

POLITICAL NORMS AND THE PRIVATE ACT OF VOTING

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Abstract Research spurred by the widespread adoption of new voting technology has largely neglected the issue of privacy. Using data from a field experiment, we find that a treatment intended to increase a sense of privacy is able to alter poll-worker and voter behavior, but has little direct effect on voter attitudes. More importantly, we find that concern about privacy is concentrated among an identifiable group: those who go against their community’s descriptive political norm or majority. This “political minority” is more sensitive to issues of privacy and harder to reassure that voting conditions will safeguard the confidentiality of their choices. Data from the 2008 Cooperative Congressional Election Study confirm that privacy is a concern for voters nationwide who feel out of step with their locality’s political majority.

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A core tenet of modern American democracy is that voters should be able to vote without coercion or fear of reprisal. The secret ballot grew out of late nineteenth- and early twentieth-century reforms designed to curb the influence political machines and others could have on the vote. The Help America Vote Act of 2002 (HAVA) was designed to reduce the irregularities that marred the 2000 presidential election;¹ however, it also may have reduced voters' feelings of privacy, as newly adopted optical scan systems and direct-recording electronic (DRE) voting machines often are out in the open rather than enclosed. Early research about the post-HAVA voting experience highlights that voters overwhelmingly believe that new voting machines count their votes accurately but are less confident that these machines afford sufficient privacy. Voters' judgments about privacy are related to their overall confidence in the fairness of the election process (Claassen et al. 2008, 2011), and lower levels of voter confidence can depress turnout rates (Alvarez, Hall, and Llewellyn 2008).

This article builds on research about privacy in the post-HAVA voting environment in two ways. First, we examine why voters are concerned about privacy and whether their concerns can be alleviated. Second, and perhaps more importantly, we ask whether concerns about privacy are equally distributed across the population. We are especially concerned with the relationship between voter privacy and the political norms of the communities where voters live. We use data from an Election Day field experiment, supplemented with national survey data, to examine perceptions of privacy. Results from both data sources indicate that concerns about privacy are related to whether voters consider themselves to be a member of their community's political majority or minority:² voters in the political majority are less sensitive to issues of privacy, while voters who are in the political minority seem especially worried about other voters seeing their ballot, are more concerned about the issue of privacy generally, and are more resistant to efforts to reassure them that their ballots are cast in secret. These findings raise concerns about whether the voting process

1. The extraordinarily close outcome of the 2000 presidential contest between George W. Bush and Al Gore, especially in Florida, invited significant scrutiny of electoral law and administration. For example, the Caltech/MIT Voting Technology Project (2001) estimates that 1.5 million votes in the 2000 presidential election were not counted because of voter difficulties with voting equipment. Mebane (2004) proposes that if the state of Florida had used different voting technology, Gore would have won the presidency. Various scholars suggest that other institutional irregularities, such as miscounting military ballots in Florida (Imai and King 2004), may have contributed to Bush's victory.

2. Throughout the article, we refer to political minorities and majorities. For the purposes of this article, that designation has nothing to do with race or ethnicity, but rather with whether or not an individual conforms to the political norms of the community. In the field experiment data, it encompasses the difference between those who voted for the community's "favorite son" in the presidential primary and those who did not. In the national data, this is a self-report of how different the respondents felt their choices for president were likely to be from others at their polling place. Other works have used similar definitions of political majorities and minorities as well (e.g., Hunton, Price, and Hall 1996).

can adequately meet the two challenges of protecting a voter's privacy and ensuring satisfaction with the voting process.

Theoretical Overview

Prior to the twentieth century, the act of voting was not at all private (see Schudson 1998 and Keyssar 2000 for historical overviews). Political parties printed and distributed ballots and could track how people had voted, rewarding their supporters with perks such as jobs or money (Fortier 2006, p. 9). Widespread corruption led to the introduction of the secret, or Australian, ballot, which was adopted in nearly all states by 1910. The secret ballot changed election administration in four ways: Ballots were printed and distributed by the government; ballots contained the names of all legally nominated candidates; ballots were distributed only by election officials at government-sanctioned polling places; and provisions were made for privacy and secrecy in casting ballots, such as private or curtained booths where voters could mark their choices. Although the secret ballot resulted in a drop in voter turnout, scholars attribute this to the decreased role of party bosses in elections and a reduction in voter fraud (Heckelman 1995; Schaffer 2002; Fortier and Ornstein 2003). The secret-ballot reforms produced an election system that remained mostly unchanged for more than a century.

The presidential election of 2000 sparked demands for change. HAVA reforms required election jurisdictions to abandon punch-card voting systems. These jurisdictions often selected optical scan or DRE machines, many of which did not have the privacy booth or curtains that had accompanied older voting systems. Claassen et al. (2011) show that many voters in the 2006 election were concerned about the level of privacy these machines afforded. Approximately 80 to 90 percent of respondents across jurisdictions in Utah and Ohio expressed confidence that their ballots had been counted accurately, and similar proportions were confident that the election process "produces fair outcomes." However, only 50–60 percent of voters agreed with the statement "I felt like I voted in privacy." Furthermore, a lower sense of privacy is strongly associated with lower voter confidence. Using data from 2008, Gerber et al. (2009) find that approximately one-quarter of all voters and about half of non-white or less-educated voters believe that their ballot choices are not kept secret.

Voters may not be so much concerned about overt fraud or physical coercion as they are about poll workers or other voters knowing how they voted, as some voters may be especially sensitive to the norms and expectations of those around them. Research on sensitive topics supports Brandt and Sandholm's (2005) inference that secret ballots allow voters to express "true" opinions instead of simply mirroring what is most popular or expected. Studies on topics like illegal drug use (Aquilino and LoSciuto 1990), sexual standards (Knudsen, Pope, and Irish 1967; Heerwegh 2005), satisfaction with life (Mangione,

Hingson, and Barrett 1982), and racist attitudes (Krysan 1998) show that respondents who receive extra assurances about the anonymity or privacy of their responses (such as being interviewed by telephone rather than in person, or by filling out a paper questionnaire and sealing the questionnaire in an envelope) are more likely to report engaging in socially undesirable behaviors or holding undesirable attitudes. Political scientists and others have demonstrated that election surveys, especially those conducted in person or without privacy measures, can obscure voters' true preferences (Benson 1941; Bishop and Fisher 1995).

Theories of social conformity and social norms can help explain why people are reluctant to reveal socially sensitive information about themselves to others. Elster defines a social norm as “an injunction to act or to abstain from acting” (2007, p. 354). Norms state desired behavior that is expected to be followed, is widely agreed upon, and has some means of enforcement (Horne 2001). Unlike codified laws that have formal institutions for enforcement, norms are instead enforced informally, whether internally when individuals apply sanctions to their behavior or follow social norms for their own sake, or externally through shaming the norm violator, contempt for those who observe the violation, or social shunning (Elster 2007, p. 355). These penalties can be heightened by gossip, which adds punishments beyond those imposed by people who observe the violation (Noelle-Neumann 1993). Obeying social norms can be contingent on whether or not a person will be observed breaking the norm (Elster 2007, p. 358); a person is less likely to break a social norm if others are present to punish the violation.

Social psychologists identify two sorts of norms—injunctive and descriptive (Reno, Cialdini, and Kallgren 1993; Gerber and Rogers 2009). Injunctive norms describe what individuals perceive others *should* do, whereas descriptive norms involve perceptions about the *actual behavior* of many or most people. Although both types of norms can affect behavior, descriptive norms are especially powerful when framed in terms of the majority's actions, and they may have varying effects depending on the individual's conformity (or lack thereof) with the norm. This implies that descriptive norms may be especially meaningful for those who are in the minority. Non-conforming persons, for example, may be especially likely to feel discomfort because they are deviating from the majority (Gerber and Rogers 2009). Studies provide a variety of examples of how pressure from descriptive norms can drive individuals to change their behavior, including publicly announced judgments (Asch 1955), littering (Cialdini, Reno, and Kallgren 1990), recycling (Cialdini 2003; Goldstein, Cialdini, and Griskevicius 2008), and binge drinking (Prentice and Miller 1993; Haines 1996). The common finding is that norms can powerfully shape behavior (Paluck 2009a, 2009b).

More central to our study, descriptive social norms are likely a critical aspect of voting behavior. Several scholars have shown that social norms can influence the decision of whether or not to vote (Coleman 2004; Campbell 2006, pp. 24–25; Blais 2000, pp. 112–13). Mutz (2006) shows that conflict-avoidant

citizens may be especially reluctant to divulge preferences that differ from the community norm, even choosing not to vote to avoid being forced to publicly discuss their political choices. Experimental findings reveal that voters who are made aware of a neighborhood norm in favor of voting are much more likely to vote in a primary election (Gerber, Green, and Larimer 2008) and that individuals exposed to messages emphasizing a norm of high turnout are significantly more likely to report a strong intention to vote than are individuals who receive messages about norms of low turnout (Gerber and Rogers 2009). These effects are concentrated among those who reported voting infrequently in the past; in other words, the effects of messages about the majority's behavior were especially powerful among those who had deviated from the descriptive norm.

The literature suggests, then, that descriptive norms can shape the voting experience. We expect that voters' privacy concerns stem from the fear that poll workers or other voters may see their ballot choices and issue some sort of social punishment for the non-conforming vote. Because HAVA-reform technologies like DRE voting machines are more likely than their predecessors to be out in the open, we expect that concerns about onlookers will help explain privacy worries. We hypothesize that limiting the proximity of poll workers and other voters to those casting ballots should reduce voters' concerns about these two groups of onlookers. We further hypothesize that social and political norms shape the voting experience insofar as some voters may arrive at their precinct expecting to be among a political majority or a dissenting political minority. Therefore, voters who share widely held political preferences will not be as worried about privacy as those in the political minority.

Research Design and Data

Our study draws on two sources of data to test our hypotheses. We conducted a field experiment in the February 5, 2008, presidential primary in Syracuse, Utah, to test whether voter privacy could be increased by using a few simple measures, and we collected data in the 2008 Cooperative Congressional Election Study (CCES) to explore voter privacy on a national level.

Our field experiment was the result of collaboration with county election officials in Davis County, Utah. With their assistance, we set up two side-by-side voting rooms at a community center where all residents of Syracuse, Utah, voted on Election Day. The rooms were exactly alike in the number and layout of voting machines and check-in tables and the number of poll workers in the room. Both voting rooms were spacious and well lit, creating an ideal situation for voting. One room, the experimental treatment room, had extra privacy measures—black-and-yellow tape laid on the floor around each voting machine to delineate the county's privacy boundaries and signs prominently placed throughout the room reminding people to respect voter privacy (see figure 1). The control room had none of these features. We randomly assigned

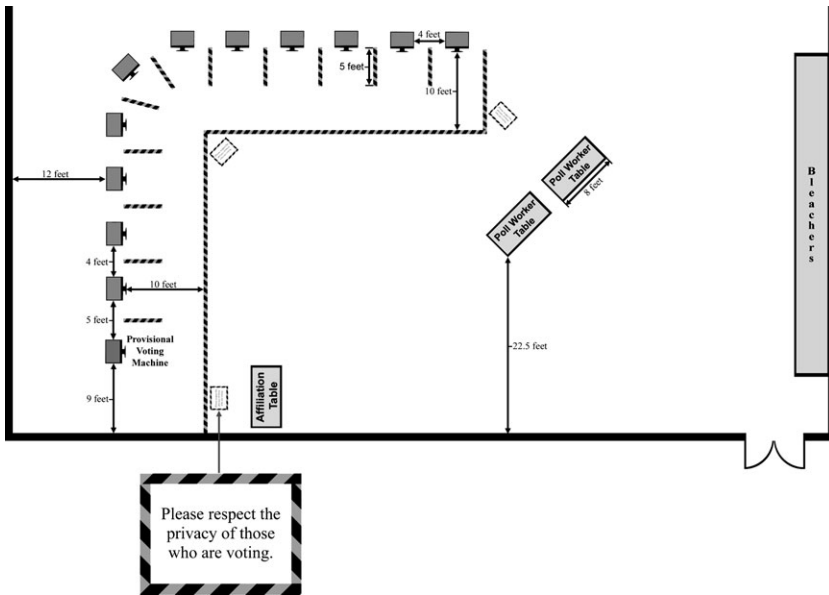


Figure 1. Diagram of the Experiment Room.

voters to vote in one of the two rooms.³ Exit-poll interviewers then invited voters from each room to fill out a questionnaire about their voting experience, especially their perceptions of privacy.⁴ We also conducted unobtrusive structured observations in both rooms throughout the day to observe voter and poll-worker behavior. Structured observers monitored the voting process for 35 minutes during every hour throughout the day, counting the number of times a voter or poll worker crossed into the “privacy zone”—the area around each voting machine—and noting the number of voters at the voting machines and waiting in line to vote. Observers were also instructed to record any other occurrences that were relevant to the research design.⁵

The field experiment portion is especially pertinent to our hypotheses because the elements of descriptive political norms were heavily in play in the

3. A randomization check shows no statistically significant difference between treatment and control rooms on a series of demographic variables and political attitudes. See the supplementary Online Appendix, table A2, for details.

4. The exit poll proved very accurate in predicting the winners of the presidential primary election, with exit-poll estimates within one percentage point of the election returns in both the Democratic and Republican primaries. For a more complete comparison of the exit-poll results with election results, see the supplementary Online Appendix, table A1.

5. Information on response rates and the methodology of the exit poll can be found in the appendix. More detailed information on the exit poll and the structured observations can be found in the supplementary Online Appendix.

community. Republican presidential candidate Mitt Romney had strong community and religious ties to Utah: 81 percent of Syracuse voters identified themselves as adherents of the Church of Jesus Christ of Latter-day Saints, or Mormon Church, of which Romney is also a member.⁶ Approximately 90 percent of Republicans in Syracuse voted for Romney in this election, and if we count all voters who cast ballots that day, regardless of party affiliation, approximately 75 percent chose Romney. We take this as strong evidence that the community's descriptive political or social norm favored Romney, meaning that the city could be divided into a commanding political majority favoring Romney and a much smaller political minority preferring other candidates. Those who went to the polls with the intent to vote for someone other than Romney would be acting against the political norms and expectations of most others around them and would thus be in the political minority. With respect to the field experiment data, then, we operationalize the political majority as those who voted for Romney in the presidential primary. The political minority includes those who chose any other candidate.

We buttress the field experiment data with evidence from the 2008 Cooperative Congressional Election Study (CCES).⁷ The survey was administered via the Internet by YouGov/Polimetrix and used sample-matching techniques to construct a nationally representative sample of adults (Vavreck and Rivers 2008; Ansola-behere 2009). The present analysis draws on a portion of the survey administered to 1,000 respondents in two waves—a pre-election wave completed in October 2008 and a post-election wave completed in November. The pre-election wave contained a number of questions about respondents' expectations for their voting experience in the upcoming presidential election. One question asked whether or not the voting system in the respondent's area would allow others "to see or learn how I vote." Another question explored voters' subjective impressions of their adherence to the descriptive political norms in their area by asking whether their expected vote choice for president would be "similar to the majority of voters at

6. Romney's religion is especially relevant because Mormons tend to be politically cohesive and ideologically conservative (Campbell and Monson 2007). Though the Mormon Church did not endorse Romney (its political neutrality was emphasized in official statements read to Mormon congregations), he was widely viewed as the first viable Mormon candidate for a major party's presidential nomination and gained much electoral and financial support from fellow Mormons. We expect that these facts contributed to social pressure on many Mormons to support Romney, which may have been especially powerful in a setting like the local polling place, where voters could easily encounter neighbors or fellow church congregants. Of course, because partisan, religious, and community norms in Syracuse were highly correlated, it is impossible to tell whether party, church, or neighborhood identities are driving the results. Whatever the specific mechanism, the key fact is that Syracuse voters who arrived at their local polling location had strong reason to suspect that a majority of their fellow citizens would be casting ballots for Romney. In this sense, the demographics of Syracuse, Utah, actually work in favor of a study of community norms and the voting experience.

7. Information on methodology and response rates can be found in the appendix. Our analysis is based on the September 2009 release of CCES data.

my polling location.” The post-election wave asked about voters’ actual experience at the polls, including whether or not they felt they voted in privacy.

Findings

THE FIELD EXPERIMENT

Given the generally favorable voting conditions at the community center, we expected that most voters in our field experiment would have a positive experience. This has implications for our experimental results: If we find any privacy effects in these nearly ideal voting conditions, we expect that those effects would be even larger under less favorable circumstances. The data confirm our expectations: Voters expressed high levels of satisfaction with their overall voting experience and generally high levels of confidence in the fairness and accuracy of the elections process, with very little difference between the experiment room and the control room.⁸

Theories of descriptive social norms predict differences in confidence and satisfaction between political majorities and political minorities and, consistent with those expectations, we found that 65 percent of minority voters said they were very confident that their ballot would be counted accurately, compared to 86 percent of voters in the majority. Similarly, minority voters scored 27 percentage points lower than majority voters on a measure of whether they were very confident in the fairness of the election process. These results buttress the hypothesis that the voting experience may be fundamentally different for minority voters than for voters who are in the political majority.

The exit poll asked voters to rank in order of importance “a list of five things that people value when they come to vote”: a short wait; helpful poll workers; a simple ballot; privacy; and easy-to-use equipment. If the treatment, with its increased attention to privacy, had any effect at all, then we would expect voters in the experiment room to rank privacy higher on the list of values than voters in the control room. Table 1 shows precisely this result: Approximately 43 percent of voters in the experiment room included privacy as one of their top two values, and slightly more than one-third of the voters in the control room ranked privacy high on the list, a marginally statistically significant difference at $p < .10$.

Table 1 also shows that voters in the political minority view privacy as more salient than do voters in the political majority.⁹ Whereas 47 percent—nearly

8. More than three-quarters of all voters in our field experiment expressed high confidence in the fairness and accuracy of the elections process; further details can be found in the supplementary Online Appendix, table A5.

9. Consistent with the results in table 1, alternative specifications such as ANOVA or logit models show strong and statistically significant main effects for both the experimental treatment and being in the political minority, with both leading to increased salience of privacy ($p < .05$ for both main effects). However, the interaction between the experimental treatment and being in the political minority was not statistically significant.

Table 1. Saliency of Privacy (standard errors listed in parentheses)

	All Voters (n = 663)	Political Majority (n = 477)	Political Minority (n = 160)
Percent ranking “Being able to vote in privacy” as one of the two most important values when voting			
All	39.6 (2.0)	37.5 (2.3)	47.3 (4.2)
<i>Difference Between Minority/Majority</i>		9.8** (4.8)	
Experiment Room	42.8 (2.9)	41.1 (3.3)	51.6 (5.6)
Control Room	35.6 (2.8)	33.2 (3.4)	41.2 (6.5)
<i>Difference Between Experiment and Control</i>	7.2* (4.1)	7.9* (4.7)	10.4 (8.5)

NOTE.—A small number of voters did not disclose their vote choice, so they could not be classified as part of the political majority or minority. Values in **bold** indicate statistically significant relationships.

* $p < .10$, ** $p < .05$, *** $p < .01$, two-tailed difference of proportions test

SOURCE.—2008 Utah Colleges Exit Poll Data.

half of all minority voters—ranked privacy high on their list of values, only 37 percent of majority voters reported privacy as being highly important compared to other values. Both majority and minority voters in the experiment room ranked privacy higher on the list of values than their counterparts in the control room, though the difference between treatment and control is not statistically significant at conventional levels when results are restricted to the political minority only.¹⁰ Still, we note that 41 percent of minority voters in the control room view privacy as highly salient—the same percentage as majority voters who were exposed to the experimental treatment.

Our research design also sought to measure the effects of the experimental treatment on the behavior of voters and poll workers. As part of the data collection, unobtrusive observers¹¹ counted the number of times voters and poll

10. The lack of statistical significance may be due to a small sample size among the population of political minority voters who answered the saliency question ($n = 160$). Because of the limitations of sample size, we report statistical significance at the .10 level in addition to the .05 and .01 levels.

11. Unobtrusive observation was facilitated because voting took place in large gymnasiums with bleachers along a wall opposite the voting area that allowed the observers to accurately view voting activity from a distance.

workers crossed the “privacy zone” around each machine, which was outlined clearly in the experiment room (see figure 1) but was not formally delineated in the control room.¹² Table 2 displays the mean number of times both voters and poll workers crossed into the privacy zone in each room and clearly shows that the experimental manipulation had a strong effect. Whereas poll workers in the control room entered the privacy zone an average of nearly nine times during each 35-minute observation period, their counterparts in the experiment room crossed into the privacy zone only once each observation period. Similarly, voters in the control room entered the privacy zone nearly six times per observation period, but just over three times per observation period in the experiment room.¹³ Comparing the control to the experimental condition, poll workers in the control room were nearly nine times more likely to cross into the privacy zone, and other voters were nearly twice as likely to do so; these differences are statistically significant at conventional levels. We take this as strong evidence that the manipulation had at least some effect on the voting experience.

Our larger research question concerns not only actual behavior, but voters’ *perceptions* of the behavior of poll workers and other voters. As Gerber et al. (2009) argue, voters’ beliefs about privacy may be more important than the

Table 2. Structured Observations of Voter and Poll-Worker Behavior
(standard errors in parentheses)

	Mean number of times a poll worker entered privacy zone	Mean number of times another voter entered privacy zone
Experiment Room	1.0 (0.3)	3.1 (1.0)
Control Room	8.7 (1.5)	5.8 (0.9)
<i>Difference Between Experiment and Control</i>	-7.7*** (1.6)	-2.7** (1.3)

NOTE.—Values in **bold** indicate statistically significant relationships.

$n = 26$ observation periods for each room

* $p < .10$, ** $p < .05$, *** $p < .01$, two-tailed difference of means test

SOURCE.—Structured Observation Data from 2008 Utah Colleges Exit Poll.

12. A few small pieces of masking tape were placed on the floor in the control room so that the observer could accurately see where the privacy tape would have been placed in the control room.

13. This does not include the times when voters entered the privacy zone to cast their own ballots.

Table 3. Voter Impressions of Poll-Worker and Voter Behavior (standard errors listed in parentheses)

	Political Majority (n = 548)		Political Minority (n = 184)	
	Experiment Room	Control Room	Experiment Room	Control Room
While you were marking your ballot, how likely do you think it was that a poll worker could see your choice?				
Very likely or Somewhat likely	13.3 (2.1)	12.0 (2.2)	12.4 (3.4)	25.3 (5.3)
<i>Difference Between Experiment and Control</i>	1.3 (3.1)		-12.9** (6.3)	
While you were marking your ballot, how likely do you think it was that another voter could see your choice?				
Very likely or Somewhat likely	12.2 (2.1)	7.3 (1.7)	10.9 (3.3)	21.5 (5.0)
<i>Difference Between Experiment and Control</i>	4.9* (2.7)		-10.6* (6.0)	

NOTE.—Values in **bold** indicate statistically significant relationships.
 * $p < .10$, ** $p < .05$, *** $p < .01$, two-tailed difference of means test
 SOURCE.—2008 Utah Colleges Exit Poll.

actual practices of election officials. We find stark differences between the perceptions of voters in the political majority and minority. As table 3 shows, majority voters expressed generally low levels of concern about privacy, and the experimental manipulation had relatively little effect on their attitudes: Only a small percentage of majority voters expressed concerns about the prying eyes of other voters or poll workers. Majority voters in the experimental room were slightly *more* likely to perceive at least some probability that another voter could see their ballot, perhaps because our manipulation raised the salience of privacy, but even this increase is small in magnitude.

The dynamic among voters in the community’s political minority, on the other hand, is quite different. In the control room, where no special privacy measures were present, fully one-quarter of political minority voters expressed concern that a poll worker could observe their choices, and more than a fifth of minority voters worried about other voters being able to see their ballot. This increased concern parallels the more frequent violations of the privacy zones noted by the structured observers. With the enhanced privacy measures in the experiment room, a much smaller percentage of minority voters believed it was likely that another voter or

poll worker was able to glimpse at their ballots. These differences are powerful evidence for the relationship between norms and perceptions of privacy.¹⁴

The results show that minority voters were more likely than majority voters to rank privacy high on their list of important values and were more likely to perceive violations of privacy from poll workers and other voters when enhanced privacy measures were not present. But how do all of these measures contribute to their opinions about privacy at the voting place on Election Day? We find that voters in the political minority expressed increased concern about all aspects of privacy, even in the face of the enhanced privacy measures. For example, the exit-poll survey asked voters to judge the space between the voting machines. Importantly, the voting machines in both rooms were all verified to be four feet apart, as mandated by the county. Table 4 shows no significant difference between experiment and control room voters in their judgments about whether the voting machines were “too close together.” Within both conditions, however, minority voters expressed significantly more concern about the spacing of voting machines; this difference between majority and minority voters is especially pronounced in the room with enhanced privacy measures. Thus, voters who chose a candidate other than the community favorite came to the polling place sensitive to factors that may affect their privacy.

Voters were also asked about their agreement with the statement “I felt like I voted in privacy”; this measures voters’ summary judgments about the privacy of their voting experience. As shown in table 4, the political minority again expressed less confidence that their votes had been cast in private. Minority voters who cast their ballots in the experiment room scored, on average, 0.25 points lower on the five-point privacy scale than voters in the political majority. This disparity represents about 6 percent of the difference between the privacy measure’s maximum and minimum values (5 and 1, respectively). In the room without any special measures to protect privacy, minority voters scored 0.40 points lower—a difference of about 10 percent of the span from the top to the bottom of the scale.¹⁵

Given the pattern of results in table 4, it is possible that the experimental treatment actually exacerbated the privacy problem, with the gap between majority and minority voters becoming larger in the experimental condition. Such a result would be consistent with Singer, Hippler, and Schwarz (1992), who find in a survey setting that reassuring respondents about privacy *depressed* response rates because mentioning privacy raises its salience. A difference in differences

14. Alternative analytic approaches underscore this main point. A logit model, for example, shows a strong main effect of being in a political minority ($p < 0.01$ for perceptions of other voters’ and perceptions of poll workers’ behavior). In addition, the models show a strong interaction between minority status and the experimental treatment ($p < .05$ in both models), with minority voters in the experiment room less likely to believe that others could see their ballots.

15. OLS regressions show a significant main effect for being in the political minority ($p < .02$), but no significant effect for the experimental treatment and no significant interaction between treatment and minority status. Results are similar when perceptions of the distance between voting machines constitute the dependent variable.

Table 4. Subjective Judgments about Privacy (standard errors in parentheses)

“The Voting Machines Were Too Close Together”				
	All Voters (n = 723)	Political Majority (n = 521)	Political Minority (n = 170)	<i>Difference Between Majority/Minority</i>
All	1.84 (0.04)	1.73 (0.05)	2.12 (0.10)	-.39*** (0.11)
Experiment Room	1.88 (0.06)	1.73 (0.07)	2.21 (0.13)	-.48*** (0.15)
Control Room	1.79 (0.06)	1.72 (0.07)	2.00 (0.15)	-.28* (0.16)
<i>Difference Between Experiment and Control Rooms</i>	.09 (.09)	.01 (.10)	.21 (.20)	
“I Felt Like I Voted in Privacy”				
	All Voters (n = 717)	Political Majority (n = 534)	Political Minority (n = 177)	<i>Difference Between Majority/Minority</i>
All	4.44 (0.04)	4.52 (0.05)	4.20 (0.10)	.32*** (0.11)
Experiment Room	4.48 (0.06)	4.47 (0.07)	4.22 (0.12)	.25* (0.14)
Control Room	4.41 (0.06)	4.58 (0.06)	4.18 (0.16)	.40** (0.17)
<i>Difference Between Experiment and Control Rooms</i>	.07 (.08)	-.11 (.09)	.04 (.20)	

NOTE.—Cell entries are means on a 1–5 scale, with 5 = Strongly agree. Values in **bold** indicate statistically significant relationships.

* $p < .10$, ** $p < .05$, *** $p < .01$, two-tailed difference of means test

SOURCE.—2008 Utah Colleges Exit Poll.

test (not shown in the table) reveals no statistically meaningful difference between the conditions, however. With respect to both assessments of the distance between voting machines (difference = -0.20 , $t = -0.91$, $p = 0.36$) and summary assessments of privacy (difference = -0.14 , $t = -0.63$, $p = 0.52$), the treatment condition does not produce a significantly different majority-minority divide than the control condition.

Notably, table 4 also shows no significant differences in feelings of privacy between the experiment and control room for either majority or minority voters considered separately. This result is not unexpected for those who followed the community norm: These voters express very little concern about privacy under any circumstances. But what about the results for minority voters? Does the analysis suggest that the enhanced privacy measures failed to reassure them? Closer examination reveals that the success of the privacy treatment depends, in part, on how many other voters were in the room. As table 5 shows, when fewer than 20 other voters were in the room—as was the case for nearly 60 percent of

Table 5. “I Felt Like I Voted in Privacy” Among Political Minority Voters by # of Other Voters in the Room (Mean on 1–5 Scale) (standard errors in parentheses)

	Political Minority When <20 Other Voters in the Room (n = 99)	Political Minority When >20 Other Voters in the Room (n = 78)
Experiment Room	4.48 (0.12)	3.99 (0.20)
Control Room	4.07 (0.21)	4.32 (0.22)
<i>Difference Between Experiment and Control Rooms</i>	.41* (0.24)	-.33 (0.30)

NOTE.—Cell entries are means on a 1–5 scale, with 5 = Strongly agree. Values in **bold** indicate statistically significant relationships.

* $p < .10$, ** $p < .05$, *** $p < .01$, two-tailed difference of means test

SOURCE.—2008 Utah Colleges Exit Poll.

our respondents in the political minority—the experimental treatment worked well, with minority voters in the experiment room expressing significantly more confidence in the privacy of their voting experience.¹⁶ When the polling

16. The count of voters in the room comes from the structured observers. They reported the number of voters in the room twice during each observation period, and we assigned each exit-poll respondent to the count nearest the time when they received the exit poll. Clearly, this approach results in some amount of measurement error in assessing the exact number of voters in the room at the time

location was busier, the experimental manipulation was not strong enough to reassure those in the political minority.¹⁷ If anything, minority voters in the control room who cast their ballots at busy times were *more* likely than their counterparts in the experiment room to feel that they voted in privacy, though this difference is not statistically distinguishable from zero. In other words, the attempts to enhance minority voters' sense of privacy worked well during moderate to light traffic on Election Day, but in the more stringent test of a busy polling place, minority voters were not reassured by our signs and marked privacy zones that they had cast their ballot in sufficient secrecy. A formal test shows that the difference in differences between high-traffic and low-traffic

Table 6. Determinants of Privacy Judgments in Field Experiment (standard errors in parentheses)

	Model 1 (n = 660)		Model 2 (n = 660)	
Political Minority	-0.06	(0.03)**	-0.05	(0.06)
Experiment Room	-0.01	(0.02)	0.00	(0.04)
Spacing of Voting Machines	-0.10	(0.05)**	-0.10	(0.05)**
Poll Workers Could See Ballot	-0.03	(0.05)	-0.04	(0.05)
Other Voters Could See Ballot	-0.23	(0.06)***	-0.22	(0.06)***
Poll Workers Were Helpful	0.16	(0.08)**	0.17	(0.08)**
Overall Rating of Poll Workers	0.13	(0.12)	0.13	(0.11)
Personally Know a Poll Worker	-0.00	(0.02)	-0.01	(0.02)
Few Voters in Room			0.02	(0.03)
Political Minority × Experiment Room			-0.07	(0.09)
Few Voters × Political Minority			-0.06	(0.09)
Few Voters × Experiment Room			-0.03	(0.05)
Few Voters × Experiment Room × Political Minority			0.20	(0.11)*
Intercept	0.64	(0.12)***	0.65	(0.12)***
R-squared	0.14		0.15	

NOTE.—Dependent variable on a 0–1 scale, with high scores indicating an increased sense that the respondent cast his or her ballot in privacy. Demographic controls for education, gender, age, and race are included in the model but were not significant and are not reported here (see supplementary Online Appendix for full model). Values in **bold** indicate statistically significant relationships.

* $p < .10$, ** $p < .05$, *** $p < .01$, two-tailed test.

SOURCE.—2008 Utah Colleges Exit Poll.

17. This finding may, in part, be explained by the lack of privacy provisions at the check-in table. When more voters were in the room, more were likely to hear each individual declare his or her intention to vote in the Republican or Democratic primary. Given that our research design made no special efforts to observe or control privacy at the check-in table, however, we cannot be sure.

times is statistically significant (difference = 0.74, $t = 1.95$, $p = 0.05$, two-tailed test).

Together, these data help us better understand the elements that contribute to privacy judgments. Table 6 presents the results of an OLS model that includes several of the measures we have discussed up to this point, in addition to other measures of poll-worker behavior. For ease of interpretation, the dependent variable, the degree to which voters felt like they voted in privacy, which was measured originally on a five-point scale, was recoded from 0 (“strongly disagree”) to 1 (“strongly agree”). Model 1 shows that, as expected, minority voters were significantly less likely to agree that they had voted in privacy. Controlling for a variety of demographic measures and other impressions of the voting experience, minority status decreased voters’ sense of privacy by approximately 6 percentage points.¹⁸ We note, too, that this finding holds when the same model is restricted to respondents who self-identify as Republicans. Those Republicans who chose a candidate other than Romney felt significantly less assured that they voted in privacy ($\beta = -.10$, $SE = 0.05$).¹⁹ In other words, the finding is not simply driven by Democrats, the partisan minority in Syracuse, but holds for members of both parties.

Not surprisingly, respondents who believed that other voters could see their ballot felt less assured about the integrity of their ballots. This effect is especially strong, moving voters nearly a quarter of the way down the privacy scale, all else being equal. Whether or not a poll worker could see a voter’s ballot has no statistically discernable effect on voters’ overall sense of privacy. In fact, helpful poll workers are a boon to perceived privacy, a finding that confirms recent work on voter confidence (Hall, Monson, and Patterson 2009). This result suggests that the key threat to privacy comes from other voters—an interpretation that would make the community’s descriptive political norm all the more salient. It may also mean that voters have a different standard for the behavior of poll workers who may see a voter’s ballot in the process of lending assistance. The relationship (or lack thereof) between poll workers and perceived privacy may also help us make clearer sense of the effects of the experimental treatment. Data from the structured observers showed that one of the most profound differences between the control room and the experiment room was the behavior of poll workers, but table 6 indicates that altering the behavior of poll workers was less important to summary judgments about privacy than was making sure that other voters at the polling place could not oversee or

18. Results are robust to an ordered probit specification. Using ordered probit, we find that voters in the political minority were significantly less likely than voters in the political majority to strongly agree or agree that they voted in privacy. The difference in probabilities is 15 percentage points for the “strongly agree” response and 5 percentage points for the “agree” response. In both cases, the difference between the political minority and the political majority is strongly significant ($p < .001$).

19. See supplementary Online Appendix, table A3, for the full OLS model, and table A4 for the model restricted to Republicans only.

overhear what their fellow voters were doing. Because the treatment had a more powerful effect on poll workers than on other voters, it was less successful in reassuring voters about their overall sense of privacy.

Model 2 of table 6 highlights interactions between the political minority, the experimental condition, and the number of voters in the room. As we saw in table 5, the experimental conditions reassured minority voters, but only when fewer than 20 other voters were in the room. Similarly, the interaction terms in model 2 of table 6 show that our experimental treatment did reassure minority voters, but only when relatively few voters were in the room. When more voters were in the room, however, minority voters in the treatment condition were significantly less likely to feel they voted in privacy—less likely than both majority voters in the treatment condition and majority or minority voters in the control condition. The triple interaction between experimental condition, minority status, and the number of voters in the room is significant at the 90-percent confidence level.

OBSERVATIONAL DATA: THE 2008 CCES

For all its advantages, the field experiment has some limitations—its results include voters in only one location, where the voting systems were held constant across all voters. We thus sought further information about privacy concerns across the different contexts (including different voting systems) in which voters might cast their ballots. As an extension of the experimental work, we included questions about privacy and the voting experience on the 2008 Cooperative Congressional Election Study (CCES), which allowed us to explore judgments of privacy nationwide.

The CCES is an especially valuable resource because it includes respondents' subjective judgments about their relationship to the political majority in their area. In the October wave of the survey, respondents were asked to report whether they expected their choice for president to be different from the choices of the majority of other voters at their polling location, which measured whether respondents felt they were likely to deviate from the local descriptive norm.²⁰ Approximately 22 percent of the sample expressed at least some level of agreement with the notion that they would be different from the majority of voters in their area, and 12 percent felt strongly that they would be part of a political minority.²¹

20. The question wording was as follows: "I expect my vote choice for president to be similar to the majority of voters at my polling location." Respondents had seven response options, ranging from "strongly agree" to "strongly disagree." We code the variable with "strongly disagree" as the high score. Note that this particular question wording does not allow us to get at the size of the political majority in the respondent's area.

21. These percentages use CCES sample weights to reflect a representative sample. Further details about survey methodology and weights can be found in Vavreck and Rivers (2008) and Ansolabehere (2009).

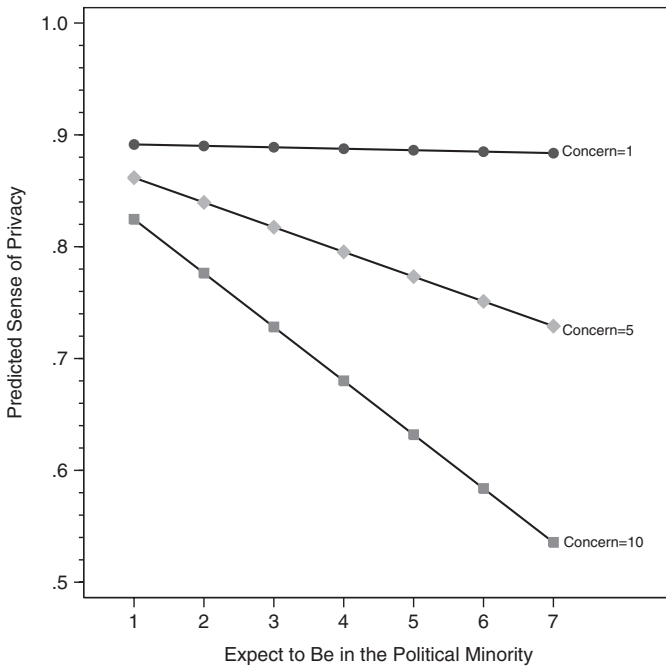


Figure 2. Estimated Sense of Privacy by Political Minority Status and Vote System Concern.

Previous research suggests that a relationship exists between a voter's sense of privacy and the type of equipment used (Herrnson *et al.* 2008, p. 124). To account for this, prior to the election, respondents were asked to disclose their potential concerns about the voting system in their area. We presented respondents with a 10-point scale anchored by two alternatives—"Given the voting system in use in my area, I am confident that no one will know how I vote" (1) and "Given the voting system in use in my area, I am concerned that someone may be able to see or learn how I vote" (10). Respondents chose the point on the scale that best represented their level of concern. For ease of interpretation, we coded the variables with high scores indicating increased expectation of being in the political minority or increased concern about the voting system.

The CCES data show a powerful relationship between political norms, pre-election concern about voting systems, and the post-election measure of whether voters felt they cast their ballots in privacy. The dependent variable here is the same summary judgment about voting in privacy as was used in the field experiment, again scaled from zero to one for ease of interpretation. An OLS regression reveals no direct effect between either minority status or

pre-election concern about voting systems on post-election privacy judgments.²² When the two variables interact, however, the effect is large and significant. Figure 2 shows a plot of predictive margins from the multivariate model and shows the effect of being in the political minority on estimated privacy judgments at selected levels along the 10-point scale of pre-election concern about voting systems.²³ For voters with low levels of concern—that is, those who expected that their local voting system would prevent others from seeing how they voted—being part of the political minority had little to no effect on post-election privacy judgments. However, if voters expressed moderate or high levels of concern that the voting system would allow others to see their ballots, then being in the political minority had a profound effect on post-election privacy judgments, decreasing voters' sense of privacy by as much as 30 percent on the privacy scale.²⁴ When the local voting system failed to reassure them, respondents who expected to be part of the political minority left their polling places much more concerned about privacy than those in the political majority.

Although the CCES data provide further insight into the relationship between political norms and privacy concerns, these results still leave several questions unanswered. We do not know, for example, precisely why some voters were not worried about their local voting system. Did some feature of the system—use of certain types of voting processes or certain types of privacy protections— inoculate them against the worry that others might see their choices? More also remains to be learned about the determinants of subjective judgments regarding status as a political minority—just how large, for example, does the political majority need to be before the minority begins to develop privacy concerns? In addition, deviation from the local political norm could occur in a variety of ways or through a variety of different mechanisms. We need to explore further what it is about the context of the local polling place—general partisanship, religion, specific vote choices, racial composition, or something else—that most powerfully shapes the sense of deviating from the political norm. More remains to be learned, too, about whether the local polling place is the most relevant normative context or whether city, state, or national trends also play key roles in understanding the relationship between the individual and descriptive norms. In any case, the national data affirm that the effects of acting against

22. The full multivariate model is available in the supplementary Online Appendix, table A6. The lack of direct effects is not simply a result of the relationship between the expectation of being in a political minority and pre-election concern about others seeing one's ballot. The correlation between the two variables is only 0.09. This result provides some reassurance that concerns about voting systems are conceptually and empirically distinct from minority status.

23. Plotting the other levels of concern reveals exactly the same pattern represented in figure 2.

24. As with all interaction effects, these can also be viewed from another perspective. Voters who were concerned about privacy prior to the election were much less likely to believe that they had voted in privacy—but only if they were also part of the political minority. When voters were part of the political majority, pre-election concerns about privacy had little effect on post-election privacy judgments.

group norms or group identities are not unique to the field experiment. In the national sample, concern about being part of a political minority has significant effects on judgments about the voting experience.

Discussion and Conclusions

The secret ballot has been described as “the jewel in the democratic crown” (Brennan and Pettit 1990), but there is little data on voters’ perceptions of privacy while they are voting in an actual election. The powerful effects of descriptive social and political norms, and the threat of social sanctions for violating these norms, mean that voters’ rights to cast their ballots without fear of repercussions must be safeguarded. Using a field experiment conducted in the midst of real Election Day processes and a nationally representative survey, this study provides important insights into which voters are worried about privacy and (at least to some extent) what can be done to reassure them of their privacy.

The conditions at our experimental site were exceptionally conducive to voter satisfaction and voter privacy: The rooms were large enough to allow plenty of space between the voting machines; they were clean and well lit; and there were plenty of poll workers available to provide assistance to voters. Despite these extremely favorable conditions, we still find that some voters in the political minority come to the polling place especially sensitive to issues of privacy and that those sensitivities may not be easy to overcome, even when election regulations are followed precisely and even when special measures to emphasize privacy are in place.

Our results also show that, under some conditions, the experimental treatment did make a difference to voters in the political minority. When the voting rooms were not too crowded, voters were reassured. However, at the busiest times of day, when it is most difficult to safeguard voter privacy, the experimental treatments had no measurable positive effect. Perhaps the experimental conditions were not strong enough to reassure these voters, or perhaps no amount of privacy measures could reassure voters who go against the community or group norm of the integrity of their ballots, as their dissatisfaction with being in the minority or with being on the losing side of an election could condition their entire voting experience. If judgments of privacy are fundamentally related to election outcomes, then perhaps no reassurance or alteration of the voting process would make a difference for minority voters. The interaction effects from the national data offer some comfort, though, that voting systems can moderate the relationship between political norms and privacy, thus reassuring voters who find themselves in the political minority.

Still, the results from this study suggest the need for considerable additional investigation into the relationship between political majorities and minorities, the ways in which those two distinct populations experience Election Day, and

the efficacy of different measures to enhance perceptions of privacy. Such investigation could include additional experiments with more stringent privacy measures or with experimental manipulations that emphasize commonalities among voters instead of any political differences (e.g., Mutz 2006). An exploration of the relationship between majorities and minorities is especially important in light of the growing number of safe congressional districts and the evidence of increasing homogeneity within localities (Macedo et al. 2005; Bishop 2008).

The findings also have important implications for electoral reform. Voting often has been construed as a communal act. However, when voters come together, some situations make some voters feel vulnerable. Certain reforms, such as vote-by-mail or electronic voting, may reduce or alleviate such vulnerability, but may also undermine the communal aspect of voting. Therefore, as electoral jurisdictions become increasingly homogeneous or consider new forms of voting, the effects of acting against political norms generated by community or group identities need to be a key part of our efforts to determine the optimum choice for democracy.

Appendix

EXIT-POLL DATA

As voters finished voting and left the polling rooms, researchers conducted an exit poll to gather information on their attitudes, confidence in elections, demographics, and especially their reaction to the experiment conditions. The exit pollsters worked in teams of three, with one team assigned to approach voters from each room throughout the entire day. The teams switched places every two hours to ensure an even response rate between the two rooms. When a voter exited each room, an interviewer from the designated team approached him or her at a fixed interval and politely requested that the voter fill out a survey. Voters from both rooms answered identical survey questions (the survey instrument is included below, with this appendix) but received different-colored surveys: Voters emerging from the treatment condition received blue surveys, and voters from the control condition received white surveys. This allowed the research team to unobtrusively monitor which voters received the privacy treatment and which voters did not. Once voters finished the survey, they placed it in a collection box to protect the confidentiality of their responses. After the election was completed, the research team delivered all completed questionnaires to DataWise, a data entry company, to be entered into a data file. Survey interviewers kept a running count throughout the day of all voters leaving each room.

Among sampled voters, the response rate is calculated simply as: Completed + Partial interviews/(completed + partial interviews) + (refusals + missed voters), a rate analogous to AAPOR RR 2. A total of 1,167 surveys were collected—534 from the traditional voting room (response rate of .654) and 633 from the enhanced-privacy room (response rate of .679).

After the research team received the completed dataset, the data were weighted to ensure that the proportion of responses for different periods of the day reflected the sampling interval that was used for that time period. The exit-poll interval was adjusted twice during the day. The research team started out interviewing every voter, but election officials became concerned that this was causing too much congestion in the foyer outside the voting rooms. At 9:00 AM, the interval was adjusted so that student interviewers approached every second voter who left each room. At 11:30 AM, the interval again was adjusted, to every third voter, so that the final number of completed surveys would be in the predetermined target range. Weighting was employed to ensure that the exit-poll responses were proportionate to the changing sampling interval used throughout the day. This was accomplished by using a weight of 1 for voters interviewed after 11:30 AM (when the interval was every third voter), a weight of 1/2 for voters interviewed after 9:15 AM and before 11:30 AM (because the sampling interval was every other voter), and a weight of 1/3 for voters interviewed before 9:15 AM (when all voters were interviewed). This prevents voters interviewed earlier in the day from counting disproportionately in the analysis. Applying the weights does not substantively change any of the analysis.

CCES DATA

The 2008 CCES is a cooperative effort of 30 university teams to conduct a national stratified sample survey of 32,800 American adults. Half of the questionnaire consists of “Common Content” asked of all respondents, and half of the questionnaire consists of “Team Content” designed by each individual participating team and asked of a subset of 1,000 respondents. The survey includes a pre-election wave conducted in October 2008 and a post-election wave conducted in November 2008. The CCES data analyzed in the article use the Brigham Young University team content.

The CCES was constructed using an innovative model-assisted probability sampling technique. First, a “target sample” was drawn from the 2006 American Community Survey (ACS) using a variety of

demographic variables to construct sampling strata.²⁵ The target sample was selected by simple random sampling within strata. In addition to the ACS variables, data on reported 2004 voter registration and turnout from the November 2004 Current Population Survey were matched to the target sample frame using a weighted Euclidean distance metric. Data on religion, church attendance, born-again or evangelical status, news interest, party identification, and ideology were matched from the 2007 Pew U.S. Religious Landscape Survey.²⁶

Respondents invited to complete the CCES questionnaire were drawn from the YouGov/Polimetrix Panel (supplemented by some other online panels) using a five-way cross-classification (age x gender x race x education x state). Approximately 50,800 pre-election interviews were completed, and all were invited to participate in the post-election survey. Each individual in the ACS target sample had one or more potential matches among the completed interviews in the YouGov/Polimetrix panel. After the survey questionnaire was administered, the completed interviews from the YouGov/Polimetrix panel then were matched to the ACS sampling frame using weighted Euclidean distances on a host of variables.²⁷ Nearest-neighbor matching identifies the closest match for each person in the ACS target sample among the completed interviews. This final match is called the “matched sample.” Matching enables data collected on a matched sample using online data collection with a sample of respondents who have measured characteristics very similar to the target sample from the ACS. Finally, the matched sample is weighted back to the sampling frame by age, years of education, gender, and turnout. Complete details of the sample-matching technique for 2008 are available in Ansolabehere (2009), including response rates. The AAPOR response rates are as follows: response rate 1: 0.468, response rate 2: 0.593, response rate 3: 0.471, response rate 4: 0.597. CCES data are

25. These include age, race, gender, education, marital status, number of children under the age of 18, family income, employment status, citizenship, state, and metropolitan area.

26. The distance function variables include the percentage of survey waves completed, state, region, metropolitan statistical area, marital status, born-again/evangelical status, income, employment, age, race, years of education, interest in news, gender, party identification, ideology, the interaction of news interest and ideology, and turnout.

27. The distance function variables include gender, age in years, categorical age variables, race (white, black, Hispanic, other), census region, education, political interest, marital status, party identification (five-point scale), ideology (five-point scale), religion (seven traditions, including mainline Protestant, evangelical Protestant, black Protestant, Catholic, other Christian, other faith, and unaffiliated), church attendance, household income, voter registration status, and metropolitan statistical area (metro or non-metro).

publicly available at <http://projects.iq.harvard.edu/cces/home>. For more information on the design of the CCES in general, see Vavreck and Rivers (2008), and for more information on the design of the 2008 study, see Ansolabehere (2009).

QUESTION WORDING: 2008 UTAH COLLEGES EXIT POLL

To what extent do you agree or disagree with the following statements regarding your voting experience?

I felt like I voted in privacy.

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

Below is a list of five things that people value when they come to vote. Which matter most to you? Please number them from 1 to 5, where 1 is the most important and 5 is the least important.

- ___ Amount of time it takes to vote
- ___ Poll workers' ability to help me
- ___ Clarity of the ballot
- ___ Ease of using the voting equipment
- ___ Being able to vote in privacy

While you were marking your ballot, how likely do you think it was that a poll worker could see your choice?

Very likely Somewhat likely Not very likely Not likely at all

While you were marking your ballot, how likely do you think it was that another voter could see your choice?

Very likely Somewhat likely Not very likely Not likely at all

The voting machines were too close together.

(Strongly Disagree) 1 2 3 4 5 (Strongly Agree)

QUESTION WORDING: 2008 CCES

Pre-Election Survey:

I expect my vote choice for president to be similar to the majority of voters at my polling location.

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

Using the scales below, please click on the position that best represents where you lie between each pair of statements about the voting process.

- Given the voting system I use in my area, I am confident that no one will know how I vote.

- Given the voting system I use in my area, I am concerned that someone will be able to see or learn how I vote.

Post-Election Survey:

I feel I cast my ballot in privacy.

(Strongly Disagree) 1 2 3 4 5 6 7 (Strongly Agree)

Supplementary Data

Supplementary data are freely available online at <http://poq.oxfordjournals.org/>.

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