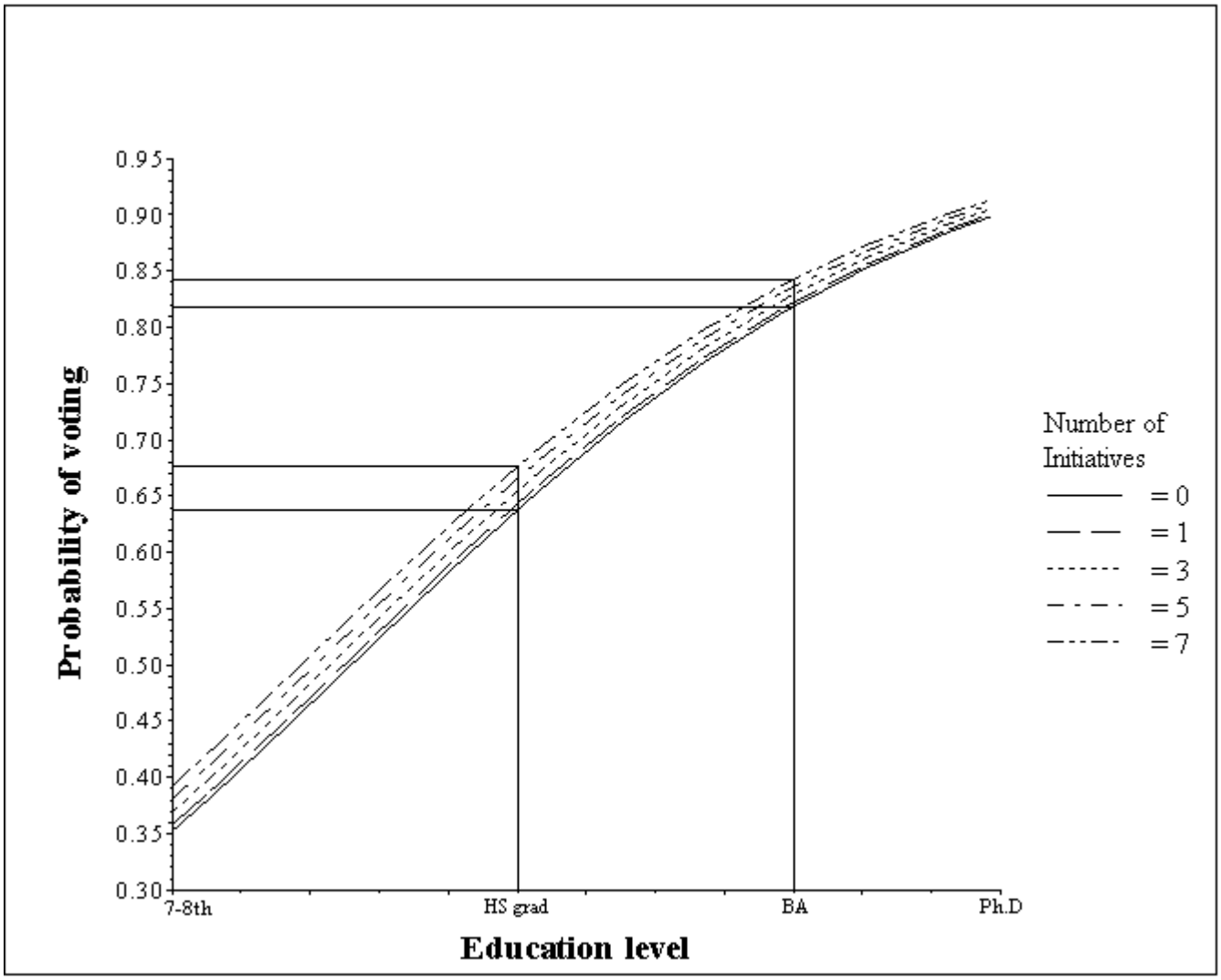


Fig. 4 Predicted Probability of Voting (2002) Varying Education Level and Number of Initiatives on State Ballot

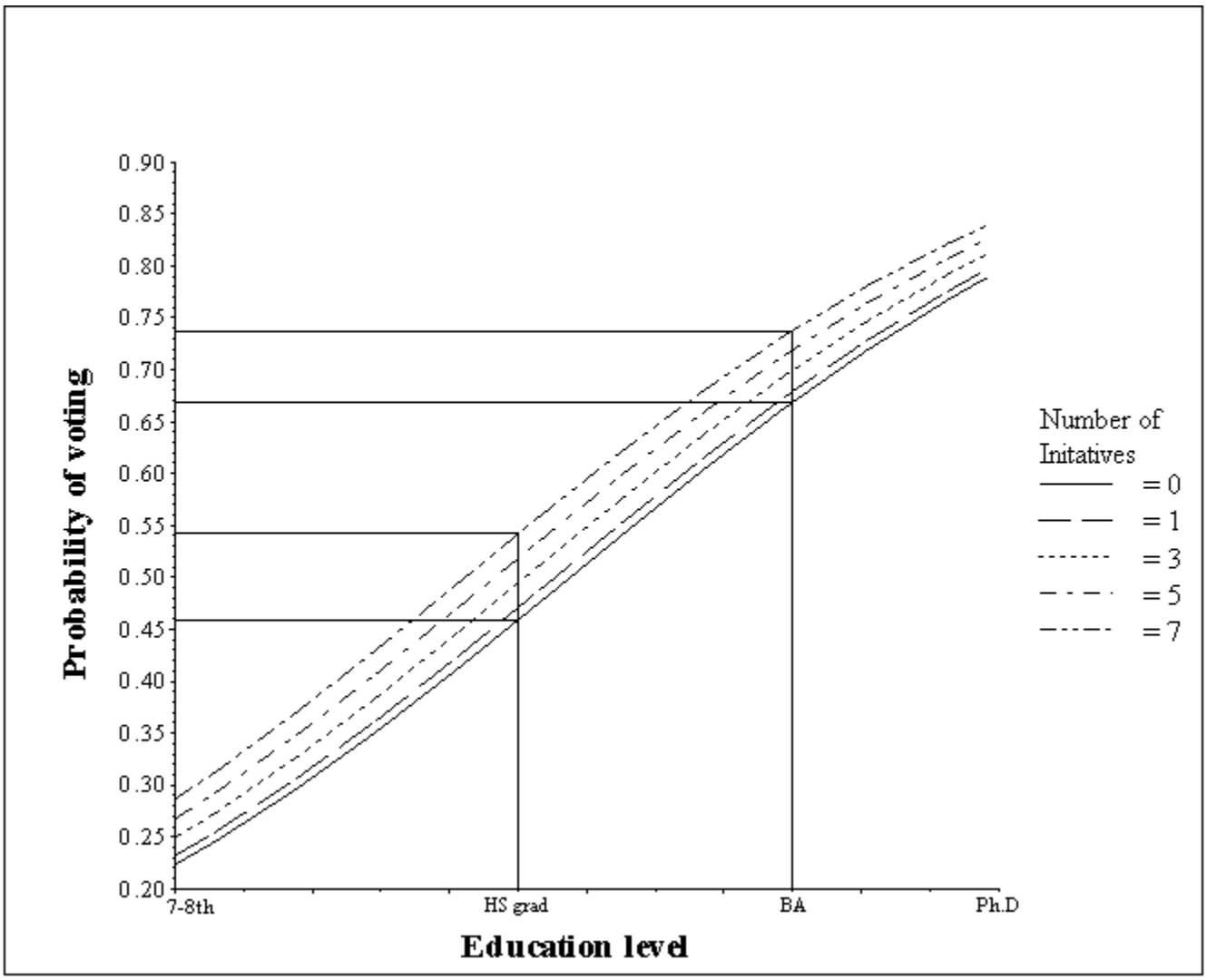


Fig. 5 Predicted Probability of Voting (2002) Varying Education Level and Percent of Uncontested U.S. House of Representatives Races in Respondent's State

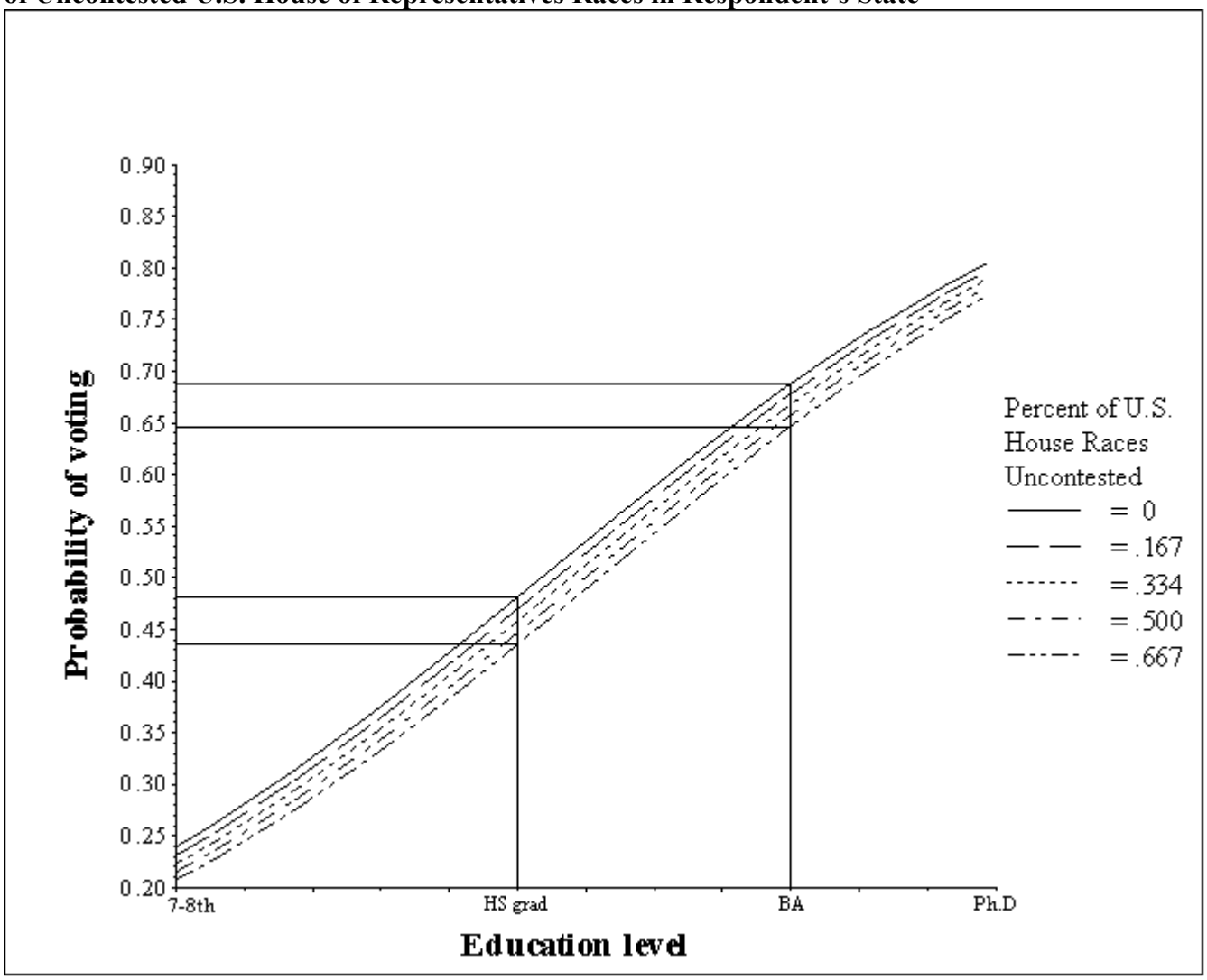


Fig. 6 Predicted Probability of Voting (2002) Varying Education Level and Competitiveness of Senatorial Race in Respondent's State

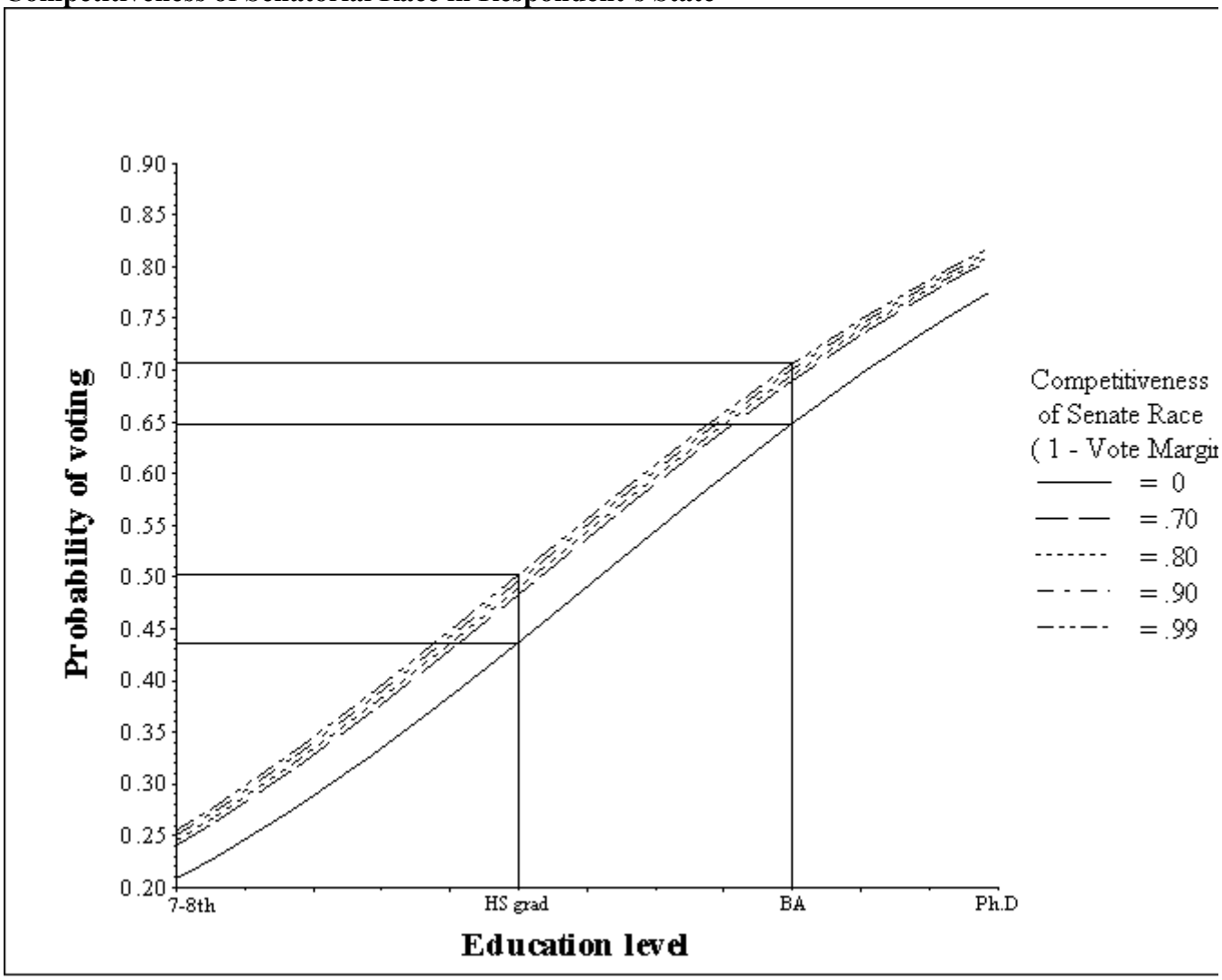


Fig. 7 Predicted Probability of Voting (2004) Varying Education Level and Competitiveness of Presidential Election in Respondent's State

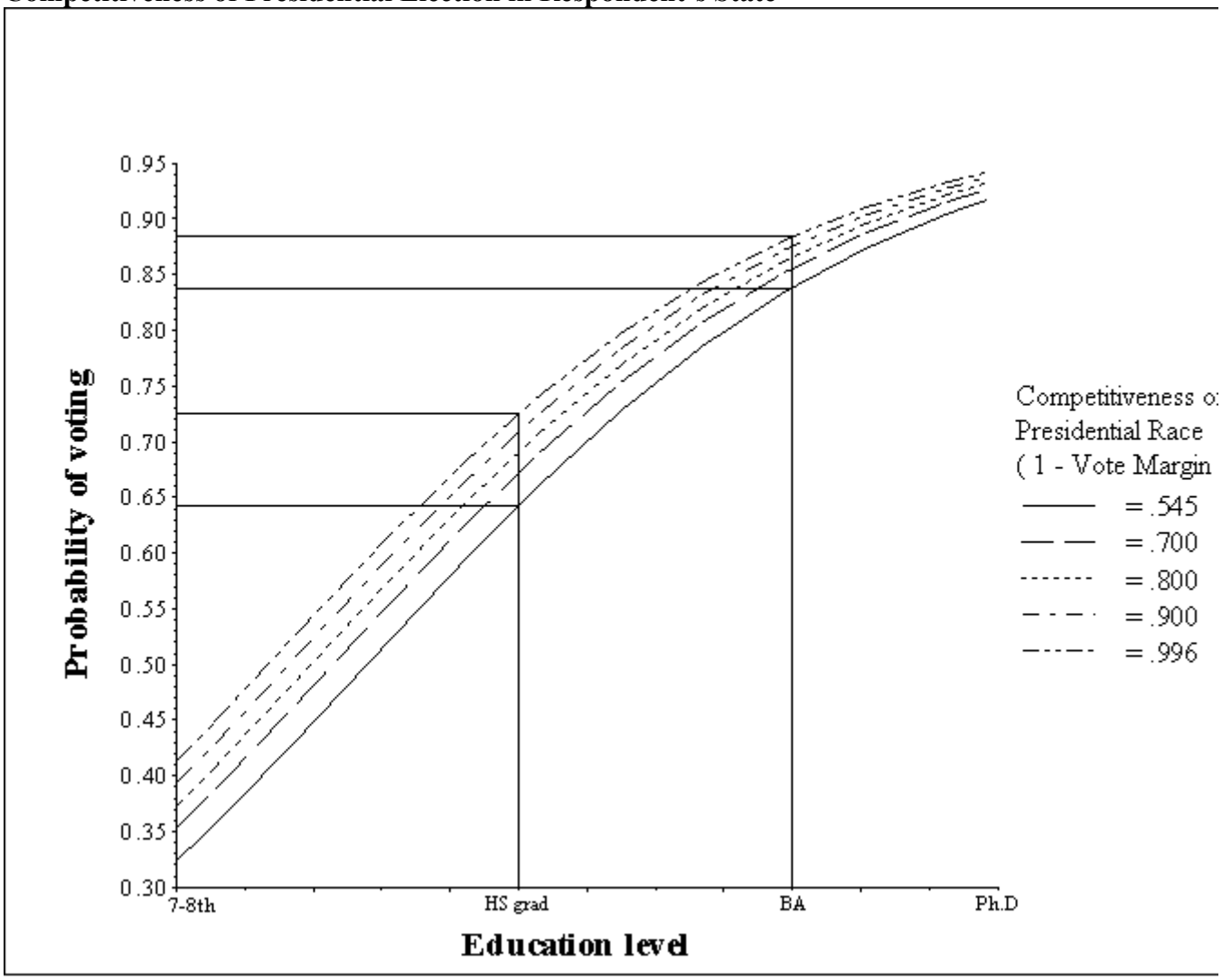
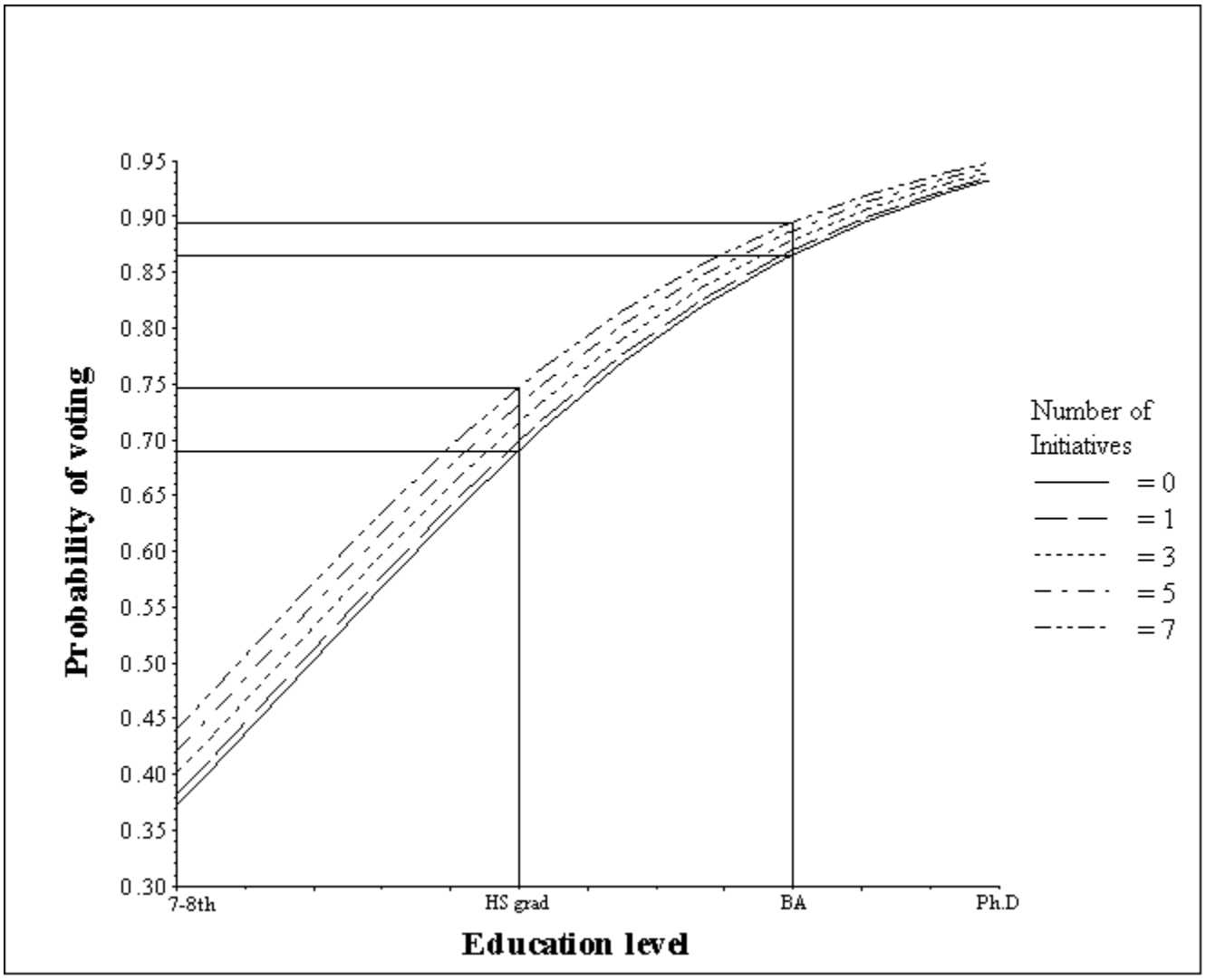


Fig. 8 Predicted Probability of Voting (2004) Varying Education Level and Number of Initiatives on State Ballot



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