Social Desirability and Voting in Public:
A Field Experiment of Voter Turnout in the 2008 Iowa Caucus

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Abstract: Does voting in public increase or depress turnout? We present a theory of the effect of social pressure on voter turnout, arguing that both social costs and social benefits can affect individual behavior. We test our theory by conducting a randomized field experiment during the 2008 Iowa Democratic presidential caucus, sending mailers to registered Democrats suggesting different reasons for voting. We include three treatments: (1) one telling citizens of the date, time, and location of the caucus; (2) one telling citizens the caucus is a public meeting where neighbors and friends will be attending; and (3) one telling citizens that the caucus does not have a secret ballot *and* that their neighbors and friends will be attending. We find that citizens are more likely to vote when information costs are reduced and when they are told the caucus is a public meeting. However, we find that turnout is reduced when citizens are told their vote choices must be revealed to their neighbors. To our knowledge, this is the first field experiment where a treatment has resulted in suppression of the vote relative to other treatment effects. These findings provide insights into individual behavior in a social context, a rejection of one explanation for heavy voter turnout in 19th century America, and practical insights for campaigns interested in mobilizing voters to presidential caucuses.

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Does voting in public increase or depress turnout? Can direct voter mail spur or suppress turnout when voters are reminded that their ballots will not be secret and will be cast in front of their friends, family, and neighbors? We answer these questions and examine the effect of social pressure on public voting. Few have examined the impact of social considerations on voting (though see Fowler and Kam 2007; Gerber, Green, and Larimer 2008), and none have examined the effect of social pressure on voting in public.

We present a theory of the effect of social pressure on voter turnout, proposing that both social costs and social benefits affect individual behavior. Some social pressure can spur turnout, as individuals may worry that other citizens will know about non-participation (Gerber, Green, and Larimer 2008). However, there is no theoretical reason to believe that social pressure or this desire for social contact always results in normatively desirable outcomes. Yet, research on political participation has posited that social pressure always leads to higher turnout. Is it also possible that social pressure can lead to lowered turnout?

To address these theoretical questions, we examine the most high-profile public vote in the contemporary United States, the Iowa Democratic caucus. We define *public voting* as any situation in which there is no secret ballot. Citizens choosing candidates in the first-in-the-nation presidential caucus publicly declare their support for a candidate in front of other voters. We utilize this setting to conduct a field experiment of voter turnout during the 2008 presidential caucus, as field experiments allow for "controlled interventions into the political world…[where] researchers draw unbiased and extremely valid causal inferences about social processes" (Green and Gerber 2003, 94-95).

We find that lowering information costs and increasing social desirability rationales for attending increase turnout, while applying social pressure by noting the lack of a secret ballot

inhibits turnout. These tests provide theoretical and empirical insights into individual behavior in a social context, a rejection of one explanation for high voter turnout in the 19th century, and practical insights for campaigns interested in mobilizing voters to presidential caucuses.

Unlike our study, field experiments typically examine lower-level elections for municipal and state legislative offices (e.g., Arceneaux 2007; Gerber and Green 2000; Gerber, Green and Shachar 2003; Green, Gerber, and Nickerson 2003; Green 2004).[1] Occasionally, field experiments focus on get-out-the-vote efforts during more high-profile gubernatorial and congressional elections (e.g., Cardy 2005; Michelson 2005, 2006; Nickerson, Friedrichs, and King 2006; Ramirez 2005; Wong 2005). A more difficult—though potentially the ultimate—test of whether direct contact affects voter turnout would involve a presidential election, where citizens undoubtedly are aware an election is occurring. No field experiment since Gosnell (1927) has examined the impact of direct voter contact in a presidential election, and no field experiment has ever examined the first-in-the-nation Iowa caucus.[2] Furthermore, no field experiment has examined voting in public without a secret ballot.

The rest of the manuscript is organized as follows. First, we detail our theory of social pressure's effect on individual behavior and voter turnout. Second, we situate our study within work that has attempted to explain why voter turnout was so high in 19th century America, prior to the adoption of the secret ballot. Third, we describe the setting for our field experiment, the 2008 Iowa Democratic caucus. Fourth, we detail the three treatments used in the field experiment, describing the differences in the messages mailed to potential voters days before the

[1] Arceneaux (2007) conducted a field experiment in Bernalillo County, NM; Gerber and Green (2000) and Gerber, Green, and Shachar (2003) examined New Haven, CT; Green (2004) examined New Jersey state legislative elections; Green, Gerber, and Nickerson (2003) examined municipal elections in more than one city.
[2] However, see Middleton and Green (2008), who employ a regression discontinuity analysis of interest group mobilization in the 2004 presidential race.

caucus took place. Fifth, we present the results of the field experiment. In conclusion, we focus on the theoretical and policy implications of our findings.

Theory: Social Costs, the Desire for Social Contact, and Voting Behavior

Satisfactory explanations for why citizens vote have been notoriously difficult to establish. Theoretically, the probability of one voter affecting the final outcome of an election is near zero (Downs 1957; Riker and Ordeshook 1968). Yet, citizens show up to vote in elections. Thus, the decision to vote has been explained as a calculus weighing the costs of voting versus the expressive or non-policy benefits received from voting. Examples of costs of voting include both institutional restrictions such as registration laws and personal costs (such as the time and effort it takes to get to the polls). Examples of non-policy benefits that spur turnout include personal feelings of expressive duty (Riker and Ordeshook 1968) and material incentives targeted to the individual voter such as the 19th-century practice of "buying" votes (Hasen 2000).

Scholars have also identified that a component of these expressive benefits may be decomposed into individual intrinsic benefits (the 'I feel good about voting' benefit) and extrinsic benefits related to social pressure (Gerber, Green, and Larimer 2008). Furthermore, individuals are driven by "social preferences," by altruism, or by concern for the social welfare of others (Edlin, Gelman, and Kaplan 2007; Fowler and Kam 2007). Individuals may also want to participate in political activities out of a desire for social contact and interaction with others. As Hibbing and Alford (2004, 64) argue, "people are born social" and "are programmed for social contact." Because voting records are public, voting is by definition a public act (Gerber and Green 2000). However, one's voting decision in most contemporary elections is an intensely private decision because of the secret ballot. Many voters may enjoy participating in a

community activity (going to the polls), but at the same time have a strong desire not to reveal their preferences in the voting booth to other citizens.

Given this human propensity to interact with others, there may be an individual desire for political participation if participation is perceived as a group or social activity. Other scholars argue that revealing one's preferences to the community encourages social and civic interactions, and thus citizens are more motivated to participate. For instance, Sturgis (2005, 25), advocating for voting without a secret ballot, argues that public voting should be encouraged because a "likely positive effect of social pressure would be to encourage more people to vote." Similarly, Gerber, Green, and Larimer (2008) conduct a field experiment where voting is done via secret ballot, yet individuals are told their voting history will be made public. This spurs higher turnout, which Gerber, Green, and Larimer (2008, 42) speculate could mean that the "introduction of secret balloting" in the United States after the 1880s "diminished… [voters'] sense that their voting behavior was being monitored." The implication of this statement—even though Gerber, Green, and Larimer (2008) are not examining voting behavior in the absence of secret ballots—is that voting without a secret ballot may lead to increased turnout due to social pressure.

While social interaction may influence behavior in order to increase turnout, the same social desirability incentives could deter participation in other settings—though few have recognized this possibility. Social pressure or desirability is a behavioral two-edged sword, and social desirability may also drive turnout down. This is particularly likely when the vote is not secret. If citizens are required to publicly reveal their voting choices, many may be persuaded not to vote out of fear of retaliation or social ostracism by others if their preferences do not match those in the community. As Levmore (1996, 2220) notes, "… the secret ballot protects

voters against threats and reprisals from government officials, employers, and the like." If the social costs due to ostracism are increased when citizens are forced to reveal their preferences, this will likely outweigh their desire to participate.

Milgram (1974) has shown that people, in the presence of authority figures or peers, will engage in undesirable social behavior. The presence of others, watching and instructing individuals in how to behave, can alter their behavior from what a person would normally do. This logic would suggest that voters may be less likely to vote if they know others—especially authority figures in the community—may be attending and will witness their vote choice. In 19th century voting in the U.S., employers would at times observe voting in public, extracting punishment for those employees that did not vote for the 'correct' candidate (Bensel 2004, 77). Sturgis (2005, 26), an advocate for public voting, argues that these possibilities are "legitimate but somewhat overblown." In contrast to Sturgis (2005), we argue that there is a potential for negative civic consequences due to social pressure, namely lowering voter turnout. Thus, both the fear of social ostracism and the fear of material loss may affect behavior when voting is public.

Before the rise of the secret ballot in the United States, voting was a public act (as it still is today), but there were two important differences. First, unlike most of today's voting, the act of voting often resembled a community gathering, where voters would not only vote, but would make a day of it, communicating and interacting with others in what often resembled a party (Bensel 2004). Today, in contrast, when people go to the polls, they briefly interact with the polling worker and may run into another voter or two if there is a line. Second, unlike contemporary voting, in the 19th century, voting was not secret. So not only did a voter who

showed up at the polls expect the equivalent of a community party, but they also were required to reveal their vote choice in front of their neighbors and fellow citizens.

This dynamic clearly presents social reasons for both turning out and declining to turn out: the first (the communal activity) is a social benefit of voting while the second (the lack of a secret ballot) is a social cost. Formally, we can reconsider the calculus of voting including both social costs and social benefits. The following determines when a citizen votes (Riker and Ordeshook 1968):

$$P * B - C + D \qquad (1)$$

where P is the probability of one's vote being decisive, B are the policy benefits accrued to the individual citizen from voting, C are the costs of voting, and D are the expressive or non-policy benefits of voting. Since P is essentially 0, the C and D terms become the only pivotal terms. If $C > D$, the citizen does not vote; and if $C < D$, the citizen votes.

However, we can unpack the components of the costs of voting (C) and the expressive benefits or duty of voting (D). Similar to Gerber, Green, and Larimer (2008) we argue that D can be decomposed into an intrinsic benefit, d (where the expressive benefit may be driven by a personal taste for voting) and a social benefit of voting, δ (where there are benefits due to interacting with others or that are derived via social pressure from other citizens).

Unlike Gerber, Green, and Larimer (2008), though, we argue that the costs of voting can be decomposed into component parts as well. In addition to the typical costs of voting, c (such as formal barriers to voting or information costs), there are also social costs of voting, γ. These social costs of voting include any individual cost that may occur if one's vote preference was known to others. When there is no secret ballot, the social cost of voting, γ, will be high, though it will vary contingent upon the number of other people who will see and know a voter's

revealed preference. In the case of a presidential caucus where all voters are required to meet at one location at the same time, the costs will be very high, as citizens will be certain other voters will see their vote preference. This social cost γ is likely to be lower in public voting where all do not gather at once to vote. If public voting were to occur over the course of a day instead of at one established moment during a meeting, fewer people will view a citizen's vote choice. For elections with a secret ballot, of course, $\gamma = 0$, unless the citizen is concerned about the integrity of the voting process or the vote tabulators.

Adding these social benefits and social costs to decompose the traditional C and D terms from (1) leads to the following:

$$C = c + \gamma$$
$$D = d + \delta \qquad (2)$$

where c = intrinsic costs of voting, γ = social costs of voting, d = intrinsic non-policy benefits of voting, and δ = social non-policy benefits of voting. The vote calculus for a potential voter is thus determined by the following inequalities:

$$c + \gamma > d + \delta, \text{ do not vote}$$
$$c + \gamma < d + \delta, \text{ vote} \qquad (3)$$

The social cost of voting, γ, is likely to exist only if vote choices are revealed in public. Thus, if the likelihood of voting is in fact reduced due to the social cost of voting, then the public nature of the vote will need to be made more enjoyable (e.g., with whiskey, ballot box parties, or by making the vote a community event) in order to increase δ to offset γ. Alternatively, an outright bribe (an increase in d) can overcome the social cost γ associated with voting in public. In the field experiment presented later, we send citizens postcards reducing information costs (c), increasing social costs (γ), and increasing social benefits (δ).

An Empirical Puzzle: The Secret Ballot and Voting in Public in Historical Context

The right to vote by secret ballot has become so ingrained in modern democracy that it is codified by the United Nations International Covenant of Civil and Political Rights, which requires of member countries that "every citizen shall have the right to vote" in elections that "shall be held by secret ballot guaranteeing the free expression of the will of the electors."[3] While voting in public is quite rare today, the secret ballot in democratic elections is, in historical context, a recent phenomenon. Montesquieu (1748) argued that "suffrage ought doubtless to be public and this should be considered as a fundamental law of democracy."

Public voting was commonplace in 19th-cenury America, and has been reported in other contexts such as 20th century village elections in China (Pastor and Tan 2000, 493). Bensel (2004) has described the scene at many 19th-century U.S. polling places. Instead of a ballot box, there was a set of steps that a voter would climb in order to stand in front of other people and publicly cast a ballot (usually distinguished by color for different political parties). The voter then handed the ballot to a person charged with its collection behind the "voting window."

At times the scene outside the window could be "chaotic" (Bensel 2004, 13) and there would be many men simply milling about the polling place as "liquor was freely available and consumed to excess" (Bensel 2004, 20). This liquor was provided as "a courtesy or as a bribe" to potential voters (Bensel 2004, 20). As a result, a citizen interested in casting a ballot needed to be "a man of ordinary courage"—the term for the informal norm of the period of a person willing to put up with "normal jostling" at the polling place. A voter—a "man of ordinary courage"—needed to be willing and "be able to make his way to the voting window" past the crowds of men standing around imbibing, communing, and talking. Some men were "too timid

[3] ICCPR Article 25(b).

to meet this condition" and could not claim "under the social practices and understandings of the time, that their right to vote had been denied." (Bensel 2004, 20).

Reported turnout in 19th-century America was much higher than in the 20th century (Rusk 2001). This temporal correlation has led some to imply that public voting caused higher turnout. Rusk (2001, 45) notes that "scholars agree that voter turnout was high in the 1800s, particularly from 1840 to 1900, and that voting decline[d]… after the turn of the century," but "what factors were contributing to this puzzling pattern in American politics is more in doubt."

There are a variety of explanations for why turnout was very high during 19th-century America, all based on studies of observational data: (1) a high proportion of the population was illiterate and generally uninformed about politics and thus the use of color-coded ballots under the guidance of party bosses led to high participation levels (Kousser 1974; Bensel 2004); (2) there were no registration requirements in place for voting (Rusk 1974, 2001); (3) the "enlightened" populace was heavily engaged in politics in the 1800s (Burnham 1965); (4) there was outright ballot box stuffing and voter fraud (Heckelman 1995; Ware 2000); or (5) the lack of a secret ballot led to high turnout (Rusk 1974; Gerber, Green, and Larimer 2008, 42). Noting the rationale behind the adoption of the secret ballot, Rusk (2001, 45-46) states that the "intended purpose of ballot and registration reforms to eliminate vote corruption was realized in America" yet "ridding the electorate of both corrupt voters and legitimate but marginally interested voters would produce significant drops in turnout rates."

The problem with attributing the causal story to the adoption of the secret ballot, though, is these other confounding factors. Did turnout decline in America because of, for instance, the adoption of voter registration requirements (as Rusk 1974 suggests) or because of the adoption of the secret ballot (as Rusk 1974 also suggests)? Or perhaps did registration laws trump the secret

ballot, and these two institutional changes simply coincided temporally? Or did voting in public among groups—and not the lack of a secret ballot *per se*—lead to higher turnout due to the social interaction endemic to such public voting?

Given our theory, the social benefits derived from voting in groups and the excitement of communing with neighbors could explain the high turnout in 19th century America, though this may not be the only causal story. High turnout is only a likely consequence of voting in public when voters can be otherwise assured that their ballot choices will remain secret. Citizens like the communal aspect of public voting, but they do not wish to reveal their preferences for candidates in front of others, as this public preference revelation yields social costs.

While we cannot directly assess causality between the lack of a secret ballot and high turnout in the 19th century, we can use a more modern empirical test to determine causality between public voting and turnout. If we find that the lack of a secret ballot does not increase voter turnout, then we can likely reject the historical argument that the lack of a secret ballot was the cause of high 19th-century turnout. Instead, other explanations—such as the adoption of more onerous registration laws, outright fraud, or possibly incentives to participate due to the community nature of voting may be more valid.

The Iowa Democratic Caucus: Voting in Public Amongst Neighbors

While the Iowa caucus does not involve free liquor and rarely involves the physical jostling as described in 19th century voting, it is "reminiscent of nineteenth century practices" as the "procedure is anything but secret" (Brady 1988, 270). There are crowds of neighbors milling about, talking, and sitting or standing around at the polling place during the caucus. Caucusing also provides opportunities for neighbors to deliberate.

The Republican caucus in Iowa is a public meeting, but the balloting is conducted by secret ballot.[4] The Democratic caucus in Iowa is also a public meeting, but voters reveal their presidential choices publicly among their neighbors. As CNN's Wolf Blitzer stated: "The primary is a secret ballot. In the caucus, everybody's going to know who you support. Your neighbors, your friends, your boss, whoever, because it is a very public declaration you have to make of the candidate of your choice."[5]

FIGURE 1 ABOUT HERE

Thus, the Iowa Democratic caucus provides a unique opportunity to explore the effect of social pressure on voter turnout. Due to its deliberative nature, caucus participation can be low. In Figure 1, we display descriptive statistics on statewide turnout in the Iowa Democratic caucus in 2004 and 2008.[6] Compared to the number of Democratic registrants and the number of Kerry voters in 2004 (a baseline of Democratic support in the state), the number of Iowans taking part in the Democratic caucus is quite low. In 2004 for instance, about 16 percent of Democratic voters in the 2004 general (122,193 ÷ 741,898) and less than 6 percent of the total voting-eligible population (122,193 ÷ 2,189,799) took part in the Democratic caucuses.[7]

The caucus works as follows. Each precinct across Iowa holds a caucus meeting at locales determined by the Democratic party. The caucus meetings are typically held in public venues such as schools and community centers, but in some rural areas are even held in private homes. Only Democrats can participate in the caucus, but a citizen can register to vote or change registration on the spot the night of the caucus. All caucuses across the state are held at the same

[4] For this study, we contacted both the Republican and Democratic parties for assistance, but only the Democratic party responded. Thus, we examine only voting in the Democratic caucus, which is theoretically more appropriate given that Democrats have no secret ballot but Republicans do.
[5] This quote is from CNN coverage on March 4, 2008 of the Texas primary and caucus results.
[6] These data are estimates as raw turnout data for the Iowa caucus is not made available statewide. Estimates on the 2004 and 2008 caucuses and the Iowa voting-eligible population are from Michael McDonald's GMU web site. The other data in Figure 1 are from the Iowa Secretary of State.
[7] There was extremely low turnout on the GOP side, not shown in Figure 1, as Bush was running for reelection.

time, and anyone not in line by the starting time of the caucus is not allowed to participate (for excellent discussions of the Iowa caucus, its activists, factors that explain vote outcomes, and more generally its politics and how it works, see Brady 1988; Hull 2007; Trish 1999).

The 2008 caucus was held on January 3, with the start time designated at 7:00pm. Instead of traditional voting, preferences for a candidate are expressed in the Democratic caucus by physically (or in some smaller precincts, verbally) declaring support for a candidate. In the precinct caucus we attended and observed (more on this below), before caucus attendees arrived, signs with the name of each candidate were taped up in different corners of the room in which the caucus was to be held. For instance, to vote for Barack Obama, a voter would physically stand or sit in the section designated for Barack Obama. The same applied to other candidates. A section for "uncommitted" voters and non-voting observers are also identified by sheets of paper hanging on the wall. As each voter arrives at the caucus, they are required to sign in.

Because of the caucus's public and physical nature, campaigns often have a designated worker to help guide supporters to their side of the room. Also, campaigns encourage their supporters to arrive early, presumably to exert social pressure: when voters walk in and see their neighbors already sitting or standing in certain sections supporting candidates, this may sway some voters not particularly committed to one candidate. For instance, say a voter is leaning toward Biden but also likes Edwards. Upon arriving and seeing two people standing in the Biden section and 50 people in the Edwards section, the voter may opt for Edwards.

Once all voters have signed in, attendees are offered the opportunity to speak on behalf of a candidate to those gathered. Then the first round of voting commences, where individuals can move toward their preferred candidate's designated area if they were not already situated near that section of the room. After the first round ends, an initial tally of support is completed to

determine which candidates have achieved "viability." Viability is determined by a pre-established formula based on the number of delegates each caucus elects and the number of attendees at the caucus (at the caucus we attended, that threshold was 15 percent support).

For round two, all supporters of candidates who have not reached viability must pick a new candidate to support. There is a set amount of time for the supporters of candidates who have reached viability levels to convince these newly uncommitted voters to support their particular candidate. Fellow voters try to convince others to come to their side during this period. At our caucus location, one voter—crammed in between two supporters of other candidates—was overhead yelling to a Bill Richardson supporter, "If you have to leave Richardson [due to non-viability], consider Edwards. He's electable." The retort from the Richardson supporter was "But he didn't win the 2004 election!" Along with debating the merits of each candidate, there can also be bartering for other favors in this period, as the newly uncommitted people try to eke out possible concessions (e.g., Obama's camp offered sandwiches and softdrinks; we also heard a promise from one voter to another that "I'll shovel snow in your driveway for the next two weeks" if the voter moved to a different candidate). At the end of this second round, the total vote support in the room for each candidate is tallied and apportioned as delegates (instead of raw votes) to be reported to the state party and the media.

Depending on one's disposition, this period can be quite fun or intimidating. While not exactly the same as 19th century public voting (Bensel 2004), the interregnum between the first and second round tallies can get quite raucous as citizens try to badger and cajole one another into joining their candidate's side. Physical agility helps voters scramble around the room rounding up new supporters to earn more delegates. Certainly, a person of "ordinary courage" (Bensel 2004, 21) could handle the Iowa caucus, but the more "timid" may not be able to.

What should be readily apparent is that the caucus meeting is very public. In contrast to the act of voting at the ballot box during a primary or general election, there is no private component as exists with a secret ballot. This public nature of the caucus creates a festive, neighborly atmosphere that will likely encourage voter turnout in the same way that whiskey and community fellowship enhanced public interest and helped bring people to the polls in the 19th century (Addonizio, Green, and Glaser 2007; Bensel 2004). Alternatively, the requirement for a voter to publicly declare support for a candidate in front of neighbors and fellow citizens whom the voter may know from work, church, the union hall, and other venues may discourage turnout.

The Location for the Field Experiment: Des Moines, Iowa

Before conducting the experiment, we initially contacted the Democratic Party of Iowa and the Democratic Party of Polk County (the most populated county in the state, where Des Moines is located) to ask if we could access the records of voter turnout at the state and county levels after the caucuses were over in order to conduct a large-scale field experiment across numerous precincts. We were told that we could not access the individual caucus turnout data, as individual turnout records are not made available on a large scale to those not active in the Iowa Democratic party.[8] However, we were allowed to attend a caucus and gather the turnout data in person. Thus, the party does not make available the individual-level attendance at the caucuses, even though—ironically—the caucus is conducted without a secret ballot and the public are welcome to attend, we were forced to limit our study to one precinct.

[8] One of the reasons whether Obama or Clinton has won more popular votes at the end of the 2008 nomination season is somewhat difficult to discern is because statewide turnout numbers in Iowa are not available, and only estimates are. While speculative, reasons for why these statewide or county-wide data are not released publicly to the media are as follows: (1) the county and state parties sell the turnout lists to campaigns to raise money; (2) the delegates elected at the initial caucus are not allocated equally by population or voter turnout across precincts, thus allowing for dramatic differences in the 'one person, one vote' standard, which the party may not want to highlight; and (3) the caucus, unlike primaries, is a political party-run event in which the state does not intervene, and thus there is no legal requirement to release these turnout data (these explanations were derived in part from a personal communication with David Redlawsk).

We conducted the field experiment using precinct 18, whose caucus met at Perkins Elementary School. Precinct 18 is located in northwest Des Moines, near the city border with the suburb of Urbandale. This precinct was suggested by the county Democratic party as representative of a typical Des Moines caucus meeting. In fact, upon our arrival at Perkins Elementary School, we learned that an entrance pollster for the Voter News Service was there.[9]

Examining only one precinct was obviously a constrained decision on our part, as it will make it more difficult to find statistically distinguishable differences between control and treatment groups than had we been able to conduct an experiment on a larger group of citizens. But the requirement that we attend the caucus to observe and collect the turnout data provided a unique opportunity to witness the caucus process in person.

Beyond the small sample size of potential voters in the precinct, any precinct in Des Moines would present challenges to our ability to find statistically meaningful differences between treatment and control groups. In some ways, compared to previous field experiments of voter turnout, studying this precinct is the ultimate and most difficult test of whether direct mail contact with citizens can increase voter turnout. The precinct lies in an urban area that was "ground zero" for the state's caucus, as candidates, media, and political tourists descended upon Des Moines in the days and months leading up to the caucus.[10] Furthermore, Iowa has been conducting the first presidential caucus for decades, and thus Iowans are likely aware of the caucus. And our year of study, 2008, was one of the most exciting and high-profile caucuses in decades, leading to historic levels of interest among U.S. citizens and Iowans. By nearly every

[9] However, because our study is experimental and we are interested in assessing causality, the question of representativeness is not particularly important.

[10] For example, just in the short time in which the authors were in Des Moines (January 1-3, 2008), we (1) saw David Axelrod, one of Barack Obama's top staff members, having lunch with George Stephanopolous of ABC News; (2) happened upon and saw U.S. senator Tom Harkin (D-IA), U.S. Senator Dick Durbin (D-IL), and presidential candidates Mike Huckabee (R-AR), Ron Paul (R-TX), and Mitt Romney (R-MA) in a variety of locations in Des Moines; and (3) saw numerous button-clad and sign-waving supporters walking the streets.

measure, if we are able to find statistically significant effects in this political environment, it is highly likely that treatments of direct mail do, in fact, affect turnout.

However, it is important to remember that the Iowa caucus traditionally has experienced surprisingly low turnout. Trish (1999, 874) states that the Iowa caucus "offers an environment marked by disincentives for participation." To those Iowans whom have rarely or never attended, the caucus is viewed as a complex and "unknown" process compared to regular voting (Trish 1999, 874). While this complexity deters turnout, it enhances our study. The Iowa caucus may be the only election in the U.S. where nearly all citizens are aware it is happening and have relatively high levels of knowledge about the leading candidates—and yet are relatively uninformed about the processes by which the caucus is conducted (such as the lack of a secret ballot or even knowing the location of their caucus meeting).

The Field Experiment: Three Treatment Groups

The randomization of voters was conducted as follows. We purchased voter data from the company Aristotle, which maintains voter lists. We limited the universe of citizens from which the randomization was drawn to all registered Democrats in the 18th precinct of Des Moines, excluding those registrants who had died or who had moved as of December 20, 2007. The total population of registered Democrats in the precinct was 460 individual registered voters and 354 total households. We randomized on the household, randomly selecting 88 households into treatment 1, 88 households into treatment 2, and 88 households into treatment 3. The remaining 90 households were in the control group. The control group received no mailings. Following the randomization, we verified and confirmed that there was balance across demographic covariates of the registrants in each group.

Within each treatment, we sent three identical postcards to each registrant randomly selected into the treatment group (while the postcard texts were identical within one treatment group's three mailings, the postcard texts obviously differed across the treatment groups). Because Iowans may have received a reasonable amount of mail from the candidates themselves, we sent three postcards to ensure that our messages got through. To design the postcards and to advise us on the correct dates to mail the postcards, we sought advice from a political consultant specializing in direct mail. The first set of mailings (in all three treatment groups) were mailed on Wednesday, December 26, 2007 in order to arrive in citizens' mailboxes on Thursday, December 27, 2007 or Friday, December 28, 2007. The second set of mailings were sent on Friday, December 28, 2007 with the intention to arrive in citizens' mailboxes on Saturday, December 29, 2007 or Monday, December 31, 2007. The third and final set of mailings were sent on Monday, December 31, 2007 in order to arrive on Wednesday, January 2, 2008 or Thursday, January 3, 2008, the date of the caucus.

The top of the postcards for all three treatment groups were identical. There was a heading in all capital letters on the card stating "Iowa Caucus Thursday, January 3, 2008 6:30pm" followed by another line below stating "Your Caucus Location: Perkins Elementary School." There were no graphics on any of the postcards in any of the treatments other than one small solid line separating the header described above and the varying text of the cards sent to each treatment group, which we will describe in detail below. Each of the postcards in all three treatment groups began with the salutation "Hello neighbor," and ended with "Sincerely, Chris" to indicate that the postcard may have in fact been sent by a neighbor, as direct voter contacts and mobilization from friends and neighbors have much larger effects on turnout than direct voter contacts from other, more anonymous sources (Green, Gerber, and Nickerson 2003). Each

included a first-class postcard stamp to suggest that this was not a mass-produced mailer, but was sent by a "neighbor." Previous studies have typically lowered postage costs by using bulk mail rates instead of actual stamps.

The first treatment group received three mailings, each with the identical message. The first treatment group's postcard text (placed in between the salutation "Hello neighbor," and signoff of "Sincerely, Chris") was just one paragraph and stated the following:

> This is just a reminder that the Iowa caucus will be held on Thursday, January 3, 2008 at 6:30pm. Your caucus location is Perkins Elementary, 4301 College Ave. I wanted to write to remind you to participate. I hope to see you at the Iowa caucus.

This postcard is the *Reminder* treatment. It simply tells the recipient where and when to caucus, and provides no other information other than to suggest that a neighbor is writing the request. We hypothesized that this request would have a positive impact on turnout. Alternatively, given the high-profile nature of the Iowa caucus, it is possible this treatment would have no effect.

This *Reminder* treatment is important because caucuses are often not held in the locations where voters normally vote in regular, non-caucus contests (because many of these normal polling places are not equipped with public rooms large enough to hold all caucus attendees). Thus, if this postcard has an effect, it does so by lowering a citizen's information costs regarding the caucus location, which corresponds to the *c* term in the theory. We wanted to disentangle the effect of simply letting people know their polling location, date, and time from the effects in treatments 2 and 3 below. Also, while the caucuses start at 7:00pm, we said 6:30pm on this treatment postcard (and the others below) because if a voter is not in line at the caucus by 7:00pm sharp, they are barred from participating. Furthermore, the Barack Obama and Hillary Clinton web sites both noted that caucuses started at 6:30pm as well, so we followed their time in order to ensure that all of our treatment respondents were included in the rolls.

The second treatment group received an identical message in all three differently-timed mailings as well. The second treatment group is the *Public meeting with neighbors* treatment. The text of the postcard sent to this group was also placed in between the salutation "Hello neighbor," and the "Sincerely, Chris" signature line. This second treatment group's postcard text was two paragraphs in total, and was as follows:

> This is just a reminder that the Iowa caucus will be held on Thursday, January 3, 2008 at 6:30pm. Your caucus location is Perkins Elementary, 4301 College Ave. I wanted to write to remind you to participate. As you may know, the caucus is a public meeting.
>
> Because it is a public meeting, your neighbors who also attend will know if you attend. It is very important for you to attend along with your neighbors and other caucusgoers. Please remember to vote and participate in the Iowa caucus on January 3, 2008 as your neighbors, friends, and family will be there as well! I hope to see you at the Iowa caucus.

The purpose of this *Public meeting with neighbors* treatment is to test the effect of social desirability on turnout by priming the voters that their family and neighbors will not only be attending, but they will also know if you attend. This treatment measures social benefits of voting, δ in the theory. We do not tell the voter that the caucus vote is not a secret ballot in this treatment. Thus, we anticipate that turnout should increase based on this treatment mailer. Voters feeling social pressure because they have been reminded that their vote is public will be more likely to turn out. This hypothesized turnout may be higher than the control group turnout, but it may also be higher than the turnout of those in treatment 1 (the *Reminder* treatment).

While Gerber, Green, and Larimer (2008) "shamed" voters into turning out with a social desirability treatment reminding citizens that their voting histories are public and may be mailed to their neighbors, our neighbor/social desirability treatment is actually quite distinct. We positively remind potential voters of the public meeting nature of the caucus. If we uncover higher turnout among respondents in this treatment group, this may be due to their desire to be

involved with their friends and neighbors in a public civic event. Nevertheless, they may show up if they feel their neighbors will look negatively on their lack of attendance.

The third and final group of registered Democrats received the *Vote is not secret* treatment mailer, and this group of potential voters received three identical mailings. This treatment incorporated information from treatment 1 (reminding voters of the date, time, and location of the caucus) and treatment 2 (noting that the caucus is a public meeting attended by friends, family, and neighbors). However, it also explicitly primed potential voters that the Iowa Democratic caucus requires a public declaration of the vote in front of these friends and neighbors. Again the text of this third treatment postcard was sandwiched between the "Hello neighbor," greeting and the signature, and the text read as follows:

> This is just a reminder that the Iowa caucus will be held on Thursday, January 3, 2008 at 6:30pm. Your caucus location is Perkins Elementary, 4301 College Ave. The caucus is a public meeting and it is not a secret ballot. During the caucus meeting, you will be able to express your support publicly for a specific candidate.
>
> Because it is a public meeting and your vote will not be secret, your neighbors who attend will know which candidate you support. It is very important for you to attend and speak out in support of your preferred candidate in front of your fellow neighbors and other caucus goers. Please remember to vote and participate in the Iowa caucus on January, 3, 2008 as your neighbors, friends, and family will be there as well! I hope to see you at the Iowa caucus.

This treatment yields a two-tailed hypothesis. If Rusk (1974) and others are correct that the lack of a secret ballot causes higher turnout, then treatment 3 should yield greater turnout than the control group—and may even yield greater turnout than in the other treatments. The social benefits incentive, δ, is again primed in treatment 3 (as it was in treatment 2), reminding voters that the caucus is with friends and neighbors. On the other hand, if our theoretical argument is correct, then this treatment is also measuring γ, the social costs of voting when there is no secret ballot. In this case, public voting with no secret ballot causes reticence, as citizens are fearful of

revealing their preferences in front of other neighbors who may not agree with their choices, which should result in lower turnout. Thus, this treatment group may turn out in lower numbers than the control group. Alternatively, since the message from treatment 2 is embedded within the message of the *Vote is not secret* treatment (treatment 3), then the result may be lower turnout than treatments 1 and 2, but there will be no appreciable difference from the control group (as the positive effect of the public meeting prime may be washed out by the negative effect of the prime that there is no secret ballot).

In sum, we hypothesize that the *Reminder* treatment will lead to higher turnout than the control group. We hypothesize that the *Public meeting with neighbors* treatment, which primes social benefits, will also lead to higher turnout than the control group and higher turnout than the *Reminder* treatment. Finally, for the *Vote is not secret* treatment, we have a two-tailed hypothesis. Due to social costs where citizens may not want to declare a potentially unpopular choice for president in front of their fellow neighbors, we hypothesize that this third treatment will lead to a suppression of voter turnout when compared to the *Reminder* and the *Public meeting with neighbors* treatments. It may also cause turnout to be lower than the control group receiving no mailers. In contrast, the alternative hypothesis is that, due to positive social pressure primes, this *Vote is not secret* treatment may spur citizens to turn out in greater numbers than the control group and the *Reminder* treatment. Finally, there is a minimal effects hypothesis as well. It is quite possible—given that the Iowa caucus is one of the most high-profile elections in the nomination process—that none of these treatments will have an effect on turnout.

Collecting the voter turnout data

One of the authors arrived in Des Moines on January 1, 2008 and the other arrived on January 2 to meet in person with the party officials granting us access prior to the caucus. We

attended the caucus at precinct 18 on January 3. Upon our arrival at Perkins Elementary School, we immediately greeted the temporary precinct chair in charge of the caucus.[11] Once all voters had signed in and the voting had occurred, the precinct chair gave us the sign-in sheets while the rest of the caucus, dealing with other party business, continued. We brought the master list of Democratic registrants that we used to randomly assign each person into one of the four treatment or control groups to the caucus to record the names of all those that turned out to vote at the caucus. Once we left Des Moines, a couple of weeks after the caucus, we emailed our master list of Democratic registrants to the county party vice chair and she double-checked our list with the precinct turnout records at the county Democratic party headquarters in order to verify that we had not made any recording mistakes when attending the caucus.

Results of the Field Experiment

The turnout levels across the control and the three treatment groups are displayed in Figure 2. The control group (n=117 individuals)—those that received no mailers—had a turnout rate of 27.4%. The *Reminder treatment* group (n=111 individuals) had a much higher turnout of 41.4%, a figure that is statistically distinct from the control group's turnout. Remarkably, given the immense media and public attention devoted to the Iowa presidential caucus, sending mailers telling voters where and when their caucus would meet had a major impact on increasing turnout. Because this precinct's caucus was held at a different location from where voting takes place during state-run elections, this result suggests the importance of simply letting voters know where their new voting location is in order to lower information costs.[12]

[11] The temporary chair serves until the permanent chair is elected, which typically is the same person serving as the temporary chair (and this was the case at this precinct).

[12] Anecdotally, it appears that campaigns did not do a good job in their own mailers to voters telling them where they would vote. An Iowa voter attending a different caucus gave us a large stack of mail that had come into her house in the month prior to January 3. While many of the mailers promoted candidates' positions or traits—and also noted the date and time of the caucus—many of the mailers failed to mention the location of the caucus. While we

FIGURE 2 ABOUT HERE

The *Public meeting with neighbors* treatment group (n=118 individuals) also had a statistically significant increase in turnout relative to the control group. These citizens had a turnout rate of 51.7%. This level of participation is quite high compared to both the control group and the estimated statewide rates of participation. Priming potential voters that neighbors will be there—a positive social pressure benefit—increases turnout. Citizens want to take part in voting when it is a community event, in which neighbors will know whether they attend or not.

Finally, the findings for the *Vote is not secret* treatment group (n=114 individuals) are very interesting. Only 29.8% of this group turned out to vote. This result is statistically indistinguishable from the control group, suggesting that the lack of a secret ballot does not increase turnout. In fact, it appears that the lack of a secret ballot suppresses voter turnout. Recall that this treatment group received a postcard noting that the vote would be a community event with friends, family, and neighbors present *and* that there was no secret ballot. Thus, a comparison between the *Public meeting with neighbors* treatment, where no mention of the lack of a secret ballot was made, and the *Vote is no secret* treatment, is revealing. A 21.9 percent reduction in turnout occurred by telling voters that they would have to reveal their preferences in front of their neighbors instead of only telling them that their neighbors would also be attending. The difference between these two treatment groups is statistically significant, and suggests that the lack of a secret ballot is a major deterrent for voters.

To evaluate the robustness of these results, we conducted additional analyses. Because we randomized our treatments at the household level and not the individual level, there is a possibility for household effects as Nickerson (2008, 51), for instance, has argued that "…[m]ost

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cannot know for certain based on this anecdote, it does suggest campaign attention toward locations could be important toward increasing turnout via mail.

contact from political campaigns reaches more than one member of a household." Given that there may be unobserved traits among individuals in one household, the solution is to cluster standard errors on the household (Arceneaux 2005; Gerber, Green, and Larimer 2008). Table 1 shows the results of OLS and logit models with robust standard errors clustered on the household, where the dependent variable is individual turnout (1=citizen voted; 0=did not vote).

In Table 1, the first and third columns are OLS and logit regressions, respectively, with three dummy variables indicating each treatment group. The second and last columns are OLS and logit regressions, respectively, including the three treatment indicator variables and an independent variable (not displayed) indicating whether the individual voted in the 2004 Democratic primary in order to measure propensity for habitual voting (Fowler 2006; Gerber, Green, and Shachar 2003; Green and Shachar 2000; Jennings and Niemi 1978, 350-51).[13] The point of these regressions is "to minimize disturbance variance and improve the precision of the treatment estimates" (Gerber, Green, and Larimer 2008).

TABLE 1 ABOUT HERE

The results in Table 1 are robust across the specifications. Consistent with Figure 2, both treatment 1 and treatment 2 are statistically distinct from the control group, and treatment 3 is not. The increase in turnout over the control group for those receiving the *Reminder* treatment is about 14 percent. The turnout differential—based on the results in Table 1—between the *Public meeting with neighbors* treatment and the *Reminder* treatment is just over 10 percent (10.2 percent in Model 1 without the past turnout covariate and 10.3 percent in Model 2 with the past turnout covariate). Finally, based on Table 1, comparing the *Public meeting with neighbors*

[13] As noted earlier, because the Iowa Democratic party does not reveal past individual-level turnout, we cannot include past caucus turnout as a covariate in the models. We use the most recent primary in a presidential election year as a covariate as a result.

treatment and the *Vote is not secret* treatment, there is a decrease in voter turnout of 21 percent between the two groups, again consistent with the results in Figure 2.

The magnitude of turnout levels in the first and second treatments is much larger than the control group. The impact of the second treatment doubles the size of turnout, which is much larger than the effect found by Gerber, Green, and Larimer (2008) due to social pressure in their examination of municipal elections. Further, the only other field experiment of voter turnout on a presidential election (albeit a general election) found that voter contact led to a 1 percent increase (Gosnell 1927), much lower in magnitude than our findings with the 2008 caucus.

Conclusion and Implications

Voting in public among other citizens when there is no secret ballot can raise both social costs and social benefits affecting political participation. People want their neighbors and fellow citizens to know they have voted, but they do not want to express their preferences publicly in front of their fellow citizens. Theoretically, these experimental results reveal that social pressure due to a public vote is quite strong. Individuals are much more likely to vote when they know others are watching, so long as these citizens are not told their vote is not secret. This result may be due to citizens' fears of public shaming (Gerber, Green, and Larimer 2008). Alternatively, the motivation to participate can be driven by social pressure of a more positive kind—an opportunity for individuals to commune with their fellow citizens in a festive atmosphere.

The lack of a secret ballot, though, greatly inhibits participation. The social costs specific to revealing one's preferences publicly to others can suppress turnout. While individuals enjoy the camaraderie and *joie de vivre* of a public meeting, they do not generally want to publicly declare their preference. To our knowledge, this is the first field experiment where a treatment has resulted in suppression of the vote relative to other treatment effects. Additionally, the

results from the *Vote is not secret* treatment suggest an answer to an empirical and historical puzzle that has plagued scholars for quite some time. Was political participation prior to the adoption of the secret ballot in the United States high because the vote was public? Or are other factors such as corruption or the lack of voter registration laws the explanations?

While we cannot establish whether corruption, bribery, or lax registration laws are the reasons for high 19th century voter turnout, we can reject the hypothesis that public voting without the secret ballot increases turnout. We find no causal relationship between priming voters that their vote is not secret and increased turnout. In fact, these voters are significantly less likely to vote compared to those who simply attend because it is a public meeting (though have not been told there is no secret ballot). Given that it is impossible to conduct field experiments on elections in the 1800s, this is the closest we can get to assessing the causal relationship between the lack of a secret ballot and turnout in 19th-century America.

Beyond the implications regarding social pressure, we also offer an important finding about the impact of direct mail on voter turnout generally. Others have examined the impact of direct mail on the vote, but few have analyzed high-profile elections. The Iowa caucus is one of the most high-profile elections in the contemporary U.S., yet with a surprisingly low turnout. We found that direct mail treatments simply reminding voters of the date, time, and location of the caucus dramatically increased turnout. This result suggests that even in election contexts in which the public is relatively well-informed, campaigns should still invest resources in direct mail to contact voters. This study is the first to find an effect of direct mail turnout in a presidential caucus and the first in a presidential election since Gosnell (1927).

Our results have not only theoretical implications, but policy implications. The practice of choosing delegates and presidential nominees in a public caucus has regularly come under fire

from a number of reformers. Typically, critics contend that caucus meetings are less accessible than primaries (Pearson 2008). Instead, we find reasons to support the continuation of the public meeting component of the caucus. By holding public meetings where neighbors gather, participation is increased. If the Democratic party chooses to retain caucuses, though, we suggest they consider adopting a system similar to the one used by the Republican party. As has been noted, the Democrats vote in public and the Republicans vote by secret ballot, even though both are public meetings where candidate surrogates are allowed to advocate on behalf of their candidates. Given our findings that turnout is increased when citizens are reminded that the caucus is a public meeting with friends and neighbors, but that turnout decreased when citizens are reminded that the caucus is not a secret ballot, the possibility of a caucus with a secret ballot would perhaps increase turnout without any of the negative consequences of citizens not attending who are unwilling to publicly express their support for a candidate in front of others.

While we have learned quite a bit about social behavior, the secret ballot, and voter turnout, new questions arise. While public voting is relatively rare, other caucuses should be examined in 2012 to extend this research. We only examined Democratic registrants because the Democratic caucus limits participation to Democrats. But caucus rules in Iowa (and in other caucus states) allow for citizens to change their voter registration at the caucus, but these new Democrats must declare (by signature) their allegiance to the Democratic party. A future field experiment—in 2012—could use independent and Republican voters as the universe of interest, priming some voters with a treatment noting this party allegiance requirement. We presume that this pledge is not known by many opposite-partisans who choose to attend the Democratic caucus and change their registration; but if primed regarding this requirement, would voters be less inclined to change parties and vote?

Other research questions are also raised relating broadly to understanding the importance of social costs on political participation. What underlies the reticence of some citizens to participate in a public vote that is not secret? Using polls of Iowa citizens from 2008, scholars should examine if this reticence to vote in public is correlated with the citizen's presidential preference. Were white citizens favoring Obama less likely to attend the caucus in rural areas that favored Edwards and Clinton? Were male citizens favoring Clinton less likely to attend the caucus in urban and university areas that favored Obama? Is caucus attendance lower among lower-income voters due to citizen fear that their bosses or co-workers may see them?

Furthermore, Fowler and Kam (2007) argue and find "that social identifiers may be spurred into political action when they believe that political outcomes will positively affect members of their group." Would their results imply that citizens with high levels of social identification with a group are more likely to turnout even in the face of having to reveal their preferences to others? Does this differ contingent upon the homogeneity or heterogeneity of the population within a caucus precinct? Or, instead of the relationships we have uncovered to spur or deter turnout simply being social, might these "personal and social tendencies undoubtedly have biological origins" (Hibbing and Smith 2007, 9)? Or are those with lower levels of political trust less likely to participate in an open caucus? We have found that the lack of a secret ballot can suppress turnout even when citizens are reminded that the voting will take place as part of a community meeting, though correlating demographics and other variables with observational survey data may yield more insights.

Addonizio, Elizabeth M., Donald P. Green, and James M. Glaser. 2007. "Putting the Party Back into Politics." *PS:Political Science and Politics* 40:721-27.

Arceneaux, Kevin. 2005. "Using Cluster Randomized Field Experiments to Study Voting Behavior." *Annals of the American Academy of Political and Social Science* 601:169-79.

Arceneaux, Kevin. 2007. "I'm Asking for Your Support: The Effects of Personally Delivered Campaign Messages on Voting Decisions and Opinion Formation." *Quarterly Journal of Political Science* 2:43-65.

Brady, Henry E. 1988. "Strategy on the Campaign Trail in Iowa." *PS: Political Science and Politics* 21:269-73.

Burnham, Walter Dean. 1965. "The Changing Shape of the American Political Universe." *American Political Science Review* 59:7-28.

Bensel, Richard F. 2004. *The American Ballot Box in the Mid-Nineteenth Century*. Cambridge: Cambridge University Press.

Cardy, Emily A. 2005. "An Experimental Field Study of the GOTV and Persuasion Effects of Partisan Direct Mail and Phone Calls." *Annals of the American Academy of Political and Social Science* 601: 28-40

Downs, Anthony. 1957. An Economic Theory of Democracy. New York: Harper & Row.

Edlin, Aaron, Andrew Gelman, and Noah Kaplan. 2007. "Voting as a Rational Choice: Why and How People Vote to Improve the Well-being of Others." *Rationality and Society* 19:293-314.

Fowler, James H. 2006. "Habitual Voting and Behavioral Turnout." *Journal of Politics* 68:335-344.

Fowler, James H. and Cindy D. Kam. 2007. "Beyond the Self: Social Identity, Altruism, and Political Participation." *Journal of Politics* 69:813-827.

Gerber, Alan S. and Donald P. Green. 2000. "The Effects of Canvassing, Telephone Calls, and Direct Mail on Voter Turnout: A Field Experiment." *American Political Science Review* 94:653-63.

Gerber, Alan S., Donald P. Green, and Christopher W. Larimer. 2008. "Social Pressure and Voter Turnout: Evidence from a Large-scale Field Experiment." *American Political Science Review* 102:33-57.

Gerber, Alan S., Donald P. Green, and Ron Shachar. 2003. "Voting May Be Habit-forming: Evidence from a Randomized Field Experiment." *American Journal of Political Science* 47:540-50.

Green, Donald P. 2004. "The Effects of an Election Day Voter Mobilization Campaign Targeting Young Voters." *CIRCLE Working Paper* 21:1-8.

Green, Donald P. and Alan S. Gerber. 2003. "The Underprovision of Experiments in Political Science." *Annals of the American Academy of Political and Social Science* 589:94-112.

Green, Donald P. and Ron Shachar. 2000. "Habit Formation and Political Behaviour: Evidence of Consuetude in Voter Turnout." *British Journal of Political Science* 30:561-73.

Green, Donald P., Alan S. Gerber, and David W. Nickerson. 2003. "Getting Out the Vote in Local Elections: Results from Six Door-to-Door Canvassing Experiments." *Journal of Politics* 4:1083-96.

Gosnell, Harold F. 1927. *Getting Out the Vote: An Experiment in the Stimulation of Voting*. Chicago: University of Chicago Press.

Hasen, Richard L. 2000. "Vote Buying." *California Law Review* 88:1323-1371.

Heckelman, Jac C. 1995. "The Effect of the Secret Ballot on Voter Turnout Rates." *Public Choice* 82:107-124.

Hibbing, John R. and John R. Alford. 2004. "Accepting Authoritative Decisions: Humans as Wary Cooperators." *American Journal of Political Science* 48:62-76.

Hibbing, John R. and Kevin B. Smith. 2007. "The Biology of Political Behavior: An Introduction." *Annals of the American Academy of Political and Social Science* 614:6-14.

Hull, Christopher C. 2007. *Grassroots Rules: How the Iowa Caucus Helps American Elect American Presidents*. Stanford: Stanford University Press.

Jennings, M. Kent and Richard G. Niemi. 1978. "The Persistence of Political Orientations: An Over-time Analysis of Two Generations." *British Journal of Political Science* 8:333-63.

Kousser, J. Morgan. 1974. *The Shaping of Southern Politics: Suffrage Restrictions and the Establishment of the One-party South*. New Haven: Yale University Press.

Levmore, Saul. 1996. "The Anonymity Tool." *University of Pennsylvania Law Review* 144:2191-2236.

Michelson, Melissa. 2005. "Meeting the Challenge of Latino Voter Mobilization." *Annals of the American Academy of Political Science* 601:85-101.

Michelson, Melissa. 2006. "Mobilizing the Latino Youth Vote: Some Experimental Results." *Social Science Quarterly* 87:1188-1206.

Middleton, Joel A. and Donald P. Green. 2008. "Do Community-based Voter Mobilization Campaigns Work Even in Battleground States? Evaluating the Effectiveness of MoveOn's 2004 Outreach Campaign." *Quarterly Journal of Political Science* 3:63-82.

Milgram, Stanley. 1974. *Obedience to Authority*. New York: Harper and Row.

Montesquieu, Charles. 1748. *Spirit of the Laws* II, 2.

Nickerson, David W. 2008. "Is Voting Contagious? Evidence from Two Experiments." *American Political Science Review* 102:49-57.

Nickerson, David W., Ryan D. Friedrichs, and David C. King. 2006. "Partisan Mobilization Campaigns in the Field: Results from a Statewide Turnout Experiment in Michigan." *Political Research Quarterly* 59:85-97.

Pastor, Robert A. and Qingshan Tan. 2000. "The Meaning of China's Village Elections." *China Quarterly* 162:490-512.

Pearson, Kathryn. 2008. “Caucuses Are Voices of the Few.” *Minneapolis-St. Paul Star Tribune* (Minn.) 10 February.

Ramirez, Ricardo. 2005. “Giving Voice to Latino Voters: A Field Experiment on the Effectiveness of a National Nonpartisan Mobilization Effort.” *Annals of the American Academy of Political and Social Science* 601:66-84.

Riker, William H. and Peter C. Ordeshook. 1968. “A Theory of the Calculus of Voting.” American Political Science Review 62:25-42.

Rusk, Jerrold. 1974. “The American Electoral Universe: Speculation and Evidence.” *American Political Science Review* 68:1028-1057.

Rusk, Jerrold. 2001. *A Statistical History of the American Electorate*. Washington: CQ Press

Sturgis, Daniel. 2005. “Is Voting a Private Matter?” *Journal of Social Philosophy* 36:18-30.

Trish, Barbara. 1999. “Does Organization Matter? A Critical-case Analysis from Recent Presidential Nomination Politics.” *Presidential Studies Quarterly* 29:873-95.

Ware, Alan. 2000. “Anti-Partism and Party Control of Political Reform in the United States: The Case of the Australian Ballot.” *British Journal of Political Science* 4:1-29.

Wong, Janelle. 2005. “Mobilizing Asian American Voters: A Field Experiment.” *Annals of American Academy of Political and Social Science* 601:102-114.

Figure 1: Comparing Aggregate Turnout in the 2004 and 2008 Democratic Caucuses with Other Voting Data in the State of Iowa

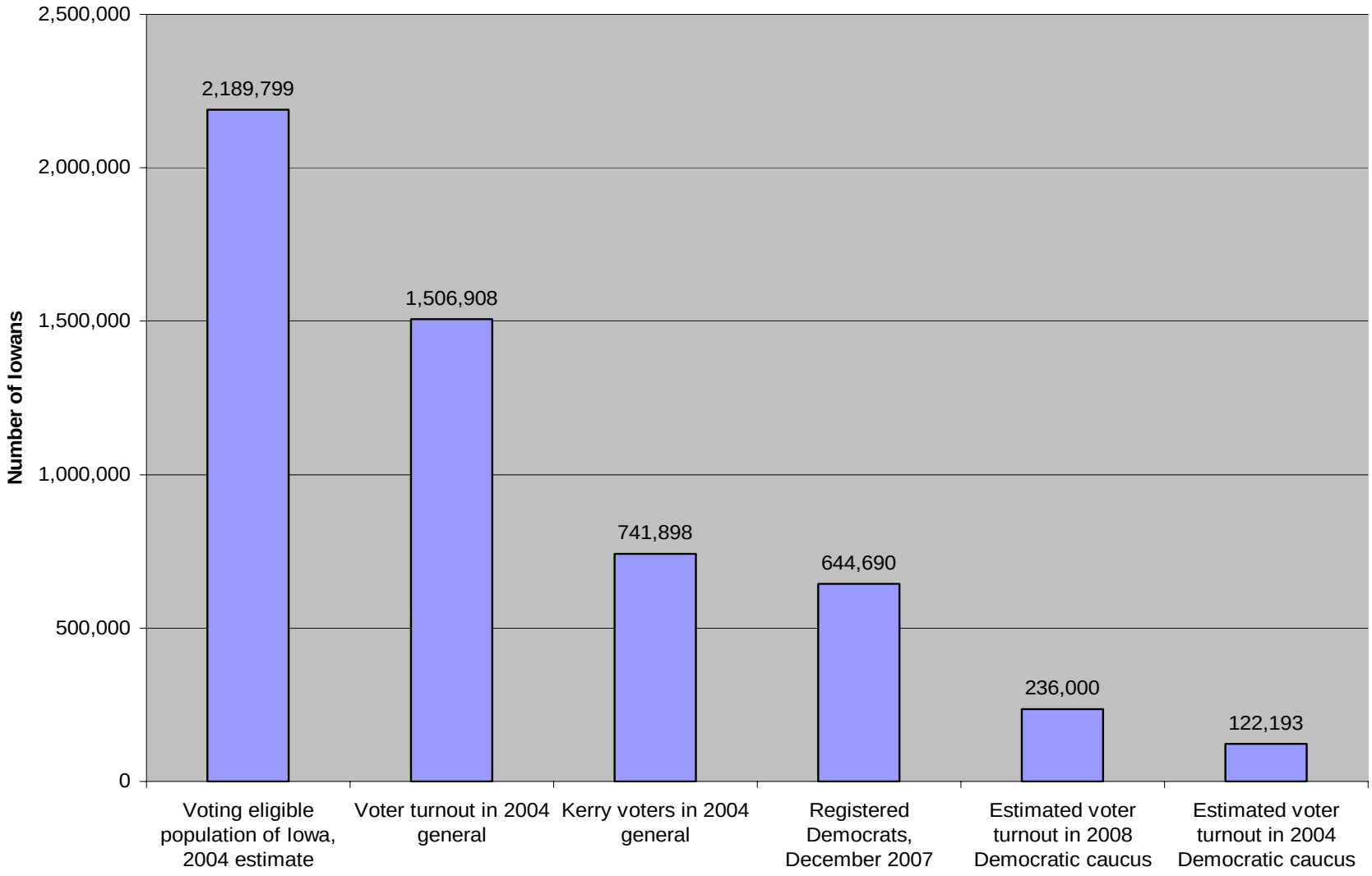

Figure 2: Turnout Proportions Across Three Treatment Groups, January 3, 2008 Iowa Caucus

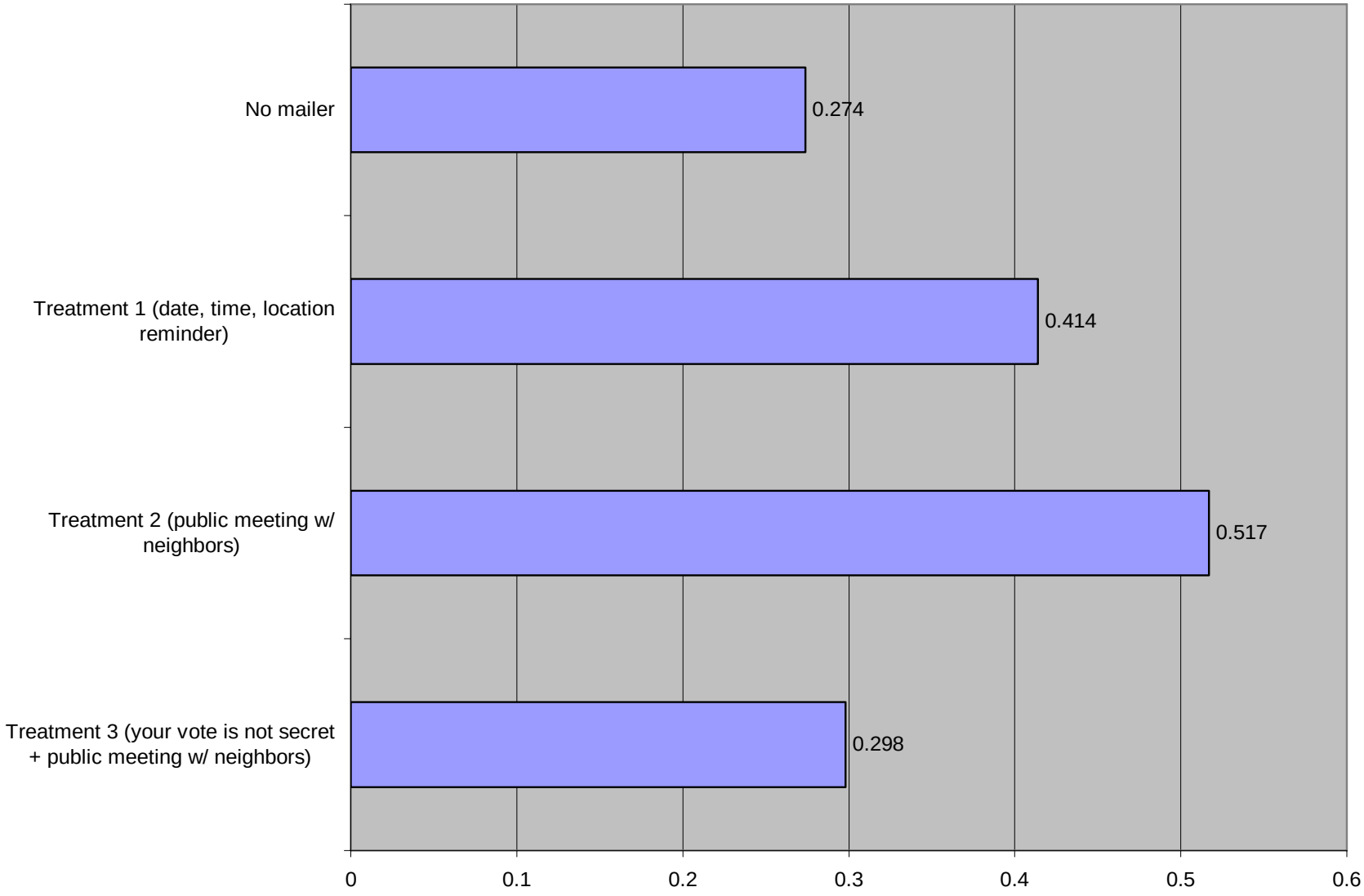

Table 1: OLS and Logit Estimates of Voter Turnout with Robust Standard Errors Clustered on the Household[†], the Effect of Three Mail Treatments on Voter Turnout in the January 3, 2008 Iowa Caucus, Precinct 18 in Des Moines, Iowa

	Model 1 OLS	Model 2 OLS, including previous vote covariate[‡]	Model 3 Logit	Model 4 Logit, including previous vote covariate[‡]
Treatment 1: Date, time, location reminder	0.141 (0.068)*	0.142 (0.067)*	0.631 (0.307)*	0.646 (0.310)*
Treatment 2: Public meeting with neighbors	0.243 (0.070)**	0.245 (0.070)**	1.045 (0.310)**	1.069 (0.316)**
Treatment 3: Vote is not secret	0.025 (0.069)	0.030 (0.069)	0.121 (0.336)	0.149 (0.338)
Constant	0.274 (0.045)**	0.257 (0.046)**	-0.977 (0.226)**	-1.060 (0.235)**
N of individuals	460	460	460	460

[†]Number of households = 354

[‡]These models also include a dummy variable, not displayed, indicating whether the individual voted in the 2004 Democratic primary.

**p≤0.01; *p≤0.05 (1-tailed tests for the *Treatment 1* and *Treatment 2* variables; 2-tailed tests for the *Treatment 3* variable).
The reference category for the three treatment variables is the control group variable, which indicates those individuals that received no mailers regarding the Iowa caucus.