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REGISTRANTS, VOTERS, AND TURNOUT VARIABILITY ACROSS NEIGHBORHOODS

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Although political participation has received wide-ranging scholarly attention, little is known for certain about the effects of social and political context on turnout. A scattered set of analyses—well-known by both political scientists and campaign consultants—suggests that one's neighborhood has a relatively minor impact on the decision to vote. These analyses, however, typically rely upon data from a single location. Drawing on official lists of registered voters from sixteen major counties across seven states (including Florida) from the 2000 presidential election, we use geographic/mapping information and hierarchical models to obtain a more accurate picture of how neighborhood characteristics affect participation, especially among partisans. Our research shows that neighborhoods influence voting by interacting with partisan affiliation to dampen turnout among voters we might otherwise expect to participate. Most notably, we find Republican partisans in enemy territory tend to vote less than expected, even after accounting for socioeconomic status. Our findings have implications for campaign strategy, and lead us to suggest that campaign targeting efforts could be improved by an integration of aggregate- and individual-level information about voters.

Key words: voting; voter turnout; political participation; context effects; presidential elections; partisanship; hierarchical generalized linear models; mixed models.

Based on the extraordinarily close elections of 2000 and 2004, the new conventional wisdom among students of American campaigns is that results increasingly hinge on turnout efforts (Citrin, Schickler, and Sides, 2003; DeNardo, 1980, 1986). This insight has led the parties to invest a much higher proportion of their resources into personal contacting and mobilization efforts.[1] In light of recent studies from political science suggesting that these

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investments can bear fruit, this shift in allocation appears sensible (see Gerber and Green, 2000b; Imai, 2004). But neither campaign professionals nor political scientists have a strong sense of precisely who should be contacted because we do not know how local context affects the propensity of individuals to vote. For example, we know that campaigns and parties are strategic in identifying whom they want to mobilize (Herrnson, 2004; Shea and Burton, 2001; Wielhouwer, 2003), commonly drawing upon both individual-level and ecological data to estimate turnout probabilities for all registered voters in relevant jurisdictions (Malchow, 2003; pp. 151–159). In spite of their political and methodological sophistication, however, these political elites use fairly simplistic assumptions to generate their estimates and typically ignore the effects of context on individual-level behavior. Furthermore, there is little consensus among professionals about exactly how to use these estimated turnout probabilities when targeting direct mail and phone calls.

To be fair, the failure to reckon with context is hardly unique to political consultants and operatives. In political science, a long history of participation research—based primarily on self-reported survey data—points to a consensual list of individual level factors that influence the propensity to vote (Campbell, Converse, Miller, and Stokes, 1960; Rosenstone and Hansen, 1993; Rosenstone and Wolfinger, 1980; Stoker and Jennings, 1995; Verba and Nie, 1972; Verba, Schlozman, and Brady, 1995; Zipp and Smith, 1979). By contrast, we are far less confident about how neighborhood characteristics condition the importance of these traditional factors, although we have strong reasons to believe that contextual characteristics do matter (Huckfeldt, 1986; Huckfeldt and Sprague, 1987, 1991; Huckfeldt, Plutzer, and Sprague, 1993; Johnston et al., 2004). In this study, we take aim at this issue and examine geocoded voter list data from sixteen counties to estimate how the social and residential context of neighborhoods affects the likelihood that someone voted in the 2000 general election.

Our broader theoretical claim is simple: geographic context affects voter turnout when it limits the acquisition of political information among voters who are normally resource rich. Conversely, we posit that certain contexts boost turnout among those who are otherwise resource poor. This perspective leads to several more specific hypotheses. In particular, we hypothesize that party composition (and, by extension, racial/ethnic composition) should suppress turnout among out-numbered partisans because minority status in a community can interfere with the acquisition of political information that facilitates voting. In addition to partisan and demographic factors, we also expect that residential mobility contributes to individual turnout probabilities. New voters can register, but may face significant costs learning about the unfamiliar names on the long ballot, the relevant issues facing their community, and where they must go to cast their vote.

It would be easy to misconstrue the causal mechanism we are claiming here, so let us be clear. It is not that voting is such a highly public or demanding act

that social pressure comes directly into play, but rather that many key antecedents of the act of voting are influenced by the peculiar and variable opinion distributions of local areas. Where citizens live at least partly determines what they learn and know.

At the same time, we are open to the possibility that politically stimulating environments can enhance the participatory impulses of those who might otherwise abstain. A politically diverse context can maximize the amount of political knowledge and discussion in a locale, generating information flows that produce greater efficacy than in more homogeneous areas (Gimpel, Lay, Schuknecht, 2003). In summary, then, similar people may wind up with very different voting histories because of where they live. Political participation has a geography, as well as a psychology.

HOW NEIGHBORHOODS AFFECT TURNOUT

How is a citizen's probability of voting affected by context—that is, by the social characteristics and predispositions of those around her? As stated earlier, our principal theoretical claim is that context adversely affects voter turnout when it limits information acquisition among otherwise resource rich voters. It can also promote turnout under circumstances where it maximizes information acquisition. We are certainly not the first to advance this idea. The Columbia scholars identified social context as perhaps the most important factor in the activation of partisan predispositions (Berelson and Gaudet, 1994; Lazarsfeld and Mcphee, 1954). They also posited that citizens subjected to "cross pressures"—conflicting political signals from group and opinion leaders—tended to abstain from voting. This notion was picked up by the Michigan scholars, who pointed out that a heterogeneous social context is one of a number of key explanations for attitude conflict and even demobilization (Campbell et al., 1960; pp. 80–81).

Even more germane to our work, however, are more recent studies demonstrating the relevance of neighborhood effects to turnout and opinion (Baybeck and McClurg, 2004; Beck, Dalton, Green, and Huckfeldt, 2002; Cohen and Dawson, 1993; Eulau and Rothenberg, 1986; Giles and Dantico, 1982; Huckfeldt, 1979; Huckfeldt and Sprague, 1997; Huckfeldt, Plutzer, and Sprague, 1993; Kenny, 1992; Krassa, 1988; Rolfe, 2004; Straits, 1990). Here the data indicate that neighborhoods and local context seem to matter less for certain kinds of participation (Huckfeldt, 1979), with voter turnout less affected by context than more involved acts such as posting a sign in one's yard, attending a rally, giving money, or working for a campaign (Kenny, 1992).

Our expectation is that the requisite information necessary to vote is available to citizens, even those who are predisposed to favor candidates at odds with the prevailing preferences of the neighborhood. This information

can be acquired via the mainstream news media, family, and perhaps friends and co-workers from outside the neighborhood. But we also believe that political information from more localized sources can still influence turnout rates for those whose predispositions run contrary to local majority views. It is important to point out that while we assume people acquire a sense of the local opinion distribution, we do not necessarily assume voters have a great deal of contact with their neighbors. Baybeck and McClurg (2004) have shown that even citizens who seldom interact with neighbors or read a local newspaper are still able to perceive accurately their political and economic environments.

The reasons for this demobilization are deceptively simple. Perceiving that one is at odds with one's neighborhood may (a) reduce the perceived utility of supporting the preferred party's candidate, and (b) increase the incentive to avoid cognitive dissonance, and perhaps interpersonal conflict, by withdrawing from politics. Avoidance of dissonance is not necessarily a direct cause of abstention, but can indirectly cause abstention by producing an aversion to acquiring the kind of political information that generates higher turnout. We also presume that party mobilization efforts—which provide voting cues along with substantive political information—may be less aggressive in neighborhoods dominated by the other party. In short, we suspect citizens who would otherwise be expected to vote might not do so in neighborhoods dominated by their non-preferred party.

As for which aspects of social context matter, and how they matter, the extant literature provides some intriguing clues. As suggested above, some research indicates that partisan context is likely to influence participation in as much as it shapes the flow and content of information that drives turnout. The logic of this argument is that partisans avoid discussions of politics in areas dominated by the other side. Avoidance of discussion, in turn, leads to a dearth of information among minority partisans (Huckfeldt and Sprague, 1995; Noelle-Neumann, 1993). Moreover, if they have no other sources of information, they may participate less simply because their neighborhood makes engagement in political activity a potentially conflictual act. This notion is backed by empirical studies demonstrating that citizens functioning under conditions where their policy interests are consistently defeated or shouted-down feel less efficacious than citizens whose interests dominate (Iyengar, 1980; Weissberg, 1975). Conversely, a more evenly divided macro environment stimulates participation because it increases information flow and often attracts the attention of political candidates and parties looking to find and persuade swing voters.

Aside from the partisan complexion of the neighborhood, local education and income profiles may also affect individual voters. According to the resource theory of turnout, participation is driven by skills, money, and status, all of which abound in wealthier and better-educated environments (Leighley,

1995, p. 183).[2] Although our registered voter lists do not provide data on individual income and education levels, we can evaluate the effects of *neighborhood* SES, which we measure by the percentage of residents with a 4-year college degree.[3] Of course it is likely that the neighborhood variables measuring socioeconomic status significantly correlate with the wealth and education of individual voters sampled from the lists. More to the point, we expect partisan identifiers living in areas with lower levels of education will show less of a propensity to participate than those living in better-educated settings.

We also evaluate the effects of a neighborhood's racial and ethnic composition on the participation of Republican and Democratic registrants. Undoubtedly, neighborhood characteristics correspond to the individual ethnic and racial identities of individuals residing there. Furthermore, without race or ethnicity data on individuals in the voter file, it is impossible to evaluate the interplay of individual and neighborhood racial characteristics. Still, it is informative to know whether the participation of Republicans and Democrats varies with the racial composition of their neighborhoods. We might expect, for example, that Republican registrants living in Black and Latino neighborhoods—where GOP adherents would typically be a decided minority—will vote less frequently than Democrats who would ordinarily find themselves safely in the majority in these same places. On the other side of the ledger, Democrats in Black and Latino neighborhoods may show a higher propensity to vote than they would in homogeneously white areas because these neighborhoods tend to have heavily Democratic (and, hence, more like-minded) populations.

Beyond party, status, and race/ethnicity, previous research shows that political participation rates are much lower among recent residents than among the well-established (Gimpel, 1999; Highton and Wolfinger, 2001; Squire, Wolfinger, and Glass, 1987; Timpone, 1998). Unless highly motivated, new residents may not even be on the registration rolls in places with burdensome registration requirements. Nevertheless, even among those who are registered to vote, the habit of voting in a new location is acquired slowly. We anticipate that neighborhoods with higher turnover will also be locations of low information exchange, where politics are not widely discussed. Partisans living in such neighborhoods thus suffer the consequences of living around other uninformed voters—it is more difficult and costly to navigate an unfamiliar political landscape.

Although we are somewhat limited by the individual-level information on the voter lists, we are able to gauge how gender, age, and previous vote history affect turnout in 2000 across a variety of neighborhood contexts. Our expectations for each of these control variables are straight-forward, though not obvious. Knowing that many recent studies have found little or no gender gap in political participation or engagement (Sapiro and Conover, 1997;

Schlozman, Burns, and Verba, 1994; Verba, Burns, and Schlozman, 1997), we believe one may exist once we control for both previous participation and context. Specifically, we hypothesize that among irregular voters, women will be more likely to turn out than men, primarily because both parties and interest groups more deliberately target women for campaign-related contacts.[4]

In addition to the multi-level relationships between neighborhood and partisanship, we also control for two individual level variables that could have independent effects on turnout: age and vote history. For age, a considerable body of work has shown that younger voters often do not develop participatory habits and are much less likely to turn out than middle-aged voters. The data also show that participation rates drop off again in old age (Rosenstone and Hansen, 1993).

For vote history, we posit that current participation levels are likely to be explained by previous voting behavior (Plutzer, 2002). In fact, one important study found that the effect of past voting far surpasses the effects of age and education reported in prior research (Gerber, Green, and Shachar, 2003). To measure vote history, we rely on actual turnout records from the 2000 presidential primary and the off-year general election in 1998. We expect that those who participated in these elections are far more likely to have voted in the 2000 general election than those who did not. Furthermore, given that campaigns customarily spend an inordinate amount of time and money contacting citizens who are already reliable participants, including vote history measures allows us to explain participation patterns as a habit. To be sure, this inclusion may weaken the effect of traditional explanatory variables on participation, but it will also help us to understand the powerful impact of habit on political behavior.

DATA AND RESEARCH DESIGN

For all the impressive research on participation in the U.S., we have not advanced far in our understanding of how neighborhoods condition the participation of voters because we often lack the appropriate data and analytical tools. Traditional ecological data sets measure voter characteristics at too gross a level (states, standard metropolitan statistical areas, or even counties) to facilitate definitive inference. Surveys, on the other hand, typically rely on respondent descriptions of where they live and what local conditions are like. Over-reporting is also a problem with the survey approach, as more respondents say they voted than actually did. For this study, we utilize individual-level data supplemented by block-level information from the 2000 U.S. Census. More specifically, we employ lists of all registered voters in 16 counties: Brevard (FL), Broward (FL), Hillsborough (FL), Orange (FL), Palm Beach (FL), Pinellas (FL), Dallas (IA), Polk (IA), Story (IA), Chester (PA), Delaware (PA), Montgomery (PA), Bernalillo (NM), Clark (NV), Jefferson (KY), and Mecklenburg (NC).

The Florida, Iowa, New Mexico, and Pennsylvania counties were selected because they were key locations in battleground states in 2000. The Kentucky, Nevada, and North Carolina counties were added to increase variation in the sample, most notably with respect to competitiveness and campaign outreach.[5] The availability of party enrollment data was a factor, as many states—including Colorado, Missouri, Wisconsin, Minnesota, Michigan, Washington, and Ohio—do not record party affiliation when registering voters. Our goal in selecting states and counties was to take advantage of the availability of voter lists while simultaneously maximizing variance across all of our contextual and explanatory factors.

In each county, registered voters' addresses were geocoded onto precincts and census tracts using a Geographic Information System (GIS). The geocoding process involves matching the addresses for voters on each list to street ranges contained in a GIS database for each county. In our case, we used the Dynamap 2000™ street range database and found that we were easily able to pinpoint the residences of over 90% of registered voters across the 16 counties.[6] To purge the voter lists of dead wood resulting from address changes, each list was checked prior to geocoding by running all names and addresses through the U.S. Postal Service's National Change of Address (NCOA) registry, a database established in 1986 containing 150 million change-of address records. The NCOA process effectively highlights addresses that are no longer valid for registered voters who have moved within the previous 48 months.[7]

Once each residential address is geocoded onto the map, it is easy to link the record from the voter list to the relevant neighborhood information on precincts and census tracts. From there, our goal is to model the pattern of participation and abstention by reference to individual and neighborhood characteristics.

To assess the effect of neighborhood context and other factors on turnout, we rely upon a method that is uniquely suited to provide unbiased estimates of multi-level effects. Hierarchical Linear Modeling (HLM) is a procedure for investigating data occurring at two levels of analysis (Humphries, 2001; Lee and Bryk, 1989; Raudenbush and Bryk, 1986, 2002; Steenbergen and Jones, 2002). Level one variables are observed at the individual level. In our case, these include the items contained in the voter list file: the participation history, party registration, age, and sex of the voter. Since we hypothesize that turnout is a function not merely of individual characteristics, but also characteristics of neighborhoods, we have a second level of data: observations occurring at the neighborhood level, for which we use either census tract information, or individual data aggregated to the tract or precinct level.

Because our observations at level one are clustered into neighborhoods, traditional regression approaches, which assume that the observations are independent, are inappropriate. Citizens living within a particular neighborhood share certain background characteristics and look more like each other,

on average, than they do someone many miles away. And because Republicans and Democrats, for example, are present to varying degrees across neighborhoods, a failure to represent this unevenness could bias the coefficients of a traditional prediction equation, distorting voter-level effect estimates (Raudenbush and Bryk, 2002, pp. 137–138). We confine remaining details of the estimation procedure to the appendix.

As suggested above, using geocoded voter lists for participation research has two impressive advantages over traditional approaches. First, the turnout figures are not self-reports, as in survey research, but the actual participation records of registered voters. Second, extraordinarily large samples can be drawn from the lists, providing us with the capacity to truly represent and test neighborhood contexts. In particular, a data set must include sufficient cases within neighborhoods so that these cases can be aggregated to produce a context-specific estimate of neighborhood effects (Huckfeldt and Sprague, 1995, p. 35); the voter lists easily meet this condition.

By contrast, the major limitation of using voter lists to study political participation is the absence of detailed individual level data.[8] While almost all lists contain some information on the vote history, age, sex, and party registration of each registrant,[9] desirable items such as income, education level, political interest, issue opinions, and candidate evaluations are lacking. Still, political interest, education level and income are likely to be highly correlated with vote history, suggesting that the inclusion of previous decisions about participation in primary and off-year elections may capture some variation that might otherwise be explained by these missing bits of individual information. To thoroughly consider the limitations to our approach, we also validate the voter list analysis by examining survey data that contain individual-level covariates as well as neighborhood level information (see analysis accompanying Table 4). More specifically, we examine the political behavior and demographic characteristics of individuals from Brevard, Broward, Hillsborough, Palm Beach, and Pinellas Counties using tracking polls conducted by the Bush-Cheney campaign in Florida between September 24 and October 25, 2000.[10] The 2,000 cases from these counties allow us to investigate the effects of neighborhood context in the presence of relevant individual level covariates not available on the voter file itself.

RESULTS

Our analysis of the voter list data underscores several key findings. First, Republicans across a variety of contexts tended to vote at higher rates than Democrats in 2000—no great surprise. Second, neighborhoods can and do condition the effects of several of the more predictable individual influences on the vote. In particular, partisans were often less likely to vote in neighborhoods where they were surrounded by supporters of the other party in

2000. Furthermore—and perhaps surprisingly, given the aforementioned GOP turnout advantage—the neighborhood effects appear to have been more consistently powerful for Republicans facing Democratic majorities than vice-versa. It is also apparent that Republicans and Democrats (but especially Republicans) were less likely to turn out in areas of high in-migration. These results are considered in greater detail across several settings. Initially, we examine several Florida locations. We then proceed to compare the lessons learned in the Sunshine State to results from other states.

Florida

In Table 1, we present a panel of results for our six Florida counties. As for partisan differences, we find Republican turnout to be higher than Democratic turnout in all of the counties, except heavily Democratic Broward. While the expected odds that a Republican would turn out to vote in Broward County are 1.19 times the odds of an "independent,"[11] the odds of a Democrat going to the polls in Broward County are slightly higher, or 1.25 times the odds of a similar independent showing up. What makes the Broward results so remarkable is that in all other Florida locations, Democratic turnout runs considerably lower than Republican participation, with the widest gap occurring in the Orlando area (Orange County).

But how do the average partisan effects on turnout we have just highlighted vary across neighborhoods? To determine that, we examine the magnitude and significance of the level-two effects included in the model. Is there a tendency for Republicans and Democrats to stay home in areas where they are a decided minority? Yes, but the depressive effect is consistently greater for Republicans. Republicans are significantly less likely to turn out as the Democratic edge grows across neighborhoods in every single Florida location. In Palm Beach County, for instance, moving from low to high levels of Democratic concentration in neighborhoods drops Republican turnout by about 8%. Democrats lose ground as Republican strength edges upward across neighborhoods only in Broward County, where Republicans are a decided minority countywide.

Aside from this partisan effect, one of our most noteworthy findings is that Republican turnout declines in areas with significant in-migration. In each Florida county, neighborhoods with high proportions of movers show lower GOP turnout. The effect is less evident for the Democrats, but it does appear in Brevard, Broward and Hillsborough counties.

Individual characteristics also interact with other neighborhood contexts, but not as significantly. We find some tendency for participation to move upward in Florida neighborhoods with better educated residents. Republican participation rises in neighborhoods with higher educational attainment in Broward, Orange and Pinellas Counties. Democratic participation rises

TABLE 1. Two Level Model of Voter Turnout, controlling for individual Characteristics and Neighborhood Contextual Effects

Fixed Effects	Explanatory Variable	Brevard County, FL	Broward County, FL	Hillsborough County, FL	Orange County FL	Palm Beach County, FL	Pinellas County, FL
Overall Means (β_0)	Intercept	−.9419***	−1.3523***	−1.1789***	−1.0352***	−.9558***	−.8317***
		(.0669)	(.0382)	(.0523)	(.0592)	(.0504)	(.0492)
		.3899	.2586	.3076	.3551	.3845	.4353
Republican Identifiers (β_1)	Intercept	.9391***	.1764*	.8253***	.8822***	.3893***	.6440***
		(.2150)	(.1028)	(.1297)	(.1417)	(.1363)	(.1368)
		2.5576	1.1929	2.2825	2.4161	1.4760	1.9041
	Percent Black	−.0028	−.0035***	−.0036***	−.0012	−.0058***	−.0011
		(.0031)	(.0010)	(.0018)	(.0020)	(.0016)	(.0018)
	Percent College Educated	-.0001	.0060***	.0018	.0050**	.0033	.0045**
		(.0031)	(.0016)	(.0014)	(.0020)	(.0022)	(.0020)
	Percentage Migrants (last 5 years)	−.0082*	−.0118***	−.0086***	−.0081**	−.0099**	−.0119***
		(.0043)	(.0038)	(.0033)	(.0035)	(.0043)	(.0034)
	Percent Hispanic	−.0093	.0043***	−.0022	−.0013	−.0006	−.0010
		(.0127)	(.0016)	(.0017)	(.0023)	(.0023)	(.0060)
	Percent Democratic	−.0103**	−.0033**	−.0080***	−.0133***	−.0063***	−.0124***
		(.0042)	(.0016)	(.0027)	(.0027)	(.0020)	(.0028)
Democratic Identifiers (β_2)	Intercept	−.1827	.2270***	.1732	.0414	.1523	.2707**
		(.1837)	(.0704)	(.1102)	(.1530)	(.1006)	(.1112)
		.8330	1.2549	1.1892	1.0423	1.1646	.7628
	Percent Black	.0026	−.0003	−.0015	−.0018	−.0032***	.0027**
		(.0025)	(.0007)	(.0012)	(.0016)	(.0011)	(.0012)
	Percent College Educated	.0000	.0092***	.0051***	.0063***	.0023	.0061***
		(.0030)	(.0014)	(.0014)	(.0023)	(.0020)	(.0020)
	Percent Migrants (last 5 years)	-.0075*	-.0083**	-.0127***	-.0034	.0008	-.0054
		(.0043)	(.0033)	(.0032)	(.0039)	(.0040	(.0034)

TABLE 1. Continued.

Fixed Effects	Explanatory Variable	Brevard County, FL	Broward County, FL	Hillsborough County, FL	Orange County FL	Palm Beach County, FL	Pinellas County, FL
	Percent Hispanic	.0162 (.0117)	.0043*** (.0014)	.0003 (.0015)	.0009 (.0024)	-.0043** (.0019)	-.0096* (.0055)
	Percent Republican	.0109*** (.0034)	−.0070*** (.0015)	.0050*** (.0023)	.0031 (.0024)	−.0011 (.0019)	.0085*** (.0025)
Gender (β_3)	Intercept	.2154*** (.0242) 1.2403	.2313*** (.0131) 1.2602	.2025*** (.0190) 1.2244	.1763*** (.0218) 1.1928	.1884*** (.0174) 1.2073	.1875*** (.0168) 1.2063
Age 18–29 (β_4)	Intercept	−.4788*** (.0597) .6195	−.0191 (.0341) .9811	−.0551 (.0428) .9464	−.0169 (.0494) .9833	−.2651*** (.0418) .7672	−.3190*** (.0413) .7269
Age 20–39 (β_5)	Intercept	-.0173 (.0551) .9828	.3502*** (.0335) 1.4194	.4119*** (.0439) 1.5097	.4344*** (.0505) 1.5440	.1881*** (.0420) 1.2070	.0910** (.0404) 1.0952
Age 40–49 (β_6)	Intercept	.2343*** (.0567) 1.2640	.5517*** (.0348) 1.7362	.6247*** (.0460) 1.8678	.6440*** (.0496) 1.9040	.4522*** (.0414) 1.5718	.2915*** (.0396) 1.3384
Age 50–59 (β_7)	Intercept	.3726*** (.0550) 1.4516	.6386*** (.0356) 1.8938	.6802*** (.0480) 1.9744	.7239*** (.0527) 2.0625	.4975*** (.0405) 1.6446	.3674*** (.0395) 1.4439
Age 65 and up (β_8)	Intercept	.2603*** (.0540) 1.2974	.2938*** (.0322) 1.3416	.4114*** (.0468) 1.5090	.5557 (.0539) 1.7431	.1789*** (.0401) 1.1959	.0997*** (.0386) 1.1049
1998 General Voter (β_9)	Intercept	2.7794*** (.0381) 16.1099	2.7594*** (.0227) 15.7907	2.7908*** (.0316) 16.2943	2.4925*** (.0373) 12.0909	2.8930*** (.0277) 18.0465	2.8771*** (.0285) 17.7624

TABLE 1. Continued.

Fixed Effects	Explanatory Variable	Brevard County, FL	Broward County, FL	Hillsborough County, FL	Orange County FL	Palm Beach County, FL	Pinellas County, FL
2000 Primary Voter (β_{10})	Intercept	2.3038***	2.2793***	2.0778***	2.0535***	2.3399***	2.2186***
		(.1024)	(.0410)	(.0761)	(.0592)	(.0563)	(.0644)
		10.0121	9.7694	7.9870	7.7955	10.3802	9.1948
No. of Level 1 Units		47,645	155,643	82,694	58,995	100,675	101,681
No. of Level 2 Units		157	569	305	316	511	335

Hierarchical Generalized Linear Model; Slopes and Intercepts Estimation cell entries are logistic regression coefficients, (standard errors), and odds ratios.

Results fro reliability estimates and variance components do not appear in the table, but are available from the authors upon request.

*p < 10; **$p \leq .05$; ***$p \leq .01$.

education levels increase in Broward, Hillsborough, Orange and Pinellas counties.

Among the other results, our estimates consistently indicate that women turned out in higher proportions than men. Note, though, that these models control for vote history, suggesting that the gender variable is picking up the effect of women who are irregular voters (e.g., those who do not participate regularly in off-year and primary elections). In other words, it would appear that women who may be peripheral (or "floating") voters were mobilized in 2000.

Consistent with previous research, younger voters (18–29) are less likely to vote just about everywhere, but especially in Brevard, Palm Beach and Pinellas Counties, where older voters are particularly likely to vote, exacerbating the contrast between the generations. In Pinellas, for every 100 older voters going to the polls, only an estimated 73 young voters showed up. In Brevard, the deficit is even worse, with only 62 young voters turning out for every 100 older voters. The elderly, for their part, are most active in the Orlando area, where they outvote younger voters by a factor of 1.74, according to the odds ratio in Table 1.

As expected, turnout is unquestionably influenced by previous voting behavior. The odds ratios are enormous, indicating that the impact of habit far outweighs any other force in these models, consistent with the findings of previous research (Gerber et al., 2003). If we could use only one previous vote, turnout in the 1998 midterm (not the 2000 primary) would be the best predictor of voting in the 2000 presidential contest.

Locations in Other States

How unique are the Florida results? By taking the same analytical approach in other areas, we seek more consistent and general patterns. Tables 2 and 3 present results for Des Moines, Louisville, Las Vegas, Albuquerque, Charlotte, and the collar counties that constitute suburban Philadelphia. On the GOP side of the equation, a few things stand out. First, Republicans exhibit lower turnout in areas of high in-migration. In this important respect, the results are the same as those from Florida. Republicans do especially poorly in high migration areas of Montgomery County, Pennsylvania, where GOP registrants in the most highly migratory neighborhoods participate 14% less than those in the most residentially stable neighborhoods.

Second, Republicans commonly turn out at lower rates in the heavily Democratic neighborhoods (Chester, Charlotte, Clark, and Montgomery). For instance, in Albuquerque, New Mexico, if we compare two Republican voters who are similar in other ways, but differ by 10% in the extent of Democratic dominance in their neighborhood, we can expect the voter in the more

TABLE 2. Two Level Model of Voter Turnout, controlling for individual Characteristics and Neighborhood Contextual Effects

Fixed Effects	Explanatory Variable	Des Moines, IA (Dallas, Polk, Story Counties)	Chester County, PA	Delaware County, PA	Montgomery County, PA
Overall Means (β_0)	Intercept	.4578***	−.4754***	−.8615***	−1.1264***
		(.0681)	(.0710)	(.0662)	(.0426)
		1.5805	.6216	.4225	.3242
Republican Identifiers (β_1)	Intercept	.7543***	.4769***	.0526	.4460***
		(.1827)	(.1393)	(.0705)	(.0763)
		2.1261	1.6111	1.5040	1.5621
	Percent Black	−.0055	−.0021	−.0039***	−.0006
		(.0061)	(.0035)	(.0013)	(.0024)
	Percent College Educated	−.0028	.0038**	.0150***	.0059***
		(.0026)	(.0017)	(.0014)	(.0013)
	Percentage Migrants (last 5 years)	−.0251***	−.0086	−.0268***	−.0207***
		(.0097)	(.0052)	(.0056)	(.0055)
	Percent Hispanic	−.0038	−.0040	−.0325***	−.0237**
		(.0108)	(.0048)	(.0119)	(.0095)
	Percent Democratic	.0006	−.0168***	−.0034	−.0111***
		(.0040)	(.0033)	(.0021)	(.0019)
Democratic Identifiers (β_2)	Intercept	.2100*	−.7235***	−.1484	−.3995***
		(.1120)	(.1930)	(.1636)	(.1334)
		1.2337	.4851	.8621	.6706
	Percent Black	.0000	−.0017	−.0032**	.0053***
		(.0038)	(.0031)	(.0013)	(.0020)
	Percent College Educated	−.0068***	.0033	.0108***	.0101***
		(.0024)	(.0021)	(.0018)	(.0014)
	Percent Migrants (last 5 years)	−.0088	.0016	−.0088	−.0238***
		(.0081)	(.0068)	(.0068)	(.0060)
	Percent Hispanic	−.0104	−.0085	−.0403***	−.0253***
		(.0082)	(.0057)	(.0122)	(.0087)
	Percent Republican	.0112***	.0092***	.0013	.0060***
		(.0036)	(.0034)	(.0021)	(.0020)

TABLE 2. Continued.

Fixed Effects	Explanatory Variable	Des Moines, IA (Dallas, Polk, Story Counties)	Chester County, PA	Delaware County, PA	Montgomery County, PA
Gender (β_3)	Intercept	.1234***	.0961***	.2922***	.1503***
		(.0241)	(.0248)	(.0205)	(.0179)
		1.1314	1.1009	1.3393	1.1621
Age 18–29 (β_4)	Intercept	−.5341***	−.2905***	−.0140	.2852***
		(.0678)	(.0633)	(.0528)	(.0343)
		.5862	.7479	.9861	1.3300
Age 30–39 (β_5)	Intercept	−.4813***	.1764***	.3453***	.5736***
		(.0684)	(.0638)	(.0526)	(.0328)
		.6180	1.1929	1.4125	1.7746
Age 40–49 (β_6)	Intercept	−.1571	.5370***	.6407***	.9516***
		(.0690)	(.0646)	(.0541)	(.0356)
		.8546	1.7108	1.8978	2.5898
Age 50–59 (β_7)	Intercept	.0422	.5021***	.7611***	1.0058***
		(.0722)	(.0637)	(.0580)	(.0355)
		1.0452	1.6521	2.1407	2.7341
Age 65 and up (β_8)	Intercept	−.2325***	−.0902	.1749***	.3936***
		(.0746)	(.0651)	(.0572)	(.0360)
		.7925	.9137	1.1911	1.4823
1998 General Voter (β_9)	Intercept	1.9098***	2.0204***	2.5710***	2.6224***
		(.0391)	(.0349)	(.0362)	(.0304)
		6.7518	7.5413	13.0794	13.7687
2000 Primary Voter (β_{10})	Intercept	.7272***	2.5723***	2.2125***	2.1478***
		(.0426)	(.0991)	(.0737)	(.0692)
		2.0694	13.0956	9.1390	8.5659
No. of Level 1 Units		55,247	42,200	58,791	80,334
No. of Level 2 Units		228	217	407	404

Hierarchical Generalized Linear Model; Slopes and Intercepts Estimation cell entries are logistic regression coefficients (standard errors), and odds ratios. Results for reliability estimates and variance components do not appear in the table, but are available from the authors upon request.
*$p \leq 10$;**$p \leq .05$; ***$p \leq .01$.

Democratic location to vote at only 86% the rate of the other voter. In Montgomery County, known as a highly competitive battleground, GOP turnout drops by 18% across the range of Democratic concentration in neighborhoods.

Third, GOP turnout is often down in the lower education neighborhoods of the counties we examine (Clark, Jefferson, Delaware, Chester, Montgomery, and Des Moines). If we take two Louisville, Kentucky, neighborhoods that are similar on other characteristics, but differ by 10% in the extent of college educated residents residing there, the Republican in the less educated neighborhood will vote at a rate about 12% less than that of the one in the better-educated neighborhood.

As for the Democrats, high migration neighborhoods often adversely affect their turnout as well, but neither as consistently nor as significantly. And unlike Republicans, who appear to stay away from the polls when living in strongly Democratic areas, in a number of areas Democrats are *more likely* to participate when they live around a preponderance of Republicans (Chester, Charlotte, Des Moines, and Louisville). At this point, we cannot rule out the possibility that the higher turnout for Democrats in GOP areas, and the lower turnout of Republicans in Democratic areas, is an artifact of individual level status-related variables, although we control for the education and racial composition of neighborhoods at level two. In other words, Democrats are more likely to turn out in areas where there are high proportions of college graduates, so any boost they receive from living among Republicans is not due to the higher education levels present in GOP neighborhoods, a variable which has already been taken into account (see Rolfe, 2004).

For partisans of both parties, Tables 2 and 3 demonstrate turnout is frequently lower in heavily black and Hispanic neighborhoods. Areas with large minority populations were noticeably less likely to turn out in suburban Philadelphia in 2000, a clear indication of where Democrats could improve in future elections.

The same gender gap among voters with irregular voting habits that we observed in Florida is present in the counties we examine in Table 2. The most significant gap is in Delaware County, Pennsylvania, where women participate at a rate of 1.34 times that of men.

As in Florida, younger voters' participation rates generally lag well behind those of older voters, but (curiously) not in the more affluent suburbs of Philadelphia (Montgomery and Delaware Counties). In Delaware County, there was no statistically significant difference in turnout between those 18–29 and older voters, while in Montgomery, the 18–29 cohort voted at a rate 1.35 times greater than that of older voters. This may reflect mobilization efforts that were especially effective among college students and other young adults in those counties.

TABLE 3. Two Level Model of Voter Turnout, Controlling for Individual Characteristics and Neighborhood Contextual Effects

Fixed Effects	Explanatory Variable	Bernalillo County, NM	Clark County, NV	Jefferson County, KY	Mecklenburg County, NC
Overall Means (β_0)	Intercept	−.6625***	−.6846***	−1.2961***	−1.0947***
		(.0764)	(.0521)	(.0616)	(.0633)
		.5155	.5043	.2736	.3646
Republican Identifiers (β_1)	Intercept	1.0882***	.9855***	.6556***	.9272***
		(.2197)	(.1582)	(.1881)	(.1747)
		2.9689	2.6792	1.9262	2.5274
	Percent Black	−.0212	−.0004	−.0053***	−.0002
		(.0178)	(.0031)	(.0015)	(.0026)
	Percent College Educated	.0011	.0059**	.0123***	.0020
		(.0031)	(.0028)	(.0018)	(.0024)
	Percentage Migrants (last 5 years)	−.0071	−.0041**	−.0157**	−.0041
		(.0045)	(.0018)	(.0068)	(.0035)
	Percent Hispanic	.0014	−.0057***	.0230	−0.0089
		(.0028)	(.0019)	(.0153)	(.0051)
	Percent Democratic	−.0152***	−.0134***	−.0074**	−.0148***
		(.0031)	(.0029)	(.0030)	(.0031)
Democratic Identifiers (β_2)	Intercept	−.4285**	.1247	−.0990	−.1688
		(.2151)	(.1323)	(.0849)	(.1760)
		.6515	1.1328	.9058	.8447
	Percent Black	−.0094	−.0007	.0015	.0013
		(.0139)	(.0019)	(.0009)	(.0019)
	Percent College Educated	.0077***	.0061**	.0108***	−.0027
		(.0026)	(.0027)	(.0015)	(.0022)
	Percent Migrants (last 5 years)	−.0063	−.0027	−.0249***	−.0014
		(.0043)	(.0017)	(.0056)	(.0033)

TABLE 3. Continued.

Fixed Effects	Explanatory Variable	Bernalillo County, NM	Clark County, NV	Jefferson County, KY	Mecklenburg County, NC
	Percent Hispanic	−.0002	−.0066***	−.0062	.0002
		(.0021)	(.0015)	(.0118)	(.0041)
	Percent Republican	.0114***	.0055**	.0115***	.0130***
		(.0022)	(.0027)	(.0024)	(.0029)
Gender (β_3)	Intercept	.0542	.1907***	.1659***	.2099***
		(.0277)	(.0173)	(.0211)	(.0214)
		1.0557	1.2101	1.1804	1.2336
Age 18–29 (β_4)	Intercept	−.0080	−.8482***	.6152***	−.0116
		(.0627)	(.0445)	(.0502)	(.0511)
		.8811	.4282	1.8500	.9885
Age 30–39 (β_5)	Intercept	.1468***	−.4364***	.7032***	.2245***
		(.0618)	(.0440)	(.0509)	(.0568)
		1.1581	.6464	2.0201	1.2516
Age 40–49 (β_6)	Intercept	.3720***	−.2765***	.8179***	.3827***
		(.0612)	(.0441)	(.0509)	(.0565)
		1.4506	.7585	2.2656	1.4662
Age 50–59 (β_7)	Intercept	.5183***	−.1817***	.8837***	.5086***
		(.0641)	(.0429)	(.0540)	(.0568)
		1.6792	.8338	2.4198	1.6629
Age 65 and up (β_8)	Intercept	.2045***	−.1216***	.4177***	.0637
		(.0663)	(.0450)	(.0516)	(.0592)
		1.2269	.8855	1.5184	1.0658
1998 General Voter (β_9)	Intercept	2.1619***	2.5201***	3.0267***	2.6874***
		(.0323)	(.0257)	(.0361)	(.0392)
		8.6876	12.4302	20.6286	14.6934

TABLE 3. Continued.

Fixed Effects	Explanatory Variable	Bernalillo County, NM	Clark County, NV	Jefferson County, KY	Mecklenburg County, NC
2000 Primary Voter (β_{10})	Intercept	2.1632***	2.8372***	2.7150***	2.1116***
		(.07419)	(.0594)	(.0913)	(.0806)
		8.7006	17.0678	15.1052	8.2614
No. of Level 1 Units		41,719	89,606	69,242	63,454
No. of Level 2 Units		379	615	488	187

Hierarchical Generalized Linear Model; Slopes and Intercepts Estimation cell entries are logistic regression coefficients (standard errors), and odds ratios. Results for reliability estimates and variance components do not appear in the table, but are available from the authors upon request.
*$p \leq 10$; **$p \leq .05$; ***$p \leq .01$.

Further Analysis: Validation with Survey Data

Our data indicate that in the locations we are studying Republicans were demobilized by living among Democrats, but the converse was less true. This raises a question about whether the effect of partisan context in Tables 1–3 is actually a function of the higher education levels of those Democrats who live among Republicans, or the lower education levels of Republicans who are living in predominantly Democratic neighborhoods. While our models so far have controlled for the education level of neighborhoods, perhaps a control for the education level of *individual voters* would confirm (or disconfirm) these results, helping us to evaluate whether the suggested neighborhood effects associated with partisan context are real, or simply an artifact of missing individual level covariates.

Surveys containing data that can be georeferenced to the neighborhood level are extremely difficult to find due to the understandable confidentiality protections associated with research on human subjects. As briefly discussed in the design section above, we were able to obtain a cumulative data file with all of the Bush campaign's tracking poll interviews from the state of Florida for the 2000 election. This file contains the phone numbers and related identifying information of approximately 2,000 citizens surveyed in September and October of that year. We proceeded to match these respondents to the 2000 Florida registered voter file, thereby obtaining a validated measure of turnout, which we then modeled with a set of demographic and political variables, including education level, race and ethnicity.[12] In total, we were able to match approximately 1,100 of the surveyed respondents to the voter file. Those who could not be matched were most likely unregistered to vote, although a few refused to provide information that would permit a match.

While a vast majority of those we were able to match to the voter file did turn out to vote (88%),[13] we have sufficient variation to use the turnout of these survey respondents as a dependent variable in order to evaluate the results of the models presented in Tables 1–3. As a check, we also used self-rated likelihood of participation in the November election as an alternative dependent variable.[14] Once again, most of those surveyed said they intended to participate, but there is enough variation to suggest that hypothesis testing can bear fruit.

To be sure, the limited number of cases makes it likely that multicollinearity among the variables will inflate the standard errors of regression coefficients. In spite of this limitation, however, we control for most of the same explanatory variables that can be found in the hierarchical models—including vote history—only here they are measured at the individual level. Perhaps most importantly, partisan composition of the neighborhood is derived from matching the individual survey respondents to the appropriate precinct and entering the percentage of registered Democrats (Republicans) as an

additional variable. Unfortunately, hierarchical estimation with these data is impossible due to the limited number of respondents present in each local context, so instead we employ individual, single-level estimation techniques. The results from standard logistic and ordered logistic regression estimation are reported in Table 4, containing relevant interactions to test for the impact of political minority and majority status. Specifically, we construct the inter-

TABLE 4. Logistic Regression of Effect of Individual and Contextual Variables on Validated Turnout in 2000, and on Intent to Participate Among Registered Voters, Florida 2000

Variables	Validated Turnout	Intent to Participate[†]
Democrats in Republican Areas	−.050 (.058)	−.016 (.059)
Republicans in Democratic Area	−.118** (.058)	−.129** (.064)
Republicans in Republican Area	−.049 (.060)	−0.57 (.060)
Democrats in Democratic Area	−.094 (.056)	−.084 (.058)
Republican Registrant	4.401 (4.762)	3.148 (4.778)
Democratic Registrant	8.986 (4.680)	9.283 (4.981)
Percent Democratic in Precinct	.018 (.048)	.037 (.048)
Percent Republican in Precinct	.028 (.049)	.068 (.051)
Education: Less than High School	−.376 (.563)	−1.399** (.385)
Education: High School Only	−.357 (.293)	−.593** (.277)
Education: 4-Year College Grad	.004 (.313)	.790** (.345)
Age 18–29	−.259 (.538)	.199 (.588)
Age 30–39	−.011 (.523)	.222 (.584)
Age 40–49	−.096 (.528)	.538 (.596)
Age 50–59	.065 (.567)	.202 (.564)
Age 65 up	−.432 (.486)	−.368 (.496)
Hispanic	−.840* (.456)	−1.257** (.593)
Black	−1.440** (.437)	−1.702** (.431)
Length of Residence	.020 (.055)	.015 (.057)
Voted in Presidential Primary	1.631** (.398)	.940** (.284)
Voted in Previous General (1998)	2.511** (.318)	1.160** (.259)
Intercept (Cut point 1)	−.872 (3.892)	1.646 (4.033)
Cut point 2	–	2.260 (4.023)
Cut point 3	–	2.965 (4.030)
N	1118	1113
Chi-square	128.4	123.5
Significance	$p \leq .0001$	$p \leq .0001$
Pseudo R^2	.289	.141

[‡]Binary Logistic Regression Estimation; cell entries are logistic regression coefficients (standard errors); dependent variable: 0 = did not vote; 1 = voted, as reported in Florida Registered Voter file.

[†]Ordered Logistic Regression Estimation; cell entries are logistic regression coefficients (standard errors); dependent variable: 0 = wait and see; 1 = 50/50; 2 = Probably will vote; 3 = Definitely will vote, as reported in survey of Florida voters.

*$p < .10$; **$p < .05$

Source: Voter Consumer Research, Florida Tracking Poll, September–October 2000, and 2000 Florida Voter File.

actions by multiplying individual Republican (Democratic) party identification by both the Democratic and Republican percentage of registered voters in the precinct. Independents are the excluded baseline for comparison. Four interactions are evaluated in the models presented in Table 4: Republicans in Republican settings, Republicans in Democratic settings, Democrats in Republican settings, and Democrats in Democratic settings.

In spite of the limited variation offered by our dependent variable, we find that one principal neighborhood effect remains statistically significant and substantively strong. The relevant probability calculations from the coefficients in Table 4 reveal that—controlling for individual education levels—Republicans are 24% less likely to vote if they live in neighborhoods that are one standard deviation above the mean level of Democratic composition, compared to the turnout of those at the mean. That the interaction of GOP party registration and Democratic neighborhood dominance remains statistically significant in spite of controls for education and age suggests that the results from the hierarchical estimation are not spurious. And perhaps we should not be so surprised because a recent study aimed at understanding contextual effects in British elections found that neighborhood effects were among the strongest influences on party choice, controlling for individual characteristics including educational attainment, personal financial situation and household income (Johnston, et al., 2004; see also: Rolfe, 2004). The moral of the story is a geographic one: otherwise similar people vote differently in dissimilar *places.*

The other indicators of partisan context are statistically insignificant, although one could easily argue they are also substantively noteworthy. We do not detail these substantive effects here, but our calculations based on the probability of voting at various high and low values of these variables indicate a vast gulf in the tendency to vote resulting from the partisan character of neighborhoods in combination with the partisanship of individuals. Because all four of the interactions capturing partisan context and party registration are negatively signed, it strongly suggests that two kinds of neighborhoods might potentially damage turnout: (1) those where partisans find themselves in an overwhelming majority, and (2) those where partisans find themselves in a similarly lopsided minority. These results square with recent evidence that evenly divided partisan environments produce higher levels of political knowledge and efficacy than one-sided ones (Gimpel et al., 2003).

The results using respondents' self-reported likelihood of participation exhibit the same pattern (see the second column of Table 4), though with greater statistical significance due to the enhanced variation of the dependent variable. Among the interactions for context and partisanship, Republicans living in heavily Democratic neighborhoods are least likely to say they intend to vote. In this model, the education variables are statistically significant and in the expected direction, with those having a college degree exhibiting much

greater certainty that they will vote than those with less than a high school education. The vote history variables are by far the most important explanations of participation here, as they are in Tables 1–3. Their presence undoubtedly produces a conservative estimate of the statistical significance of traditional factors such as education, and even context, in explaining validated turnout.

DISCUSSION

These investigations yield a number of intriguing insights. Some of the relationships identified here we can expect to see repeated across a variety of locations. Others need to be evaluated on a case-by-case basis. Either way, there are valuable lessons here for both political scientists and strategists who think about how to get out the vote.

On the Republican side of the ledger, two findings seem generally applicable. First, the results from Tables 1–3 indicate that Republicans would greatly benefit if they were to target voters living in neighborhoods of high residential mobility. Second, Republicans also appear to have serious turnout problems in many Democratically-inclined neighborhoods, even after we control for the education level of these neighborhoods. Perhaps surprisingly, GOP losses in lopsided Democratic areas are not necessarily offset by poor Democratic performance in Republican locations. Bolstering the impression that Republicans have problems turning out their own registrants on enemy turf is the finding that Republicans are especially unlikely to vote when they live in neighborhoods reporting lower education levels (this occurred in eight of the fourteen locations we examined in Tables 1–3). Presumably, these voters include "hard-hats," "NASCAR-dads," and white ethnics—working class Republicans who do not live and breathe politics, and may not vote unless reminded.

Why is GOP turnout depressed in heavily Democratic areas, but Democratic turnout is not as affected by Republican dominance? A couple of explanations come to mind. First, many of our locations are in cities or metropolitan areas where Democrats are the dominant party. Given that individuals are part of more than one context, Democrats may be in the minority in their immediate neighborhood, but realize that they are part of a meaningful local majority. Republicans, conversely, might be more sensitive to neighborhood context because they realize they are a decided minority in both their neighborhood and the broader metropolitan area or city. In this manner, our results parallel those of Ada Finifter's (1974) famous study of Detroit factory workers, in which adherents of the minority party were sensitive to the partisan orientation of their closest associates, whereas majority partisans were not (see also Gimpel et al., 2003).

A second explanation is that Republicans are more widely scattered across the metropolitan landscape, landing them in places with more widely varying political distributions. In particular, we notice that lopsided Republican neighborhoods are considerably less lopsided than the most lopsided Democratic neighborhoods. It is not uncommon to find Democratic neighborhoods that are over 95% Democratic, whereas Republican neighborhoods usually top out in the 65–75% range. Even in Chester County, Pennsylvania—probably the most Republican location we studied—only one precinct showed as much as 76% GOP registration. Generally, Democrats are more geographically concentrated and are therefore less likely to be found living among Republican majorities. And when they do live among Republicans, these GOP majorities are not as one-sided as the Democratic majorities in which Republicans are sometimes situated. Along these lines, higher Democratic turnout in the midst of Republican majorities may signal that these Democrats are really living in areas that remain substantially diverse (and competitive) because their Republican tendencies are not overwhelming. A study of rural and suburban locations where local Republican majorities are more lopsided would undoubtedly round out the research we have begun here.

A third possibility is that low turnout among local partisan minorities (especially Republicans) is because party organizations did not reach out to like-minded partisans residing in enemy territory. If the parties (especially the Republicans) did contact them, and these voters did not show up at the polls, we need to revise our thinking. Bear in mind that this would not change our argument that context affects turnout. Rather, it would cause us to re-think the *nature* of this relationship. Initially, we would have to alter our political information flow argument to exclude the idea that this reduced information flow includes diminished party contacting. We would also reverse our position that candidates and parties ought to target their partisans in opposition strongholds. Based on our examination of contacting information from the voter files, however, we see little reason to believe that campaign contacting was extensive or consistent for partisans in politically hostile neighborhoods in 2000. This impression is augmented by personal interviews with Donnie Fowler of the Democratic National Committee and Matthew Dowd of the Bush-Cheney campaign, both of whom indicated that many partisans residing in voting precincts dominated by partisans from the other side were not contacted in 2000.[15]

From the Democratic perspective, there is the over-riding problem of the turnout gap. Democrats mobilize fewer of their registrants than Republicans in nearly every battleground location. Aside from that familiar finding, the Democratic turnout picture is a mixed bag. In heavily African American neighborhoods, where they have an impressive base of voters, Democrats show no inclination toward high turnout. In fact, they have *lower* turnout rates in places such as suburban Philadelphia. The same is true in heavily Hispanic neighborhoods. Democrats did especially poorly in Latino neighborhoods in

the Philadelphia suburbs and in Las Vegas. Similarly, while Democrats manage to avoid the consistent losses that Republicans face in areas of high in-migration, this may well be due to the fact that most new migrants are Republicans (Gimpel, 1999; Gimpel and Schuknecht, 2001), not because Democrats are adept at mobilizing the new arrivals. More generally, the results shown in Tables 1–3 demonstrate that Democrats do experience more turnout variability across locations, which makes it difficult to build a general model upon which the party could base strategic decisions. The upshot is that Democratic strategists would be wise to work on a case-by-case (or list-by-list) basis as they identify neighborhoods and partisan subgroups requiring attention.

Of course, one might reasonably consider explanations of the partisan results and prescriptions for strategists premature given the possibility that we have the causal arrow backwards. In other words, is it possible that only politically inactive partisans move to hostile political environments? Might there be politically motivated "selection effects" with respect to where citizens choose to live? This possibility would, in fact, lead us to be skeptical about reaching out to individuals who choose to reside among the enemy. This alternative explanation, however, makes little theoretical sense. People do not go out of their way to choose neighbors or networks of associates on the basis of turnout or partisanship because these facts about a person or neighborhood are almost never apprehended in advance (Mutz, 2002, p. 845). It is possible that some unmeasured third factor is causing both the demobilization of these minority partisans and their residence in hostile political environments, but related research has ruled out many of the most obvious, plausible explanations (Mutz, 2002, p. 845). In Table 4, for example, we provide evidence that individual-level education is not producing the results shown in Tables 1–3.

Setting aside the broader question of causality and the aforementioned party-centered findings, a handful of other results seem to hold across most locations. Young people remain one of the most consistent turnout weaknesses for both parties. There were, however, at least a couple of locations where their participation was unusually high in 2000: Montgomery County, Pennsylvania, and Louisville, Kentucky. These areas may be worth further examination to determine what went right. Perhaps particularly vigorous mobilization efforts succeeded in targeting youth at these locations. Generally, though, it might be wise for candidates and parties to focus much more attention on socializing young voters into the habits of citizenship (Plutzer, 2002).

We take penultimate note of the impressive explanatory power of the vote history items from the voter lists. The vote history available in the voter files is critical because it allows us to focus our attention not on the most regular voters (who are highly likely to turn out in a presidential election), but rather on the least reliable voters. The failure to make such basic distinctions between regular and occasional voters condemns campaign strategies to spending time and money on voters who, at best, may appreciate the phone

call or extra piece of mail, but will not be influenced to vote by either. By including the vote history items in our models, we can learn more about what motivates the legions of irregular voters to participate or abstain on Election Day. Perhaps the centralization of political party activity that has occurred over the last 75 years has been detrimental to mobilization precisely because it has stripped mobilization efforts of the local knowledge they required to truly succeed. At least some of that local knowledge can be recovered through careful study of the voter lists as we have outlined here.

Practical lessons, however, should not obscure the broader implication of our research for the study of voting. For starters, we examine the impact of individual characteristics on participation, controlling for recent vote history (a measure of habitual voting), something not always accounted for in previous work. Treating the habitual aspect of voting as an independent variable is valuable because our estimates indicate that the impact of individual characteristics may be exaggerated, or misunderstood. We also acknowledge that partisan differences, derived from the parties' coalitional bases, may manifest themselves in unique residential patterns and, as a result, turnout dynamics. More generally, our research aims at advancing an understanding of political behavior anchored in the study of individuals in their social environments. Although it is pedagogically easier to gloss over local nuances in political behavior, even the most basic political decisions remain expressive of local contextual circumstances, even in elections where national offices are at stake. Since local contexts do matter, it can be risky for political scientists or campaign strategists to base their understanding of a local electorate upon studies carried out at a different location or based on overly general national polls.

APPENDIX

A traditional HLM, where the expected outcome is modeled as a linear function of the regression coefficients and random effects at each level, is inappropriate for our application given that our dependent variable is binary (1 = voted, 0 = did not vote).[16] In the HLM framework, the regression parameters (intercepts and slopes) may vary across neighborhoods (depending upon theoretical expectations) and the level two variables can be used to predict this variation in both the intercept and the regression coefficients. The level-one model[17] can be written as:

$$\begin{aligned}\text{Turn out}_{ij} = {} & \beta_{0j} + \beta_{1j}(\text{Democrat})_{ij} + \beta_{2j}(\text{Republican})_{ij} + \beta_{3j}(\text{Female})_{ij} \\ & + \beta_{4j}(\text{Age } 18-29)_{ij} + \beta_{5j}(\text{Age } 30-39)_{ij} + \beta_{6j}(\text{Age } 40-49)_{ij} \\ & + \beta_{7j}(\text{ Age } 50-59)_{ij} + \beta_{8j}(\text{Age 65up})_{ij} \\ & + \beta_{9j}(\text{2000 Primary Voter})_{ij} + \beta_{10j}(\text{1998 General Voter})_{ij} + r_{ij}\end{aligned} \tag{1}$$

TABLE A. 1. Level One and Two Variables in the Hierarchical Analysis

Variables	Measure
Level one	
Voted in 2000 General Election	0 = did not vote, 1 = voted
Republican Registrant	0 = Other (Non-Republican), 1 = Republican
Democratic Registrant	0 = Other (Non-Democrat), 1 = Democrat
Sex of Registrant	0 = male, 1 = female
Age 18–29	0 = older than 18–29, 1 = in Age 18–29 group
Age 30–39	0 = other than 30–39, 1 = in Age 30–39 group
Age 40–49	0 = other than 40–49, 1 = in Age 40–49 group
Age 50–59	0 = other than 50–59, 1 = in Age 50–59 group
Age 65 up	0 = younger than age 65, 1 = Age 65 or older
Primary Voter	0 = did not vote in primary, 1 = did vote in 2000 primary
General Election 98 Voter	0 = did not vote in 1998, 1 = did vote in 1998 general
Level Two	
Percent Republican†	Percentage of Republican Registrants Aggregated to Precinct
Percent Democratic‡	Percentage of Democrats Aggregated to Precinct
Median Income	Median Income of Census Tract
Percent College	Percent of Residents with 4-Year Degree or More in Census Tract
Percent Black	Percent of African American in Census Tract
Percent Hispanic	Percent Hispanic/Latinos in Census Tract
Percent Migrants	Percent Migrants from Other States in Last Five Years in Tract?

Level one variables come from the voter list files from each county.
† Level two variables are from U.S. Census 2000 except as noted.
‡ These level two variables were formulated by aggregating level one information to voter precinct boundaries.

Where i is the individual and j is the neighborhood and r_{ij} represents the residual for individual i within neighborhood j. The subscript j permits each neighborhood to have a unique slope for each independent variable's effect on turnout, contingent upon the predictors and stochastic error at level two. Note below that we do not estimate the variability of the intercept, age, and vote history variables across neighborhoods with level two predictors, although we do evaluate their variability across contexts.

At level two, we model three of the logistic regression coefficients from the within-unit model in equation 1 as dependent variables. We examine variation across these level one coefficients as follows:

$$\begin{aligned}\beta_{1j}(\text{Democrat})_{ij} = {} & \gamma_{10} + \gamma_{11}(\%\ \text{Education})_j + \gamma_{12}(\%\ \text{Republican})_j \\ & + \gamma_{13}(\%\ \text{Migration})_j + \gamma_{14}(\%\ \text{Black})_j + \gamma_{15}(\%\ \text{Hispanic})_j \\ & + u_{1j} \qquad (2)\end{aligned}$$

$$\beta_{2j}\text{Republican}_{ij} = \gamma_{20} + \gamma_{21}(\%\ \text{Education})_j + \gamma_{22}(\%\ \text{Democratic})_j + \gamma_{23}(\%\ \text{Migration})_j + \gamma_{24}(\%\ \ \text{Black})_j + \gamma_{25}(\%\ \text{Hispanic})_j + u_{2j}. \quad (3)$$

The remaining coefficients for age cohorts and vote history in the level one model are treated as randomly variable, including an intercept, but without specifying additional level two predictor variables:

$$\beta_{3j\ldots}\beta_{10j} = \gamma_{30\ldots100} + u_{3j\ldots10j} \quad (4)$$

Equation 2 assesses the extent to which these various neighborhood characteristics ($\gamma_{10} - \gamma_{16}$) moderate the relationship between Democratic identification and turnout. β_{1j} represents the difference in the log-odds of voting between Democrats and non-Democrats. Equation 3 does the same for the relationship between Republican identification and turnout, with β_{2j} estimating the difference in the log-odds of voting between Republicans and non-Republicans. Finally, Equation 4 estimates the mean values for the gender, age cohort, and vote history variables across all neighborhoods, allowing us to examine the heterogeneity of variance in these coefficients. The great advantage of HGLM over traditional regression estimation is that the error at both the individual and contextual levels is accounted for and we therefore avoid the problem with single level estimation of neighborhood effects—an underestimation of the standard errors and likely biasing of the coefficients.

As indicated earlier, because of the intense computational resources required for estimating models based on the entire voter list for each county, we drew random samples from each list. All told, we selected 20% of available names from the counties, leaving sample cases to permit highly confident generalization within and across neighborhoods. Missing data were treated with pairwise deletion at the voter level and listwise deletion at the aggregate level.

Estimates were generated for all of the models using quasi-likelihood estimation, also described as penalized quasi-likelihood (PQL), in the relevant literature (Raudenbush and Bryk, 2002, pp. 457–459), and are presented in Tables 1–3. We present unit-specific results that emphasize how the effects of neighborhood characteristics influence the level one relationships. We do not present population average results, which provide no indication of the distribution of outcomes across level two units (Bryk and Raudenbush, 2002, pp. 303–304).

NOTES

1. See Stephen Dinan, "GOP 'Ground Game' is Getting Out Vote," *Washington Times*, January 5, 2003; Staff writers, "Close Election Turns on Voter Turnout," *Washington Post.* November 1, 2002.
2. Generally, the effect of education level on participation is greater than the effect of income.
3. As is discussed later, education and income are so highly correlated that it did not make sense for us to include both among the level-2 indicators.
4. Based on the authors' email exchanges (June 2001) with Donnie Fowler, National Field Chair for Gore-Lieberman, and in person interview (February 2001) with Matthew Dowd, senior strategist for Bush-Cheney.
5. Although Kentucky, Nevada, and North Carolina were reasonably competitive in 2000, none received the attention lavished on true battleground states, such as Florida. It is also the case that Voter list data were much less rich in one-sided states, such as Massachusetts and Utah.
6. The 10% deficit is due mainly to P.O. Box addresses and Rural Route addresses that could not be assigned to a specific street range.
7. For businesses that engage in mass mailing, the NCOA service helps reduce undeliverable-as-addressed mail by correcting input addresses prior to mailing, or by returning a "nixie" code for those addresses that are no longer valid. For our purposes, it serves to eliminate those voters who have moved out of a jurisdiction and are no longer eligible to vote in the location where they were once registered.
8. Another limitation of voter lists is that we can only analyze neighborhood and contextual effects among registered voters. We assume the dynamics uncovered here should also apply to the mobilization of unregistered voters. The main difference, of course, is that party-based mobilization of non-registrants requires both registering them and turning them out on Election Day.
9. A few Southern states also identify the race of the registrant, although we do not examine individual-level racial information in this paper.
10. The interviews were conducted by Voter Consumer Research and Market Strategies, Inc. on behalf of Bush-Cheney 2000. The survey dates were September 24–28, October 1–5, 8–12, 15–19, and 22–25. Approximately 150 registered voters were interviewed every evening. The trial ballot result for the cumulative file is 41.0% Bush, 41.1% Gore.
11. "independent" is defined here in the broad sense of a non-Republican or non-Democrat, some of these registrants could be third-party identifiers as well as those who registered as independents.
12. Income was not available on the survey, but we did not include it in Tables 1–3 either. Our goal with the survey is to validate the effect of partisan context, using substantially similar models, controlling for the individual level education of respondents.
13. This is a higher percentage than among registered voters on the voter files, which usually ran in the 67–80% range for the Florida locations we studied. This high level of response by those surveyed raises the intriguing possibility that the survey itself had the impact of mobilizing those who responded.
14. The models of participation likelihood are estimated using an ordered logit procedure on the four-fold scale offered in the survey. See Table 4 for details.
15. Admittedly, the data on party outreach efforts available in the voter files is sketchy. Email exchange with Donnie Fowler, June 2001. In-person interview with Matthew Dowd, February 2001.
16. This model is discussed in Chapter 10 of Raudenbush and Bryk (2002).
17. All level-one predictors are dichotomously coded dummy variables.

REFERENCES

Adams, William C., and Smith, Dennis J. (1980). Effects of telephone canvassing on turnout and Preferences: a field experiment. *Public Opinion Quarterly* 44: 389–395.

Baybeck, Brady, and McClurg, Scott D (2004). What do they know and how do they know it? An examination of citizen awareness of context. University of Missouri, St. Louis, Unpublished ms.

Beck, Paul Allen, Dalton, Russell J., Greene, Steven, and Huckfeldt, Robert. (2002). The social calculus of voting: interpersonal, media and organizational influences on presidential choices. *American Political Science Review* 96: 75–90.

Berelson, Bernard R., Lazarsfeld, Paul F., and McPhee, William N. (1954). *Voting: A Study of Opinion Formation in a Presidential Campaign*. Chicago: University of Chicago Press.

Bobo, Lawrence, and Gilliam, Franklin D. Jr. (1990). Race, sociopolitical participation and black empowerment. *American Political Science Review* 84: 377–393.

Bullock, Charles S. III, and Shafer, David J. (1997). Party targeting and electoral success. *Legislative Studies Quarterly* 22: 573–584.

Campbell, Angus (1960). Surge and Decline: a study of electoral change. *Public Opinion Quarterly* 24: 397–418

Campbell, Angus, Converse, Phillip E., Miller, Warren E., and Stokes, Donald E. (1960). *The American Voter*. New York: John Wiley and Sons.

Campbell, James E. (1993). *Congressional Elections: The Presidential Pulse*. Lexington: The University Press of Kentucky.

Citrin, Jack, Shickler, Eric, and Sides, John (2003). What if everyone voted? Simulating the impact of increased turnout in senate elections. *American Journal of Political Science* 47: 75–90.

Cohen, Cathy, and Dawson, Michael (1993). Neighborhood poverty and African American politics *American Political Science Review* 87: 286–302.

DeNardo, James (1980). Turnout and the vote: The Joke's on the democrats. *American Political Science Review* 74: 406–420.

DeNardo, James (1986). Does Heavy turnout help democrats in presidential elections? *American Political Science Review* 80: 1298–1304.

Eulau, Heniz, and Rothenburg, Lawrence (1986). Life space and social networks as political contexts. *Political Behavior* 8: 130–157.

Finifter, Ada (1974). The friendship group as a protective environment for political deviants. *American Political Science Review* 68: 607–625.

Freedman, Paul, and Goldstein, Kenneth M. (1999). Measuring media exposure and the effects of negative campaign ads. *American journal of political Science* 43: 1189–1208.

Goldstein Kenneth M., and Freedman, Paul (2002). Campaign advertising and voter turnout: new evidence for a stimulation effect. *Journal of Politics* 64: 721–740.

Gerber, Alan S., and Green, Donald P. (2000a). The effect of a nonpartisan get-out-the-vote drive: an experimental study of leafletting. *Journal of Politics* 62: 846–857.

Gerber, Alan S., and Green. Donald P. (2000b). The effects of canvassing, direct mail and telephone contact on voter turnout: A field experiment. *American Political Science Review* 94: 653–663.

Gerber, Alan S., and Green, Donald P. (2001). Do phone calls increase voter turnout? A field experiment. *Public Opinion Quarterly* 65: 75–85.

Gerber, Alan S., Green, Donald P. and Ron Shachar (2003). Voting may be habit forming: evidence from a randomized field experiment. *American Journal of Political Science* 47: 540–580.

Gilles Michael, and Dantico, Marilyn K. (1982). Political participation and neighborhood Social Context Revisited. *American Journal of Political Science* 26: 144–150.
Gimpel, James G. (1999). *Separate Destinations: Migration, Immigration and the Politics of Places*. Ann Arbor: University of Michigan Press.
Gimpel, James G., and Schuknecht, Jason E. (2001). Interstate migration and electoral politics. *Journal of Politics* 63: 207–231.
Gimpel, James G., Lay, J. Celeste, and Schuknecht, Jason E. (2003). *Cultivating Democracy: Civic Environments and Political Socialization in America*. Washington, DC: Brookings Institution Press.
Green, Donald P., Gerber, Alan S., and Nickerson, David W. (2003). Getting out the vote in local elections: results from six door-to-door canvassing experiments. *Journal of Politics* 65: 1083–1096.
Green, Donald P., and Smith, Jennifer K. (2003). Professionalization of campaigns and the secret history of collective action problems. *Journal of Theoretical Politics* 15: 321–339.
Herrnson, Paul S. (2004). *Congressional Elections*, 5th edn. Washington, D.C.: Congressional Quarterly Press.
Highton, Benjamin (1997). Easy registration and voter turnout. *Journal of Politics* 59: 565–575.
Highton, Benjamin, and Wolfinger, Raymond (2001). The first seven years of the political lifecycle. *American Journal of Political Science* 45: 202–209.
Huckfeldt, R. Robert (1979). Political participation and the neighborhood social context. *American Journal of Political Science* 23: 579–592.
Huckfeldt, R. Robert (1986). *Politics in Context: Assimilation and Conflict in Urban Neighborhoods*. New York: Agathon.
Huckfeldt, Robert, Plutzer, Eric, and Sprague, John (1993). Alternative contexts of political behavior: churches, neighborhoods and individuals. *Journal of Politics* 55: 365–381.
Huckfeldt, Robert, and Sprague, John (1987). Networks in context: The social flow of political information. *American Political Science Review* 81: 1197–1216.
Huckfeldt, Robert, and Sprague, John (1995) *Citizens, Politics and Social Communication.* New York: Cambridge University Press.
Humphries, Stan (2001). Who's afraid of the big, bad firm: The impact of economic scale on political participation. *American Journal of Political Science* 45: 678–699.
Imai, Kosuke (2004). Do get-out-the vote calls reduce turnout? The importance of statistical methods for field experiments. *American Political Science Review* (forthcoming).
Iyengar, Shanto (1980). Subjective political efficacy as a measure of diffuse support. *Public Opinion Quarterly* 44: 249–256.
Jackson, Robert A. (1996). The mobilization of congressional electorates. *Legislative Studies Quarterly* 21: 425–445.
Johnston, Ron, Jones, Kelvyn, Sarker, Rebecca, Propper, Carol, Burgess, Simon, and Bolster, Anne (2004). Party support and the neighborhood effect: spatial polarisation of the British Electorate, 1991–2001. *Political Geography* 23(5): 367–402.
Joslyn, Mark R. (1997). The public nature of personal opinion: The impact of collective. sentiment on individual appraisal. *Political Behavior* 19: 337–363.
Kenny, Christopher B. (1992). Political participation and effects from the social environment. *American Journal of Political Science* 36: 259–267.
Krassa, Michael A. (1988). Context and the canvass: the mechanisms of interaction. *Political Behavior* 10: 233–246.

Lazarsfeld, Paul F., Berelson, Bernard R., and Gaudet, Hazel (1944). *The People's Choice*. New York: Duell, Sloan and Pearce.
Lee, Valerie, and Bryk, Anthony S. (1989). A multilevel model of the social distribution of high school achievement. *Sociology of Education* 63: 172–192.
Leighley, Jan E. (1995). Attitudes, opportunities and incentives: a field essay on political participation. *Political Research Quarterly* 48: 181–209.
Malchow, Hal (2003). *The New Political Targeting*. Washington, DC: Campaigns & Elections Magazine.
Mutz, Diana (2002). The consequences of cross-cutting networks for political participation. *American Journal of Political Science* 46: 838–855.
Noelle-Neumann, Elisabeth (1993). *The Spiral of Silence*: Public Opinion – *Our Social Skin*. Chicago: University of Chicago Press.
Plutzer, Eric (2002). Becoming a habitual voter: inertia, resources and growth in young adulthood. *American Political Science Review* 96: 41–56.
Powell, G. Bingham (l986). American voter turnout in comparative perspective. *American Political Science Review* 80: 17–43.
Raudenbush, Stephen W., and Bhumirat, Chinnapat (1992). The distribution of resources for primary education and its consequences for education achievement in Thailand. *International Journal of Educational Research* 143–164.
Raudenbush, Stephen W., and Bryk, Anthony S. (1986). A hierarchical model for studying school effects. *Sociology of Education* 59: 1–17.
Raudenbush, Stephen W., and Bryk, Anthony S. (2002). *Hierarchical Linear Models: Applications and Data Analysis Methods*. Thousand Oaks, CA: Sage.
Rolfe Meredith (2004). Taking social structure seriously: education and voter turnout. Paper presented at the annual meeting of the Midwest Political Science Association, Chicago, IL, April 14–16.
Rosenstone, Steven J., and Hansen, John Mark (1993). *Mobilization, Participation and Democracy in America*. New York: Macmillan.
Salmore, Barbara G., and Salmore, Stephen A. (1989). *Candidates, Parties, and Campaigns: Electoral Politics in America,* 2nd edn. Washington, DC Congressional Quarterly Press.
Sapiro, Virginia, and Conover, Pamela Johnston (1997). The variable gender bias of electoral politics: Gender and Context in the 1992 U.S. Election. *British Journal of Political Science* 27: 497–523.
Schlozman, Kay Lehman, Burns, Nancy, and Verba, Sidney (1994) Gender and the pathways to participation: the role of resources. *Journal of Politics* 56: 963–990.
Shaw, Catherine M., and Holstein, Michael E. (1999). *The Campaign Manager: Running and Winning Local Elections*, 2nd edn. Boulder: Westview Press.
Shaw, Daron R., de la Garza, Rodolfo, and Lee, Jongho (2000). Estimating latino turnout in 1996: a three-State, validated survey approach. *American Journal of Political Science* 44: 338–346.
Shea, Daniel M., and Burton, John (2001). *Campaign Craft: The Strategies, Tactics and Art of Political Campaign Management*. Westport, CT: Praeger.
Simpson, Dick. (1996). *Winning Elections: A Handbook of Modern Participatory Politics*. New York: HarperCollins.
Squire, Pervill, Wolfinger, Raymond E., and Glass, David P. (1987). Residential mobility and voter turnout. *American Political Science Review* 81: 45–65.
Straits, Bruce C. (1990). The social context of voter turnout. *Public Opinion Quarterly* 54: 64–73.
Steenbergen, Marco R., and Jones, Bradford S. (2002). Modeling multilevel data structures. *American Journal of Political Science* 46: 218–237.

Stoker, Laura and Jennings, M. Kent (1995). Life-cycle transitions and political participation: the case of marriage. *The American Political Science Review* 89: 421–433.
Timpone, Richard J. (1998). Structure, behavior and vote turnout in the United States. *American Political Science Review* 92: 145–158.
Traugott, Michael W., and Goldenberg, Edie N. (1984). *Campaigning for Congress*. Washington, DC: Congressional Quarterly.
Verba, Sidney, and Norman Nie H. (1972). *Participation in America: Political Democracy and, Social Equalty*. New York: Harper & Row.
Verba, Sidney, Burns, Nancy, and Schlozman, Kay Lehman (1997). Knowing and caring about politics: gender and political engagement. *Journal of Politics* 59: 1051–1072.
Wielhouwer, Peter W. (2003). In search of Lincoln's perfect list: targeting in grassroots campaigns. *American Politics Research* 31: 632–669.
Weissberg, Robert (1975). Political efficacy and political illusion. *Journal of Politics* 37: 469–487.
Wolfinger, Raymond E. and Steven J. Rosentone (1980). *Who Votes*? New Haven: Yale University Press.
Zipp, John F., and Smith, Joel (1979). The structure of electoral political participation. *American Journal of Sociology* 85: 167–177.