Socioeconomic Disparities in Social Norms Surrounding Voting

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Abstract

Why do wealthy, well-educated Americans consistently vote at a higher rate than poorer and less educated Americans? Activists routinely blame the turnout gap on the relatively higher costs of voting for low SES citizens. However, decades of policy reform to make voting easier has done little to close the gap. We identify another potential culprit: social norms. We argue that high SES citizens are more likely to vote because they are more likely than low SES citizens to feel socially obligated to do so. Formal education at all level establishes and reinforces a norm of voting. Citizens who remain in school longer are more likely to internalize and adhere to the norm while reinforcing the norm among peers in their social network with similar levels of education. We analyze data from three national surveys to provide evidence that well-educated citizens are more likely to consider voting a duty and a marker of good citizenship, and are also more likely to overreport voting on surveys. We also use a survey data from a convenience sample of undergraduate students to address the possibility that family socioeconomic background, rather than educational attainment, explains differences in norms. The results suggest that social norms play a more appreciable role in explaining the turnout gap than previously thought.

One of the best-established relationships in the study of political behavior is the association between socioeconomic status (SES) and political participation. High SES citizens are more likely to vote, donate to campaigns, attend meetings, and run for office (e.g. Campbell et al. 1960; Verba and Nie 1972; Verba, Schlozman, and Brady 1995; Wolfinger and Rosenstone 1980; Carnes 2013). Following the influential resource model developed by Brady, Verba, and Schlozman (1995), political scientists have focused on how disparities in time, money, and civic skills help to explain the relationship. High SES citizens participate, as the argument goes, participate because they can more easily bear the costs of getting involved. Activists in American politics, particularly on the left, have appropriated the resource explanation to promote measures designed to reduce the costs of voting and increase turnout, such as by repealing voter ID laws and by implementing automatic voter registration.

However, the resource model presupposes that citizens desire to vote at all—whether because of individual activism, group mobilization, or simple adherence to democratic norms of voting. Moreover, reducing the costs of voting in the U.S. seems to have done little to chip away at socioeconomic disparities in turnout over time. The federal government and state governments have implemented a number of policy reforms that have made voting substantially easier than in previous decades, such as the federal National Voter Registration (Motor Voter) Act of 1993 and state reforms like early voting periods and no-fault absentee balloting. If low SES citizens do not vote primarily because they are less able to bear the cost of voting than their high SES counterparts, then the major policy shifts that have effectively reduced the cost of voting should have boosted turnout among low SES voters disproportionately compared to high SES voters. However, the turnout gap between high and low SES voters has remained fairly constant in presidential elections since 1972 (Leighley and Nagler 2014, ch. 3). Reforms that make voting easier appear at best to make only modest reductions in the turnout gap (e.g. Highton 1997; Hershey 2009)

Explaining socioeconomic disparities in voting requires moving beyond differences in

electoral costs. Instead, we focus on socioeconomic differences in motivations to vote. In particular, we focus on the norms surrounding voting—what some might refer to as a sense of civic duty. Feelings of civic duty have long been theorized to predict participatory behavior, and more recent empirical work has provided evidence to support this hypothesis (Campbell et al. 1960; Blais 2000; Gerber, Green, and Larimer 2008; Galais and Blais 2016).

However, norms of civic duty are not universal. Factors like educational environment and social networks strengthen citizen adherence to civic norms (Campbell 2006). We contend that adherence to norms of civic duty surrounding voting varies systematically by socioeconomic status, and that variation can be primarily explained by an individual's level of educational attainment. At all levels of education, schools socialize their students into believing that voting and participation are important components of citizenship. Furthermore, the social networks that form among the highly educated reinforce these civic norms. As citizens progress through higher levels of education, they are more likely to be exposed to civic norms about voting and more likely to be positioned in social networks where those norms are enforced.

We test the hypothesis that socioeconomic differences in voting norms are attributable to education. We draw on two national datasets (the 2016 American National Election Study and the 2006 United States Citizenship, Involvement, Democracy Survey) to demonstrate that education positively predicts belief that voting is a civic duty, belief that voting is a core component of good citizenship, and recruitment to political participation. We use validated voting data from the 2016 Cooperative Congressional Election Study to show that more well-educated people are more likely to overreport voting, an indicator of sensitivity to norms of voting. Finally, we administer an original survey to a student population to rule out alternative explanations for the relationship between SES and adherence to norms of voting.

The tentative results provide evidence of systematic differences in norms surrounding voting across levels of SES and that one's level of education, rather than family background, as the primary factor predicting internalizing those norms. The findings help to

explain persistent socioeconomic disparities in voter turnout. The results suggest that reformers interested in closing socioeconomic disparities in turnout should focus both on reducing costs and increasing motivation for low SES voters. Given that elected officials pay more attention to the political demands of voters than those of nonvoters (Griffin and Newman 2005, 2013), the findings also have important implications for differences in the representation of high SES and low SES Americans.

Social Norms and Voting Behavior

Classic work in political science views the decision to vote in economic terms: citizens vote when the benefits of doing so outweigh the costs. Famously, Downs (1957) and Riker and Ordeshook (1968) modeled the decision to vote using the formula:

$$U = p \cdot B - C + D$$

where U = utility of voting, p = probability that one's vote affects the outcome of the election, B = the political or material benefits obtained from one's candidate winning, C = costs (in terms of time, effort) of voting, and D = the benefit of seeing democracy continue (Downs 1957), or as Riker and Ordeshook (1968) conceptualized it, the benefit of fulfilling one's civic duty.

The concept of civic duty describes a social norm of voting. Citizens vote not only to support preferred candidates, but also because they feel socially obligated to do so. Voting confers a social or psychological benefit for complying with the norm. As a result, many Americans cite civic duty as a reason they vote. In both classic and recent survey research, agreeing that voting is a civic duty strongly predicts self-reported voting behavior (Berelson, Lazarsfeld, and McPhee 1954; Blais 2000; Campbell et al. 1960; Galais and Blais 2016; Lewis-Beck et al. 2008). Recent experimental research finds that when Americans are reminded of their civic duty, they are more likely to search for unbiased information about political issues (Kam 2007) and to vote in elections (Gerber, Green, and Larimer 2008, 2010).

We argue that socieconomic differences in the extent to which individuals internalize and enforce norms of civic duty supply an explanation for voting disparities. Under the rational choice framework laid out above, any systematic disparities in voting across sections of the population can be explained by disparities in parameters for the B, C, and D terms. Researchers have considered whether the political or material benefits gained from voting (e.g. Han 2009; Miller 2013) or the costs of voting (e.g. Highton 1997; Newman, Johnson, and Lown 2014; Nickerson 2015; Braconnier, Dormagen, and Pons 2017; Hershey 2009) vary by SES. However much of the variation in citizen voting behavior, particularly along socioeconomic lines, remains to be explained, leaving differences in norms as a potential area for scholarly exploration.

In explaining social norms, social psychologists make a distinction between injunctive and descriptive norms (Cialdini and Goldstein 2004). Injunctive norms prescribe certain types of behavior—they tell people what they ought to do. Descriptive norms, in contrast, simply represent what types of behavior are typical. Each type fulfills a different social function (Cialdini, Reno, and Kallgren 1990; Kallgren, Reno, and Cialdini 2000). Injunctive norms motivate people to engage in behaviors they might not otherwise engage in through social pressure and the threat of social sanctions. Descriptive norms help individuals make optimal choices as people observe and imitate their peers' behavior, void of any explicit social pressure.

We focus on injunctive norms surrounding voting because they appear to be more crucial in motivating voting than descriptive norms. Numerous get-out-the-vote (GOTV) field experiments have found that reminding citizens of their civic duty, promising to report their voting behavior to neighbors, or inducing feelings of pride or shame increase the likelihood they will vote (Panagopolous 2013, 2010; Gerber, Green, and Larimer 2008, 2010). In contrast, exposure to descriptive norms (for example, telling a person that lots of people are voting) seems to make subjects in similar experiments more likely to state their intention to vote (Gerber and Rogers 2009), but not to cast a ballot in reality (Panagopoulos, Larimer, and Condon 2014).

A collective norm surrounds voting in the United States—public figures, celebrities,

mass media, and community leaders all encourage citizens to exercise their right to vote on Election Day—but that norm is not self-enforcing. According to the focus theory (Kallgren, Reno, and Cialdini 2000; Cialdini, Reno, and Kallgren 1990), social norms induce desired behaviors as long as individuals are reminded of the benefits of adherence or costs of defection. For injunctive norms, individuals are reminded either through social reward for compliance or social sanction for lack of compliance. Continuous enforcement within social networks and communities causes norms to persist. When norms are not enforced locally, individuals become unlikely to comply with them, even if the norm is widespread in a broader culture.

The Role of Education in Instilling Norms of Voting

Differences in turnout by SES could be explained by differences in norms surrounding voting. We expect that greater educational attainment increases the likelihood citizens act in accordance with those norms. Decades of research in political science have established an association between education and various forms of political participation (Campbell et al. 1960; Converse 1972; Wolfinger and Rosenstone 1980; Verba, Schlozman, and Brady 1995). The exact mechanism by which education encourages later political participation remains unclear, leading some to explore whether the relationship is spurious (Kam and Palmer 2008; Berinsky and Lenz 2011; Tenn 2007). A persistently vexing problem in research is the selection effect: whether education itself encourages political participation or whether individuals who are more inclined to take part in politics select into greater educational attainment (e.g. Nie, Junn, and Stehlik-Barry 1996). However, well-designed research using instrumental variables and experiments has isolated education itself as a causal factor (Dee 2004; Milligan, Moretti, and Oreopoulos 2004; Sondheimer and Green 2010), leaving researchers to identify mechanisms by which education spurs participation.

One potential mechanism is the instillation of civic duty norms through formal education: in short, schools teaching students that they have an obligation to vote. Schools are socializing institutions. On top of teaching fundamental skills like reading and writing, they also instill civic values in students. Schools socialize students formally by requiring

civics or government classes to teach students how the political process works. A good civics curriculum can be crucial to students' participation later in life (Niemi and Junn 1998; Galston 2004). Schools also socialize students informally by requiring deliberation or votes within classrooms to make collective decisions, holding elections for student leadership positions, and even holding mock elections for real presidential campaigns. By encouraging students to speak up and participate in group activities and discussions, schools impart the understanding that participation is an expected behavior.

Then again, schools may not equally encourage voting behaviors. In his classic study of civic education, Litt (1963) compared civics curriculum and activities in three Boston-area communities: an upper-class, a middle-class, and a working-class community. Litt found that textbooks assigned in the classroom and community leaders (including administrators and teachers) in the upper-class community imparted norms of civic engagement, encouraged involvement, and portrayed politics as a conflictual process in which personal effort could result in desired change. In contrast, texts and leaders in the middle- and working-class communities failed to encourage personal involvement and portrayed politics as a mechanical process where government works on citizens' behalf. Students' prior attitudes about the political process were not altered through civic education in the latter communities; only in the upper-class community did students revise their attitudes towards the political process to align with desired democratic attitudes. The findings in Litt's study are particularly crucial in light of later findings that the civic culture where a person attended school can predict their future political involvement (Campbell 2006).

However, teaching children they have a civic duty to vote is insufficient to cause them to vote as adults. School attendance is compulsory in all states until at least age 16. Therefore, almost all people educated in the U.S. will have been exposed to the collective norm of voting to some extent before they are eligible to vote. Since many adults do not vote upon reaching eligibility, primary and secondary education alone cannot be responsible for driving voting behavior.

Greater educational attainment (especially higher education) exposes individuals to norms of voting over a longer period of time and sorts them into long-term social networks

where those norms are continuously reinforced. Beyond primary and second education, norms continue to be instilled and enforced on college campuses. College students encounter voter registration drives and GOTV campaigns targeted directly at increasing youth turnout. This both lowers the costs of voting and reminds students that voting is a core component of responsible citizenship. Further, the college curriculum, especially in the social sciences, encourages participation (Hillygus 2005).

Individuals spend more time being instructed about the social norm and, as a result, are more likely to internalize them as one's level of education increases. However, norms of voting persist only as long as individuals' social networks and communities continue to enforce them, and individuals would only be exposed to norms on college campuses as long as they remain enrolled. After graduation, norms continue to be enforced by peers and individuals in their networks with similar levels of education. People who complete higher education tend to be more centrally located within social networks and have more ties with other individuals—especially those who are at the center of political networks, like elected officials and journalists (Nie, Junn, and Stehlik-Barry 1996). When individuals are located centrally alongside other highly educated individuals, they are likely to be in contact with others who have internalized and who enforce norms of civic duty within their networks.

Social network position does not rule out the possibility that cross-class relationships can lead to a norm being disseminated broadly regardless of one's own level of education. However, Americans' social networks are segregated along the lines of education (McPherson, Smith-Lovin, and Cook 2001), and some evidence suggests that social distance between people of differing education levels has increased in recent decades (Smith, McPherson, and Smith-Lovin 2014). For example, Americans are less likely to marry a person of a different socioeconomic status (whether measured by education or income) than they were nearly a century ago (Mare 1991; Schwartz 2010). If individuals are less likely to have close relationships across educational boundaries, peer-to-peer enforcement of voting norms is likely only to occur with strata of the population where voting is already viewed as expected behavior.

To summarize, formal education early in life teaches students that voting is a socially desirable behavior, but those lessons may fade over time. However, being located in social networks with other individuals who were exposed to those norms reminds individuals of their civic duty over the course of the lifetime.

Research Design

We expect that educational attainment is an important indicator of SES and that it is the mechanism by which norms about voting are instilled unevenly throughout the population. In what follows, we present three studies using a range of data sources to demonstrate an association between educational attainment and voting norms. The first study examines citizens' reported attitudes surrounding voting and their recruitment to political participation. We analyze two national surveys that respectively record what citizens say when asked whether they think voting is a duty and asked how important voting is to good citizenship. The second survey in the study also records citizens' reports of who in their social networks asked them to participate. The second study examines how citizens act in accordance with perceived norms by comparing self-reported voting to validated voting. The third study uses an original survey with an embedded experiment conducted with undergraduate students to determine whether other predictors of SES, like family income or parents' occupation, also predict holding a personal norm of voting.

Study 1: Expressed Belief in Civic Duty

The first step in determining whether norms of voting vary across education levels is simply to ask the question directly to citizens. The American National Election Studies' 2016 Time Series Study asked a nationally representative sample of respondents whether they regarded voting to be a duty. Respondents were given the following prompt:

> Different people feel differently about voting. For some, voting is a duty—they feel they should vote in every election no matter how they feel about the candidates and parties. For others voting is a choice—they feel free to vote

> or not to vote, depending on how they feel about the candidates and parties. For you personally, is voting mainly a duty, mainly a choice, or neither a duty nor a choice?

Asking whether voting is a duty provides a good measure of whether individuals subscribe to the normative view of voting. Injunctive norms describe the way that individuals believe that people ought to or are obligated to behave. Therefore, individuals who have internalized the norm should describe voting as a duty. According to the data, 51.2% of respondents felt that voting is mainly a duty, 37.9% of respondents felt that voting is mainly a choice, and the remaining 10.8% felt that voting is neither a duty nor a choice. We collapsed responses to the question into a binary variable such that values of 1 indicated the respondent agreed voting is a duty and values of 0 indicated other responses.

To measure educational attainment, we relied upon respondents' self-reports of their highest achieved level of education. We created the ordinal variable *Education* such that a value of 0 indicates the respondent did not graduate high school, 1 indicates the respondent graduated high school only, 2 indicates the respondent completed some college credit, 3 indicates the respondent completed a 4-year Bachelor's degree, and 4 indicates the respondent completed a graduate or professional degree.

If education instills and reinforces a personal norm of voting in students, then we should expect to see that higher levels of education in respondents predict a greater likelihood of agreeing with the option that voting is mainly a duty. Table 1 reports the result of a bivariate logistic regression in Model 1. In line with expectations, the coefficient estimate for the education variable is positive and statistically significant at the .05 level of confidence, indicating an association between educational attainment and perceiving voting as a duty.

To eliminate the possibility of confounding factors, we estimated a second model controlling for several demographic and political variables: age, foreign born, religious attendance, partisanship, and political interest.[1] The results of a logistic regression model

[1] *Age* is a respondent's self-reported age in years, controlling for shifting norms of political involvement

Table 1: Expressed Belief in Civic Duty

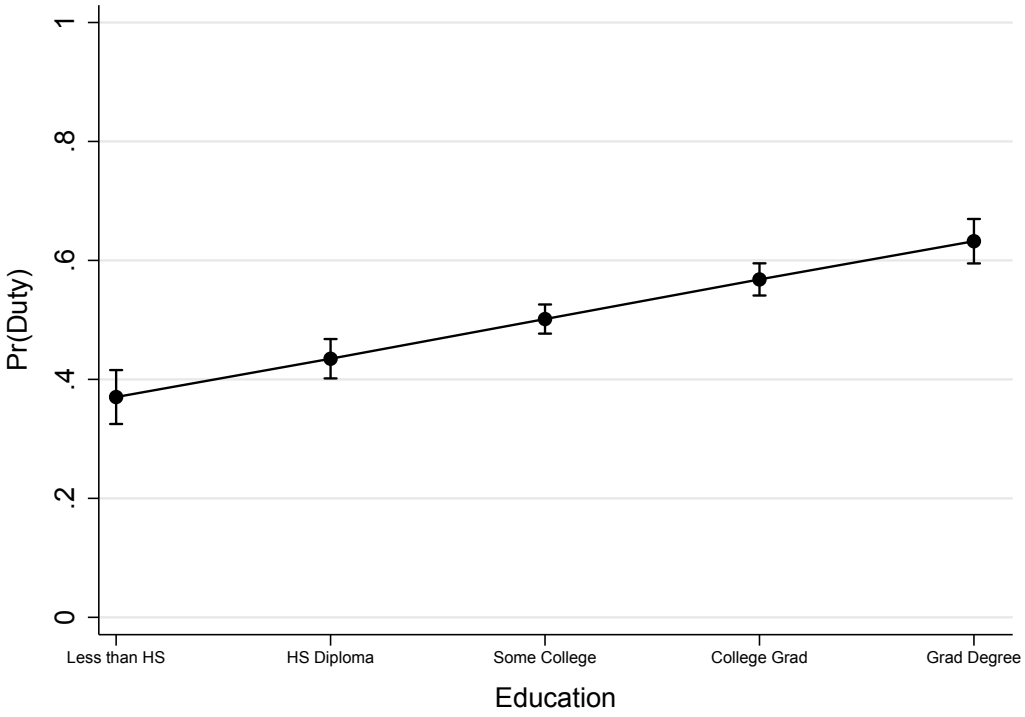
	Dependent variable:	
	Voting as Duty	
	(1)	(2)
Education	0.34*	0.27*
	(0.04)	(0.04)
Age		0.01*
		(0.00)
Foreign Born		0.19
		(0.18)
Religious		0.15*
Attendance		(0.03)
PID Strength		0.37*
		(0.05)
Interest		0.41*
		(0.06)
Constant	-0.66*	-2.76*
	(-0.09)	(0.18)
N	4228	4106

Note: Data from the 2016 American National Election Study. Survey-adjusted coefficient estimates obtained from logistic regression, with standard errors reported in parentheses. Significance tests are two-tailed. *p<0.05.

including all of these control variables is reported in Model 2 of Table 1. Even controlling for the demographic and political variables, education continues to have a positive and statistically significant association with considering voting a duty. Among the controls, a respondent's age, frequency of religious attendance, partisan strength, and interest in politics are positively associated with considering voting a duty. Whether the respondent is native-born or foreign born has no relationship to considering voting a duty.

over time in the U.S. (Dalton 2008). *Foreign Born* is a binary variable with a value of 1 indicating the respondent was outside the U.S., controlling for differences in political norms across cultures. *Religious Attendance* is a ordinal variable measuring the frequency of a respondent's participation in religious services, controlling for norms of social obligation instilled through religious institutions rather than schools. *PID Strength* is a folded 7-point party identification scale. A value of 0 indicates true independents, 1 indicates party-leaning independent, 2 indicates weak partisans, and 3 indicates strong partisans. *Interest* measures respondents' self-reported interest in politics, ranging from a value of 0 (not at all interested) to 3 (very interested).

Figure 1: Predicted Probability of Agreeing that Voting Is Duty



To determine the size of the association, we estimate the predicted probability of a respondent expressing that voting is a duty across levels of education based on the results in Model 2. Figure 1 reports the probability of a native born respondent reporting that voting is a duty based on their level of education, with all remaining control variables held at their mean values.

Figure 1 shows a substantively large disparity in the view that voting is a duty between respondents with low and high levels of education. The probability that a respondent who did not graduate high school considers voting a duty is 0.37. In contrast, the probability that a respondent who holds a graduate or professional degree considers voting a duty is 0.63.

We supplement the analysis of the 2016 ANES civic duty question with analyses from the United States Citizenship, Involvement, Democracy (CID) Survey, an instrument administered to a nationally representative sample of 1,001 adults in 2005. The CID measured respondents' endorsement of a wide range of civic norms. The following is most relevant to our hypothesis: "To be a good citizen, how important would you say

it is for a person to vote in elections?" Like the ANES question above, this question measures voting as an injunctive norm—that one ought to vote in elections to be a good citizen. Accordingly, we expect the importance placed on this behavior to increase with education.

To test this expectation, we replicate the models in Table 1 as closely as possible. There are two departures worth noting. First, the dependent variable is measured on an 11-point scale. The distribution of responses is heavily left-skewed, so we perform quantile regression to estimate the conditional median as a function of our independent variables.[2] Second, there is no equivalent to the *Foreign Born* variable on the CID instrument, so we exclude that control from the models in Table 2. Each of the other variables from Table 1 is included in the models in Table 2.[3]

The results in Table 2 are broadly consistent with the ANES analysis. Education predicts a belief that voting is an important component of good citizenship, and this association is significant at the 0.05 level in Models 1 and 2 and at the 0.10 level in Model 3 with the addition of a control for political interest (p=0.07). Each of the control variables is significant and in the same direction as the results from Table 1: believing that voting is important to being a good citizen increases with age, religious attendance, partisan strength, and political interest.

Finally, our theory claims that highly educated individuals are centrally located in social networks that help enforce voting norms. Being embedded in these networks helps reinforce the view that voting is a civic duty and central to good citizenship. If this is the case, we should find that highly educated citizens are more likely to face social pressure to participate politically—including to vote—from members of those networks. Facing pressure to participate underscores that political participation is a behavior that people are expected to engage in, and not simply a choice or a hobby.

[2]Results from ordered logit versions of these same models appear in Table A1 in the appendix.

[3]Specifically, *Education* is measured on a 7-point scale, where 1 indicates the respondent did not attend high school, 2 indicates that high school was not completed, 3 indicates a high school graduate or a respondent with a GED, 4 indicates non-traditional post-secondary education, 5 indicates some college without a 4-year degree, 6 indicates a college graduate, and 7 indicates post-graduate training. *Age* is a respondents self-reported age in years. *Religious attendnace* is a 7-point scale measuring how frequently the respondent attends religious services apart from special occasions. *PID Strength* is a folded measure of party identification. *Interest* measures interest in politics on a 4-point scale.

Table 2: Importance of Voting to Good Citizenship

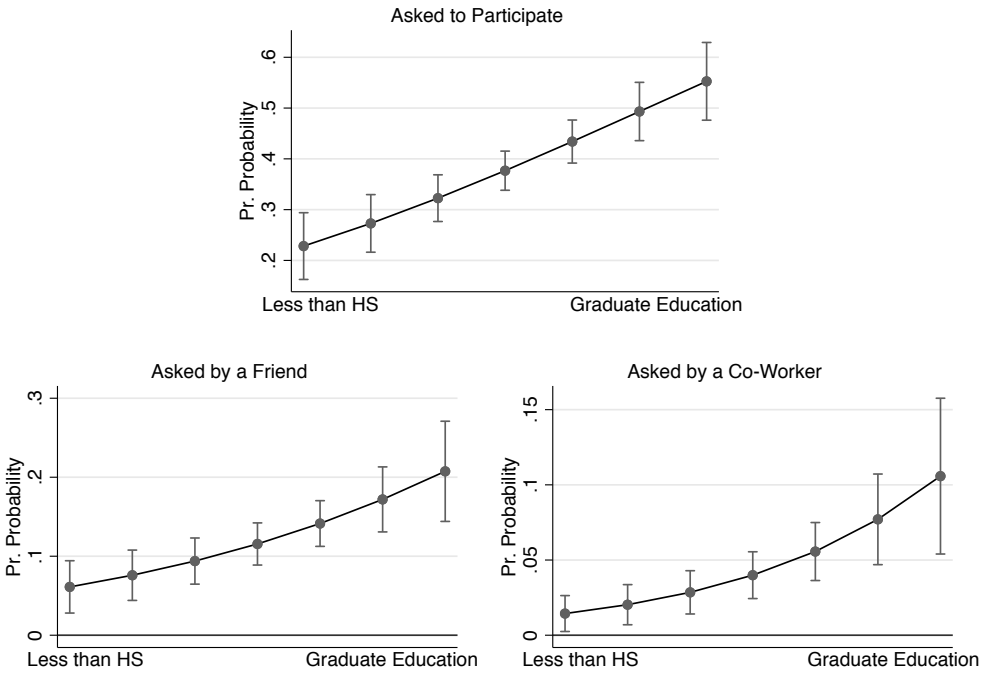
	Dependent variable:		
	Importance of Voting		
	(1)	(2)	(3)
Education	0.33*	0.11*	0.08+
	(0.06)	(0.05)	(0.04)
Age		0.01*	0.01*
		(0.00)	(0.00)
Religious		0.16*	0.11*
Attendance		(0.05)	(0.04)
PID Strength		0.37*	0.21*
		(0.10)	(0.07)
Interest			0.61*
			(0.11)
Constant	7.67*	6.64*	5.64*
	(0.32)	(0.42)	(0.43)
N	999	922	921

Note: Data from the 2006 Citizenship, Involvement, Democracy Survey. Survey-adjusted coefficient estimates obtained from quantile regression, with standard errors reported in parentheses. Significance tests are two-tailed. *p<0.05, +p<0.10

We test the prediction that highly educated individuals face stronger pressure to participate from their social networks with three questions from the CID Survey. Respondents were asked whether in the past year they had been asked to vote, contribute money to a political cause, or engage in some other kind of political activity by someone they knew.[4] Importantly for our theory, they were also asked whether the person who asked them was a friend or acquaintance and whether the person was a co-worker. Since we expect highly educated individuals to have highly educated friends and co-workers in their social networks, the likelihood that someone was asked to participate by such

[4]Unfortunately, the CID does not separate encouragement for voting from encouragement for the other activities in its question wording. However, because voting is a much more common behavior than donating or other types of participation, we assume that most individuals responding positively to the question were encouraged by someone they knew to vote.

Figure 2: Predicted Probability of Being Asked to Participate Politically



individuals should increase with education.

Responses to each of the three questions are binary variables, which we regress on education, age, religious attendance, strength of party identification, and political interest. Results from each logistic regression are contained in Table A2 of the appendix. In Figure 2, we plot the predicted probability of an affirmative response to each question across levels of educational attainment, holding each control variable at its mean.

Figure 2 provides additional evidence that highly educated individuals exist in social networks that reinforce the importance of political participation, including voting specifically. The effects of education are both statistically significant and substantively large. Compared to those without a high school education, those with a graduate degree are nearly 40 percentage points more likely to have been asked to participate in the past year. Further, their probability of being asked by a friend more than doubles from less than 0.10 to 0.20, and their probability of being asked by a co-worker rises from under 0.02 to 0.08. This is consistent with the notion that highly educated individuals are more likely to remind each other about the importance of political engagement.

Of course, these results only reveal a strong correlation between educational attain-

ment and considering voting to be a norm, and do not provide causal evidence that educational attainment induces norms. We have not ruled out the possibility that another factor drives individuals both to pursue higher education and to hold the voting norm. However, attitudes of social obligation surrounding political participation clearly vary directly with educational attainment.

Study 2: Overreporting Voting

The first study provides evidence that individuals who have attained a higher level of education are more likely to express that they believe voting is a duty and are more likely to be pressured to vote. However, it could be the case that individuals express that norm because they already vote for other reasons (see Galais and Blais 2016). Individuals would reap social or psychological rewards by saying they fulfilled their civic duty as a post-hoc justification of their behavior, rather than because they held a personal norm of voting that drove them to vote in the first place. If this explanation were true, education would predict norm possession only because education levels predict voting behavior.

To address that possibility, we compare self-reported voting behavior to validated voting behavior. In national surveys of voting behavior, respondents are likely to overreport voting—in other words, telling a survey taker they voted when in reality they did not. Researchers conducted several studies of overreporting in the 1960s through 1980s when the ANES validated respondents' voting behavior, generally finding that overreporting was not strongly associated with any particular demographic characteristics or attitudes (e.g. Sigelman 1982; Traugott and Katosh 1979). However, more recent research has pointed to systematic biases in who does and does not overreport voting (Ansolabehere and Hersh 2012; Belli, Traugott, and Beckmann 2001; Silver, Anderson, and Abramson 1986)

Respondents overreport voting on surveys because voting represents a normative, and thus socially desirable, behavior (Bernstein, Chadha, and Montjoy 2001). If norms of voting are more common among well-educated people, we should also see the likelihood of overreporting increase as education levels increase. To test this empirically, we rely

Table 3: Self-Reported Voting among Validated Non-Voters in 2016 Presidential Election by Level of Education

	Education					
Validated Vote	No HS	HS Diploma	Some College	College	Grad/Prof	Total
Reported Voting	63.78% (118)	81.13% (2,283)	87.46% (3,704)	91.88% (3,361)	93.24% (2,111)	88.00% (11,577)
Reported Not Voting	36.22% (67)	18.87% (531)	12.54% (531)	8.12% (297)	6.76% (153)	12.00% (1,579)

Note: Data from the 2016 CCES. Unweighted column percentages reported with number of respondents in parentheses.

on a comparison of self-reported voting to validated voting from the 2016 Cooperative Congressional Election Study (CCES). CCES relies upon voter file data from the private firm Catalist.[5]

According to Silver, Anderson, and Abramson (1986), researchers should measure overreporting by observing self-reports only among validated nonvoters. Measuring overreporting by observing the veracity of self-reports among all respondents or among all respondents who claimed they voted includes populations not at risk for overreporting. Any estimates of variables that contribute to the individual propensity to overreport using these two measures will be sensitive to the marginal distribution of true voters and true nonvoters.

We begin by calculating the percentage of validated nonvoters who reported voting by level of education in 2016.[6] Table 3 reports the results. At the lower extreme of education, a majority (64%) of validated nonvoters (respondents who said they voted but for whom no match in Catalist's voter file could be found) without a high school education

[5]CCES reports being able to match roughly 80% of respondents to voter file data for their 2016 survey. The validated voting data used here likely includes some incorrect matches. However, according to the data's authors, the most likely reason that no voter file match is found for a respondent is that the respondent is not actually registered to vote. More information is available at https://cces.gov.harvard.edu/.

[6]When asked if they voted in 2016, respondents were given several options: they did not vote, they tried to vote and were prevented from doing so, they intended to vote but couldn't this year, and they actually voted. Our measure of self-reported voting only includes people who claim they actually voted, not those who tried or intended to vote but could not.

reported voting nonetheless. However at the higher extreme, roughly 93% of validated nonvoters with graduate or professional degrees reported voting. Even among validated nonvoters with a college education, about 92% reported voting. The results show that the vast majority of respondents with a higher education degree believed they *should* report having voted, even if they did not. Though a majority of validated nonvoters without a high school diploma also overreported, a much larger percentage of them (36%) had no qualms admitting they did not vote than nonvoters with a postgraduate degree (7%).

Perhaps other factors associated with education, like age or political interest, are better predictors of overreporting. To reduce the likelihood of finding spurious results and to calculate estimates of the effect of education using appropriate survey weights, we also ran a multiple regression model including the same set of control variables we used to predict a normative view of voting in Study 1: age, religious attendance, party ID strength, and political interest. Unlike ANES, CCES did not ask respondents their nation of birth, but did ask respondents whether or not they were U.S. citizens. *Noncitizen* is a binary variable with values of 0 indicating U.S. citizens.

The results of a logistic regression model predicting overreporting are presented in Table 4. Model 1 displays the bivariate results and shows that as education increases, the likelihood of having overreported voting increases. Model 2 includes the set of control variables. Even with their inclusion, education remains positively and significantly associated with overreporting. Among the controls, age, partisanship, and political interest also positively predict overreporting. Noncitizenship is associated with a lower likelihood of overreporting.

To give an idea of the substantive association between education and overreporting, we estimate the predicted probability of a citizen overreporting by education level while holding the remaining control variables at their means. Figure 3 presents the results. The probability that a nonvoter without a high school diploma reports voting is 0.79. However, the probability that a nonvoter with a graduate degree reports voting is 0.97.

The results suggest that highly educated individuals are more likely than less educated individuals to feel a need to report having voted even when they did not. The results are

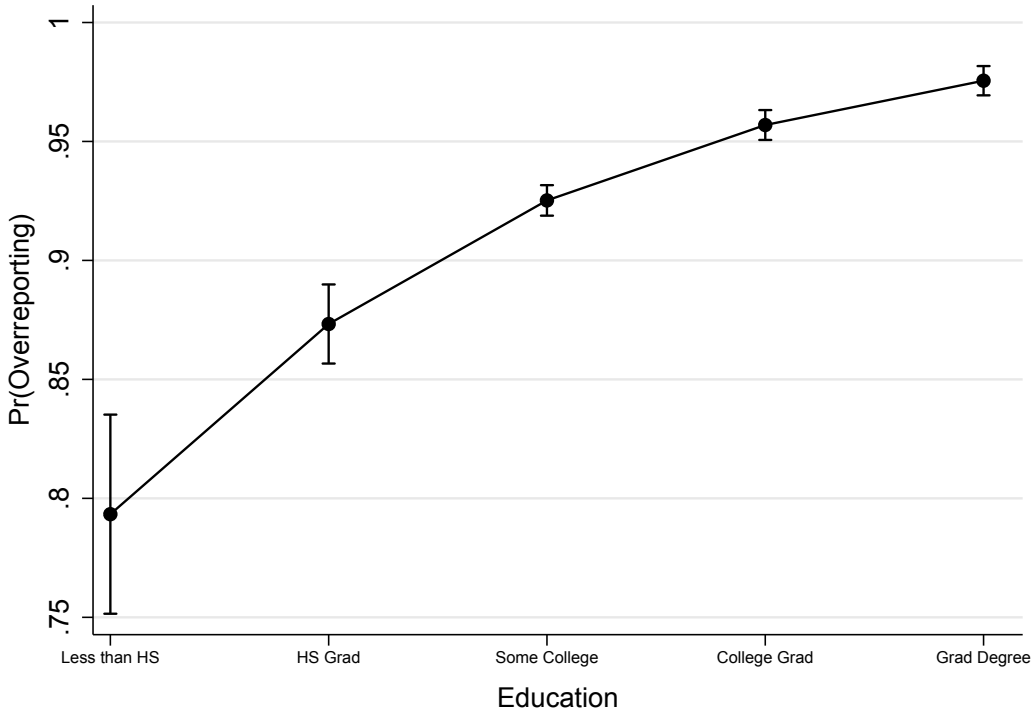
Table 4: Overreporting Voting

	Dependent variable:	
	Overreported Voting	
	(1)	(2)
Education	0.60*	0.59*
	(0.05)	(0.06)
Age		0.03*
		(0.00)
Noncitizen		-1.22*
		(0.25)
Religious		0.01
Attendance		(0.03)
PID Strength		0.23*
		(0.04)
Interest		0.53*
		(0.06)
Constant	0.94*	-2.25*
	(0.11)	(0.25)
N	19,249	18,456

Note: Data from the 2016 CCES. Only validated nonvoters are included in the sample. Survey-adjusted coefficient estimates obtained from logistic regression, with standard errors reported in parentheses. Significance tests are two-tailed. *p<0.05.

especially intriguing given the context of reporting—respondents reporting their behavior in a web survey (rather to a human survey taker) with a promise that their responses will remain anonymous. Even with no immediate social pressure on respondents, highly educated respondents almost always reported voting, regardless of whether they voted in reality. We take the results to mean that nearly all highly educated voters respond to the norm of voting, either by actually voting or by overreporting their vote. It is possible that validated voters cast ballots for reasons other than adherence to a social norm, of course. However, nearly all highly educated voters in the sample either complied with the norm through their behavior or tried to create the appearance that they complied with the norm in their self-reports. Though overreporting was also common among voters

Figure 3: Predicted Probability of Overreporting Voting



without much formal education, it was much less common than among highly educated voters.

Study 3: Norms of Voting among Students

The first two studies found that claiming voting is a civic duty, claiming it to be central to good citizenship, and overreporting voting all increase with education. This evidence suggests that education helps citizens see voting as a normatively important behavior, as predicted by our theory. One concern with this conclusion is that education is simply a proxy for SES, and that other components of SES, such as income or class status, are driving the relationships we have seen. Under this explanation, norms might be imparted in high SES communities where educational attainment happens to be high, rather than education itself driving the relationship.

We address this concern in a third study that surveys students in a college class. By holding constant the educational attainment of the respondents, we can determine whether other markers of SES cause people to endorse voting norms. If family income or

parental employment are responsible for SES differences in voting norms, we should find that those characteristics distinguish students who are in the same educational context. But if, as we predict, education accounts for the distinctions we have found above, we should find that students with similar status are indistinguishable across other attributes of SES.

The survey was administered to a convenience sample of 371 undergraduate students across four sections of an Introduction to American Politics class, yielding 314 respondents who completed the survey. The survey was designed to assess respondents' endorsement of norms about voting and other forms of political participation. It also measured their interest in politics and participation in a range of civic and political activities.

The sample faces two potential problems in allowing us to generalize to the broader population. First, students who select into college attendance are more likely to come from high SES backgrounds, limiting the variation in indicators of SES we can observe. However, the university where the survey was administered uses a geographic quota system to admit students from all counties in the state (limiting admissions from affluent urban and suburban areas) and keeps in-state tuition particularly low, making it among the most economically diverse large public universities in the country. Though a selection effect still limits the economic diversity in our sample, the bias in this convenience sample should be relatively less severe than in other samples of college students. Second, our sample includes students who selected into taking an introductory American politics class, potentially limiting the variation in political interest and the extent of political participation. Though our sample is by no means representative, we still find a wide range of interest and participation among respondents.

To measure our main dependent variable, we asked respondents to imagine that they had to move in with a new roommate. We provided a list of ten characteristics and asked them to report on a five-point scale how important each one would be in choosing who they would live with. The characteristics included a mix of personal attributes (e.g. being an outgoing person and getting good grades) and some that were more related to social and political life (e.g. supports the same political party and keeps up with current

events). Our central dependent variable is the importance respondents assign to voting, which measures agreement that voting is an injunctive norm (i.e. potential roommates *should* participate by voting).

We included multiple measures of class status that might distinguish high SES students from low SES students. *Income* measures students' estimation of their family income on a 13-point scale. *Home ownership* is a binary variable set at 1 if the students' family owns their own home and 0 if they rent it. *Adult employment* is a binary variable set at 1 if either adult that was responsible for raising the student has (or recently had) a high SES job and 0 if neither adult does.[7] Bivariate regression models for each independent variable are estimated in Table 5, alongside models with controls for political interest and a folded party measure to replicate the models in Study 1 and Study 2 as closely as possible.

The evidence in Table 5 makes clear that none of the three attributes of SES influence endorsement of the voting norm. Across the four models, only the income variable consistently falls in the expected direction, but the estimate is not statistically significant at the .05 level. Consistent with the studies above, strength of party identification and political interest both positively predict the importance rating. This provides confidence that our measure is tapping into the same concept.

We also conducted a list experiment in the survey to measure the voting norm in a second way. Respondents in the control condition were provided four activities that people might engage in and were asked to report how many they thought it was important for people to do.[8] In the treatment condition, respondents were asked to report their agreement with the same four items plus an additional one: voting at least once every four years. If the mean difference in selected items between the two conditions is higher for high SES students than for low SES students, that indicates that class attributes other than educational attainment drive voting norms.

[7] An adult is coded as having a high SES job if they own their own business, work as a highly educated professional, or work in upper-level management. Low SES employment includes professionals with lower education requirements, lower-level management positions, and any other kind of worker.

[8] The four activities were showering at least once a week, eating at least one full meal a day, reading at least 50 books a year, and exercising at least two hours every day. The statements were designed to be reasonable life recommendations but not ones that invited necessary agreement.

Table 5: Importance of a Roommate who Votes

	Dependent variable:			
	Voting Importance Rating			
	(1)	(2)	(3)	(4)
Income	0.19			0.21
	(0.23)			(0.32)
Home		-0.18		0.03
Ownership		(0.22)		(0.28)
Adult			0.13	-0.01
Employment			(0.16)	(0.16)
PID Strength				0.55*
				(0.21)
Interest				2.06*
				(0.32)
Constant	2.05*	2.36*	2.13*	0.84*
	(.19)	(0.21)	(0.14)	0.36
N	299	298	264	240

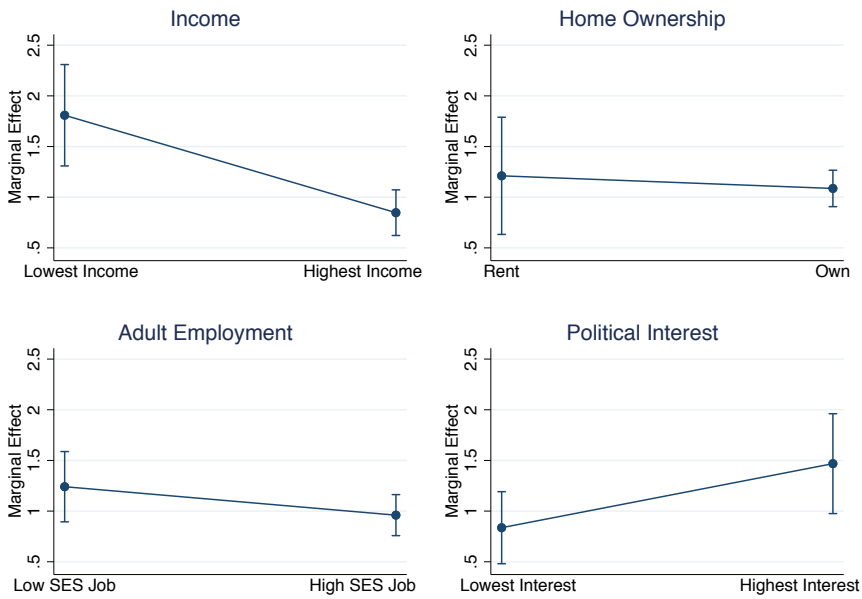
Note: Data from a survey to a student population administered by the authors. Coefficient estimates obtained from linear regression, with standard errors reported in parentheses. Significance tests are two-tailed. *p<0.05.

We run four separate models to test the effect of SES on agreement with the voting norm. Each regresses the number of statements agreed with on an interaction between the experimental condition and another predictor. The predictors in the first three models are income, home ownership, and the binary adult education variable. In the fourth model, for comparison, it is the political interest variable. Figure 4 plots the predicted number of statements agreed to as a function of experimental condition across levels of the respective independent variable.[9]

Figure 4 reinforces the idea that markers of SES besides educational attainment do not appear to be responsible for differences in voting norms. As a reference point, the panel in the bottom right corner displays an expected result: moving from the control condition to the treatment condition has a larger effect among the more politically interested respondents, since they are more likely to express agreement that voting is an important

[9]Results from each model are contained in Table A3 of the appendix.

Figure 4: Marginal Effect of Treatment Condition on Statement Agreement



activity to participate in. By contrast, none of the three panels featuring interactions between the treatment condition and SES indicators suggest that those indicators drive support for voting norms. The marginal effect of the treatment condition is flat across both levels of the home ownership and adult education variables. Further, the marginal effect of the treatment actually *decreases* as respondents' family income increases. This suggests that among respondents with the same level of educational attainment, increasing family income is associated with lower endorsement of voting norms. We would not see this evidence if income was driving the relationship between SES and voting norms.

Discussion

In three studies, we have provided evidence that endorsing voting as an injunctive norm varies by SES, that this disparity is attributable to education, and that other markers of SES, especially family background, do not seem to capture this relationship. Specifically, as an individual's educational attainment increases, their likelihood of believing voting to be a civic duty, their likelihood of believing voting to be important to good citizenship, and their likelihood of overreporting their own voting behavior all increase. All of this suggests that citizens become more likely to internalize voting norms as their education

increases. Further, education also predicts recruitment into political participation, particularly from members of one's social network. This suggests that social networks serve as a mechanism for reinforcing voting norms among the highly educated.

Our findings should redirect the attention of those hoping to minimize class-based disparities in voting. Political scientists and civic reformers have largely taken it as a given that people derive satisfaction from political participation and that these rewards are distributed equally across the population. According to this line of thought, all people should want to vote, so the evidence of systematic differences in who actually votes has to be attributable to barriers. Reform efforts, in turn, have largely focused on lowering the costs of voting, and the results, though notable, have not served to eliminate socioeconomic disparities.

The assumption that voting is a widely recognized normative good thus misunderstands the underlying problem. There is nothing innate or instinctive about participating in contemporary American politics generally or voting in elections specifically. Like many types of social behavior, voting regularly is a learned behavior—principally one that is instilled through schools and reinforced in social networks. Norms governing individual behavior vary across communities, as do individual incentives (whether material, social, or psychological). Though an injunctive norm to vote is widespread in the United States, it is certainly not a default.

Our results suggest that disparities in voting will continue to persist until reformers take steps to motivate greater participation in conjunction with reducing the costs. We have demonstrated that one particular motivation—adhering to a social norm—varies across individuals by socioeconomic status, but this is not the only motivation one might have. Other motivations have a more material basis or a psychological one, where people vote to express symbolic approval or disapproval of a party or particular candidate. Just as we have demonstrated that the propensity to be motivated by an injunctive norm is unequal across the population, the propensity to be motivated by material or value-expressive reasons might vary as well, both by social group and political context. Researchers should devote more attention to these various motivations, including who

has them and how they are primed, if they want to help increase the habit of regular voting across the population.

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Appendix

Table A1: Importance of Voting to Good Citizenship (Ordered Logit)

	Dependent variable:		
	Importance of Voting		
	(1)	(2)	(3)
Education	0.17*	0.14*	0.08+
	(0.04)	(0.04)	(0.04)
Age		0.01*	0.01*
		(0.00)	(0.00)
Religious		0.18*	0.18*
Attendance		(0.04)	(0.04)
PID Strength		0.28*	0.22*
		(0.07)	(0.07)
Interest			0.61*
			(0.09)
N	999	922	921

Note: Data from the 2006 Citizenship, Involvement, Democracy Survey. Survey-adjusted coefficient estimates obtained from ordered logistic regression, with standard errors reported in parentheses. Significance tests are two-tailed. *p<0.05, +p<0.10

Table A2: Being Asked to Participate Politically in the Past Year (Figure 2)

	Dependent variable:		
	Asked At All	Asked By a Friend	Asked By a Co-Worker
	(1)	(2)	(3)
Education	0.24*	0.23*	0.35*
	(0.05)	(0.07)	(0.10)
Age	0.00	-0.01	-0.02
	(0.00)	(0.01)	(0.01)
Religious	0.03	-0.13^{+}	0.10
Attendance	(0.05)	(0.07)	(0.11)
PID Strength	0.14	0.03	-0.26
	(0.08)	(0.13)	(0.17)
Interest	0.59*	0.34*	0.26
	(0.10)	(0.15)	(0.27)
Constant	-3.54*	-3.18*	-4.49*
	(0.45)	(0.61)	(0.84)
N	917	922	922

Note: Data from the 2006 Citizenship, Involvement, Democracy Survey. Survey-adjusted coefficient estimates obtained from logistic regression, with standard errors reported in parentheses. Significance tests are two-tailed. *p<0.05, $^{+}$p<0.10

Table A3: List Experiment Measuring Adherence to Voting Norms (Figure 4)

	Dependent variable:			
	Number of Statements Agreed To			
	(1)	(2)	(3)	(4)
Treatment Condition	1.81*	1.21*	1.24*	0.84*
	(0.25)	(0.29)	(0.18)	(0.18)
Income	0.32			
	(0.20)			
Treatment x Income	-0.96*			
	(0.31)			
Home Ownership		0.00		
		(0.19)		
Treatment x Ownership		-0.12		
		(0.31)		
Adult Education			-0.09	
			(0.13)	
Treatment x Adult Education			-0.28	
			(0.20)	
Political Interest				0.40
				(0.26)
Treatment x Interest				0.63
				(0.40)
Constant	2.18*	2.39*	2.50*	2.24*
	(0.16)	(0.18)	(0.11)	(0.12)
N	297	296	262	305

Note: Data from a survey to a student population administered by the authors. Coefficient estimates obtained from linear regression, with standard errors reported in parentheses. Significance tests are two-tailed. *p<0.05