

# Don't Forget to Vote: Text Message Reminders as a Mobilization Tool

**Allison Dale** University of Michigan  
**Aaron Strauss** Princeton University

*Current explanations of effective voter mobilization strategies maintain that turnout increases only when a potential voter is persuaded to participate through increased social connectedness. The connectedness explanation does not take into account, however, that registered voters, by registering, have already signaled their interest in voting. The theory presented in this article predicts that impersonal, noticeable messages can succeed in increasing the likelihood that a registered voter will turn out by reminding the recipient that Election Day is approaching. Text messaging is examined as an example of an impersonal, noticeable communication to potential voters. A nationwide field experiment ( $n = 8,053$ ) in the 2006 election finds that text message reminders produce a statistically significant 3.0 percentage point increase in the likelihood of voting. While increasing social connectedness has been shown to positively affect voter turnout, the results of this study, in combination with empirical evidence from prior studies, suggest that connectedness is not a necessary condition for a successful mobilization campaign. For certain voters, a noticeable reminder is sufficient to drive them to the polls.*

Over the past 10 years, dozens of field experiments have shown that personal mobilization tactics are the most effective approaches to increasing voter turnout. In contrast, impersonal and passive methods of voter contact have been shown to be less effective at mobilizing turnout (e.g., Gerber and Green 2000; Green and Gerber 2004; Michelson 2003; Nickerson 2007a, 2007b; Ramirez 2005). The theory that has emerged from these results holds that personal messages are more effective because they increase the social connectedness between the potential voter and the political process (Gerber and Green 2000; Green and Gerber 2004; Green, Gerber, and Nickerson 2003). While some previous experimental results are incongruent with this theoretical explanation (e.g., Nickerson 2005; Nickerson, Friedrichs, and King 2006; Panagopoulos 2009; Wong 2005), no attempt has been made to explain the dissonant results theoretically. This study fills that gap by offering a refinement of the existing theory of voter mobilization that is compatible with these past results. The new theory posits that, for some voters, a turnout strategy can

be successful merely by increasing the likelihood that an individual pays attention to a reminder to vote. It is not essential that the message persuade citizens to vote through an appeal to social connectedness. A field experiment in the 2006 election finds that text messaging—an impersonal form of voter contact—is effective at mobilizing voters, bolstering this new claim.

This study's argument in favor of the effectiveness of impersonal voting reminders rests upon three points. First, citizens who are registered to vote have already signaled their willingness to participate in the political process through the act of registering. Second, as a consequence of that willingness, some registered voters are less in need of persuasion to participate than they are in need of a reminder to make time in their busy schedules to go to the polls. Finally, both personal and impersonal reminders to vote can be effective if the recipient of the message internalizes the communication (i.e., does not ignore the message).

Because text messages are impersonal, yet unlikely to be ignored, this mobilization strategy provides an ideal

---

Allison Dale is a Ph.D. student at the University of Michigan, 5700 Haven Hall, 505 South State Street, Ann Arbor, MI 48109-1045 (dalea@umich.edu). Aaron Strauss has a Ph.D. in Politics, Princeton University, 130 Corwin Hall, Princeton, NJ 08544-1012 (abstraus@princeton.edu).

We are extremely grateful for the help of our many partners. We received generous support from the following organizations and individuals: Working Assets, Mobile Voter, Student PIRGs, The UMass Donahue Institute Civic Initiative, Young Voter Strategies, The Mellman Group, Survey Sampling International, Catalist, Kieloch Consulting, David Nickerson, Donald Green, Craig Thomas, Martin Gilens, Chris Achen, Don Kinder, Spencer Piston, Ray La Raja, and several anonymous reviewers.

*American Journal of Political Science*, Vol. 53, No. 4, October 2009, Pp. 787–804

©2009, Midwest Political Science Association

ISSN 0092-5853

critical test between this study's hypothesis and the established literature. The effectiveness of text messaging is measured through a large-scale nationwide field experiment. Newly registered and reregistered voters in the treatment group received a text message the day before the 2006 election encouraging them to vote; participants in the control group did not receive a message. The results from the experiment demonstrate a strongly positive and statistically significant effect of reminding people to vote through text messaging. The intent-to-treat effect for the experiment is 3.0 percentage points, with an estimated treatment-on-treated effect of 4.1 percentage points.<sup>1</sup>

## Theory

Current scholarship on voter mobilization has argued that voting turnout has declined in tandem with the face-to-face involvement of volunteers in the campaign process (Addonizio, Green, and Glaser 2007; Gerber and Green 2000). As campaigns have become less reliant on volunteer labor, these studies argue, contact with voters has been channeled through increasingly impersonal methods of mass communication, such as mass mailings or e-mail. As a corollary, these studies have emphasized the quality of volunteer engagement with voters to explain why personal mobilization strategies, such as in-person canvassing and personal phone calls, have been more successful than the impersonal campaign tactics used in past field experiments (as shown in Table 1). The fact that face-to-face communications have fairly consistently outperformed impersonal modes of communication empirically leads Green and Gerber (2004) to argue that the personal nature of the contact makes a voter "feel wanted at the polls." They compare mobilizing a voter to "inviting them to a social occasion" (Green and Gerber 2004, 92). The term *social connectedness* is used throughout this article to describe the extent to which a voter feels this sense of belonging at the polls.

The connectedness framework, labeled here the Social Occasion theory, is flawed in two ways. First, the Social Occasion theory stretches what can be inferred from the relative success of "personal" mobilization contacts (defined as messages that are delivered by an-

<sup>1</sup>Intent-to-treat (ITT) measures the effect of assignment to the treatment group, regardless of whether or not the participant actually received the message. Treatment-on-treated (TOT) measures the effect of actually receiving the message. ITT is lower to account for the probability that a person did not receive the treatment.

**TABLE 1** Effects of Mobilization Strategies Listed from Most Personal to Least Personal

Mobilization Strategy	Effect
Face-to-Face Canvass	8%
Average Volunteer Phone Calls	3%
Average Commercial Phone Calls	0.55%
Direct Mail	0.6%
Robo Calls	none
E-mail	none

*Note:* The data in this table come from Nickerson (2007b), Green and Gerber (2004), and Ha and Karlan (2009).

other person, either in person or over the phone). Although past research generally shows that the effectiveness of voter mobilization increases with the degree to which the mobilization strategy is a personal contact (see Table 1), the Social Occasion theory further claims that the pervasive use of impersonal contacts (e.g., direct mail) has contributed to voters' losing a sense of social belonging at the polls. This social capital perspective relies on the idea that declining voter turnout is a "symptom of a broader disengagement from community life," linked to a decline in personal mobilization (Putnam 2000, 35). While the social capital argument may be correct in identifying important societal and civic declines in the past few decades, research by McDonald and Popkin (2001) raises doubt about the validity of the social capital concern over voter decline. These authors show rather convincingly that previous research has measured the pool of eligible voters incorrectly, leading to false conclusions of voting decline. Thus, we cannot infer a connection on the aggregate level between a shift to impersonal forms of voter mobilization and a growing sense of alienation by voters during the same period.

A second concern with the Social Occasion theory is that it assumes that potential voters need to be convinced—rather than just reminded—to vote. Green and Gerber suggest that "face-to-face interaction makes politics come to life and helps voters to establish a personal connection with the electoral process" (2004, 41). Other scholars note, however, that registration can be the largest hurdle to electoral engagement (Powell 1986; Rosenstone and Hansen 1993; Squire, Wolfinger, and Glass 1987; Wolfinger and Rosenstone 1980).

This article argues that by investing time and energy in the act of registering to vote, new registrants have signaled their belief that voting is a desirable activity. Further, the act of registering to vote marks the beginning

of a transformation whereby citizens go from thinking of themselves as a “nonvoter” to thinking of themselves as a “voter.” An appeal to social connectedness provides social pressure that could be effective at catalyzing this type of transformation, which begins with the act of registering to vote.<sup>2</sup>

The decision to vote, however, is based on a different calculus. In nearly every state, citizens must register to vote before casting a ballot. Since the only utility of registering to vote is to gain the ability to vote, it stands to reason that the act of voter registration indicates a commitment to the idea of voting. Thus, voter mobilization need not always increase social connectedness, as the Social Occasion theory implies. Rather, in some cases, a mobilization message needs only to remind citizens of the commitment they made to voting when they registered. We offer a formal model to illustrate the conditions under which a reminder is sufficient mobilization to vote.<sup>3</sup>

Let an individual's perceived benefit of voting be  $b_v$ , his or her perceived cost of voting be  $c_v$ , and his or her perceived cost of registering be  $c_r$ . Consistent with the Social Occasion theory's argument that social connectedness increases the likelihood of voting, let the benefits of voting be an increasing function of social connectedness,  $k$ . Considering only a single election, a voter registers if

$$E[b_v(k^+) - c_v] > c_r \wedge \text{the voter knows how to register.} \quad (1)$$

The expectation on the left side of equation (1) signifies that a potential voter projects the benefits and costs of voting when deciding whether to register. On Election Day, the individual casts a ballot if

$$b_v(k) > c_v \wedge \text{the voter remembers to schedule time to vote.} \quad (2)$$

In a hypothetical world with only one election, costly voter registration, and no uncertainties about the benefits and costs of voting, voter registration ensures that  $b_v - c_v > 0$ . Consequently, turnout among registered individuals could be increased only through reminders to vote, and the Social Occasion theory would not be applicable to mobilization.

<sup>2</sup>A strong, perhaps personal, catalyst is needed to compel a change in an individual's identity (Caspi and Bem 1990).

<sup>3</sup>The formal model described in this study, in which individuals estimate the benefits and costs of voting when registering to vote, yields useful comparative statics but is a crude depiction of the actual activities and incentives of potential voters. This model is presented for illustrative purposes; the discussion about why citizens vote is an important question that is addressed more fully elsewhere (e.g., Campbell et al. 1960; Downs 1957; Wolfinger and Rosenstone 1980).

The role of mobilization changes, however, when individuals are assumed not to be perfect predictors of their future actions. Three examples illustrate reasons why a voter may register but then decide not to vote on Election Day. The first, and perhaps most prevalent, example of misprediction occurs when voters register for presidential elections and then fail to vote in succeeding non-presidential elections. American elections vary widely in their perceived importance. High-profile contests such as presidential campaigns may increase individuals' perceived benefits (Edlin, Gelman, and Kaplan 2007), leading many to register with the intention of voting in national, but not state, congressional, or local elections. In this case,  $b_v(k) < c_v$  in elections that are perceived to be less important, and an increase in social connectedness,  $k$ , can increase the likelihood of voting.<sup>4</sup> A second example of misestimation occurs when a voter's favored candidate drops out of the race in the same electoral cycle in which the individual registered and intended to vote. A third example arises when individuals who have a low interest in politics are convinced to register through a Social Occasion registration appeal. If the effect of this appeal is ephemeral and wears off by Election Day, these new registrants will need more than a noticeable reminder to drive them to the polls. For individuals who misestimate their projected benefits (as in the three preceding examples), mobilization reminders are useless; even if they have time to vote, their Election Day decision will be to not vote. Driving these individuals to the polls requires *both* increased social connectedness (and hence an increased  $b_v(k)$ ) and a reminder to vote on Election Day. The Social Occasion theory of mobilization is applicable in these cases.

One way to evaluate how social connectedness relates to the acts of registering and voting is to contrast the reasons that citizens do not register to vote with the reasons that registered individuals do not vote. The Social Occasion theory would predict that nonregistrants and nonvoters would offer similar reasons for not participating; they feel socially unwelcome or disengaged from the political system. However, as displayed by the U.S. Census data in Table 2, the reasons for not registering and not voting are distinct and do not reflect this expected pattern. The most cited reason for not registering to vote is that respondents are “not interested in the election”; this response exemplifies the type of apathy that might be remedied with a Social Occasion mobilization approach. A full 47.6% of the nonregistrants offered this reason for

<sup>4</sup>This scenario does not preclude a noticeable reminder from boosting turnout among a different set of individuals who intend, but forget, to vote in less-visible elections than the one for which they initially registered.

**TABLE 2** Reported Reasons for Not Registering to Vote and Not Voting in the 2006 Election

Reason for Not Registering		Reason for Not Voting (Among Registered Voters)	
Not interested in the election or not involved in politics	47.6%	Too busy, conflicting schedule	27.3%
Did not meet the registration deadlines	14.2%	Illness or disability	12.4%
Not eligible to vote	6.5%	Not interested	11.5%
Don't know or refused	6.1%	Out of town	10.7%
Other	6.1%	Other reason	9.1%
Did not know where or how to register	5.6%	Did not like candidates or issues	7.3%
Permanent illness or disability	4.8%	Don't know or refused	7.2%
Did not meet residency requirements	4.8%	Forgot to vote	5.7%
My vote would not make a difference	3.2%	Registration problems	3.9%
Difficulty with English	1.0%	Inconvenient polling place	2.5%
		Transportation problems	2.1%
		Bad weather conditions	0.6%

*Notes:* The data are from a U.S. Census Report (File 2008). Reasons for not voting are asked of registered voters only. The survey on nonregistering comprises 39,599 respondents, while the survey on nonvoting comprises 39,728 respondents.

not registering. On the other hand, the top reason for not voting is lack of time, a condition that could be corrected with a noticeable voting reminder and subsequent re-planning of the individual's Election Day schedule. These responses also shed light on how an individual might misestimate his or her benefits or costs of voting. For instance, 2.5% of registered respondents reported that they did not vote because of an "inconvenient polling place," something the individual may not have realized when registering. Overall, these self-reported survey responses provide circumstantial evidence that individuals are projecting their costs and benefits accurately. The decision whether or not to register to vote is more a function of social connectedness than is the decision whether or not to cast a ballot.

To expand and refine the Social Occasion theory, a new instrumental view of information consumption is offered here to help explain why some voter mobilization techniques work better than others. In this age of mass communication, citizens are inundated with political and commercial information through landline phones, U.S. mail, e-mail, and television, which leads recipients to ignore messages delivered through these media. Because it is costly to absorb and process information, people have an incentive to ignore a majority of the unsolicited information that comes their way. For a political message to be effective, then, it must first break through the clutter of messages competing for an individual's attention (Kinder 2002; Lupia and McCubbins 1998; Zaller 1992). Gerber and Green (2000) hint at this point when they suggest that direct mail pieces have become less effective over time because of the increase in the volume of mail sent out in each new election. While Gosnell (1927) found that a piece of

mail increased turnout by 9 percentage points in 1925, a single piece of mail now only has an effect of around 1 percentage point or less.

This article contends that mobilization messages can be successful if they are delivered in a manner that lowers the recipient's ability and motivation to ignore the message. This assertion is consistent with prior findings in the voter mobilization literature. In the case of successful landline phone calls, Nickerson (2007b) finds that professional phone bankers who are experts at keeping voters on the phone are more effective at mobilizing turnout than are poorly trained volunteers. In the case of the highly effective face-to-face canvassing approach, the framework presented in this article suggests that the strategy is effective because commercial and political information is rarely brought to a voter's doorstep by another person. The novelty of the canvassing approach (one rarely gets visitors at the door) compels a potential voter to open the door to a canvasser; social decorum obliges the individual to listen to the message and not turn away the visitor. In both cases, the message succeeds because the voting reminder is helpful, and because the recipient has little motivation or ability to ignore the reminder.

The Social Occasion theory posits that a social appeal is a necessary condition for voter mobilization to be effective. This argument that mobilization messages *must* be personal to be successful is based on empirical results that show that the effectiveness of voter mobilization messages declines in tandem with decreases in the personal nature of the message (Table 1). This article posits, on the other hand, that a perceived net benefit of voting *and a noticeable reminder* are sufficient conditions for successful voter

mobilization (see equation 2). The act of voter registration is a signal that the former condition has already been met for the individual. The difference between the two perspectives hinges on whether or not social connectedness is a necessary component of the mobilization process for all voters. Prior research has failed to disentangle noticeability from connectedness, making it impossible to differentiate the effects of these two factors.

Text messaging poses a critical test for the Social Occasion theory because text messages are noticeable, but not personal. The recipient will notice the text message because mobile phones are still relatively uncluttered by unwanted “spam” messages. Similarly, the nature of the display makes it difficult to ignore an incoming text message on most phones. A regular mobile user will be unlikely to miss the text message as he or she uses the phone

throughout the day. Text messaging thus tests the assertion that impersonal messages can remind potential voters to cast a ballot, as long as the reminders do not provide the recipient with the motivation or ability to ignore the message. Noticeable communications such as text messaging, which circumvent individuals’ resistance to processing extraneous information, can therefore represent a successful mobilization campaign.

These propositions on noticeable voter mobilization strategies combine to form an alternative framework to the Social Occasion theory. The Noticeable Reminder theory is offered as a shorthand to encapsulate this framework. For the sake of clarity, we recapitulate the assumptions behind the Noticeable Reminder theory in Table 3, along with providing additional evidence to support these assumptions.

**TABLE 3 Noticeable Reminder Theory Assumptions and Evidence**

<b>Assumption</b>	<b>Evidence Supporting Assumption</b>
Registration is costly.	Rosenstone and Hansen (1993); Powell (1986); Squire, Wolfinger, and Glass (1987); Wolfinger and Rosenstone (1980).
Voters project benefits and costs of voting.	This view does not offer a complete encapsulation of voting behavior. However, there is a long research tradition that shows this to be a useful starting point for understanding the decision to vote (Aldrich 1993; Downs 1957; Riker and Ordeshook 1968).
Registered voters have signaled an interest in voting.	In addition to the face validity of this claim (for most voters there is little reason to register if they are not actually interested in voting), research done by Pew shows strong differences between registered and unregistered voters in their relative interest in politics. For example, an average of 76% of registered voters say they believe it is their duty as a citizen to always vote compared to just 39% of unregistered voters (Pew Research Center 2006).
Voters who register in the same cycle as the election in which they are voting send a stronger signal that they intend to vote in the current election than those who registered in previous—perhaps more salient—elections.	The consistent decline in turnout among registered voters between presidential and midterm elections supports the view that some voters who register to vote during the highest-salience elections do not (intend to) vote in lower-salience elections.
Voters have many demands on their attention and afford little attention to politics, thus making it necessary for a reminder to be noticeable.	Lupia and McCubbins (1998); Kinder (2002); Zaller (1992).
Citizens who were either eligible to vote, or did vote, in a previous federal election have more firsthand knowledge about the cost-benefit analysis of voting and thus are likely to be more accurate in their decision that the benefits outweigh the costs.	This study does not offer direct evidence to evaluate the skill with which voters conduct their cost-benefit analysis. However, existing research provides evidence that voter participation among registered voters increases with age (Achen 2008), which supports the view that older voters are less likely to register when they do not intend to vote.

For illustrative purposes, the Noticeable Reminder theory on voting can be likened to reminding a person to get the oil changed in his or her car. Once a person has decided to purchase a car, he or she has made an investment in owning, and also maintaining, the car. Car owners do not need to be convinced of the importance of getting an oil change; they just need to be reminded to get it done. Like an oil change, voting is an activity that needs to be put on the “to do” list (Nickerson and Rogers forthcoming). Voting is not part of one’s daily routine, even for experienced voters; reminders help ensure that potential voters do not forget to visit their polling places.

## Existing Research

Because noticeability has not been explicitly separated from social connectedness in prior research, the Social Occasion theory has been applied to explain all successful mobilization results. Although some empirical results contradict the Social Occasion theory, no widely applicable frameworks have been put forth to challenge its proposed mechanism. In an example of a study that demonstrates a gap in the Social Occasion theory, Nickerson (2007b) finds that professional phone banks with quality control assurances are more effective at mobilizing voters than “organic” volunteer phone banks. These results indicate that professional phone banks are more effective at commanding the attention of voters and conveying clear information than volunteer phone banks.<sup>5</sup> In this case, the importance of information clarity appears to outweigh the social connection a voter may experience with the volunteer phone banks.

Looking further into research on mobilization, the two frameworks can be evaluated on the basis of their ability to explain four attributes of mobilization effects (Table 4). First, both theories imply that the medium of communication is important. The Social Occasion theory emphasizes that the medium matters because of the personal nature of the contact, while the Noticeable Reminder theory states that the medium is a crucial strategic aspect of successful message delivery. The evidence supports both perspectives, mainly because the predicted results are observationally equivalent. The hierarchy in Table 1 is monotonic *both* in terms of the personal nature of the contact and the noticeability of the contact, so a

comparison of these tests does not distinguish between the two theories. However, recent work has demonstrated the effectiveness of impersonal yet noticeable mobilization techniques such as door hangers (Nickerson 2005) and waving political signs on a busy street (Panagopoulos 2009). These results cannot be explained by the Social Occasion theory; the Noticeable Reminder theory explains that these tactics are effective because they grab people’s attention.

On a second dimension, the two theories offer different predictions regarding the importance of the timing of a mobilization message. Based on the logic of the Social Occasion theory, one could argue that an “invitation” to join the political process would last until Election Day, making the timing of appeals irrelevant. The timing of messages under the Noticeable Reminder theory, on the other hand, is crucial; the reminders must be close to the election to be relevant. Nickerson (2007b) provides a test of the timing of Get-Out-the-Vote (GOTV) phone calls and finds that calls made before the last week of the election are ineffective. This finding supports the Noticeable Reminder theory’s prediction that timing is a relevant consideration.

On a third dimension, content of the appeal, the Social Occasion theory predicts that message content matters a great deal (the more personal, the better), yet studies have failed to find significant differences between types of messages. Finally, the evidence is mixed on whether the relationship between the messenger and the recipient matters—another area in which the two theories yield competing predictions. On the whole, research on the attributes of the mobilization message indicates some weakness in the explanatory power of the Social Occasion theory.

Evidence concerning voter experience illuminates another inconsistency within the Social Occasion theory. Gerber et al. (2003) find evidence to support the notion that voting is a habitual and self-reinforcing behavior. Logically, they suggest that voter absenteeism is an event that could cause a rupture in the otherwise reinforcing pattern of regular voting. In particular, they fear that low-interest “sleepy local elections” will cause disruptions to voting habits. These elections, they argue, “are akin to gateway drugs, eroding citizens’ sense of themselves as involved participants in elections” (Gerber, Green, and Shachar 2003, 549). They conclude that campaigns can intervene to combat voter absenteeism by mobilizing voters. Presumably, campaign mobilization efforts—especially those that make an appeal to social connectedness—should have the greatest impact on infrequent voters who are prone to skipping elections and are thus less connected to the electoral process.

<sup>5</sup>The conditions in both phone banks were equal; professionals were “carefully monitored” and the volunteers were “under a great deal of pressure” to stick to the script (Nickerson 2007b, 2). The difference, presumably, was the skill of the professional in keeping the voter on the line and delivering the message.

**TABLE 4 Predictions of the Social Occasion and Noticeable Reminder Theories**

Attribute of GOTV Technique	Social Occasion Hypothesis	Noticeable Reminder Hypothesis	Evidence
Medium of delivery	Matters	Matters	Matters (Gerber and Green 2000; Nickerson 2005; Panagopoulos 2009)
Timing of message	Does not matter	Matters	Matters (Nickerson 2007b)
Content of message	Matters	Does not matter	Does not matter (Gerber and Green 2000)
Peer as Messenger	Matters	Does not matter	Mixed (Michelson 2006; Nickerson 2007b)

The evidence, however, shows the opposite. Green and Gerber concede that their finding that voter mobilization efforts actually have the greatest effect on frequent voters is “counter-intuitive” (2004, 37). Nevertheless, they report that frequent voters “are especially receptive to get-out-the-vote appeals, particularly when contacted face-to-face” (92). From a theoretical perspective, it is unlikely that social connectedness would have the greatest effect on voters who, through their accumulated voting experience, have already developed a sense of belonging at the polls. Instead, in the case of frequent voters, it is more likely that the mechanism at work in a successful mobilization message is a noticeable reminder.

These discrepant results do not rule out the possibility that the Social Occasion theory explains the mechanism behind voter mobilization in many circumstances. Indeed, a large body of evidence supports the Social Occasion theory. However, prior experimental findings raise serious questions about whether the Social Occasion theory presents a comprehensive view of the mobilization process. The Noticeable Reminder theory fills these gaps; the formal model presented above demonstrates the conditions under which each theory should hold.

## Testing Contrasting Hypotheses

The primary divergences in these two frameworks offer testable propositions for this study. One main hypothesis and one corollary hypothesis are presented and then tested.

### Main Effect Test: Average Treatment Effect of Text Messaging

The Social Occasion theory predicts that impersonal text message mobilization reminders are not an effective method of generating additional votes. With only 160 characters available per appeal, and the message coming from an unknown number, this theory would conclude

that a voter could scarcely be cajoled into a feeling of social belonging at the polls. The Noticeable Reminder theory, on the other hand, argues that text messages will be effective because voters have little motivation or ability to ignore the reminder. Voters who are reliant on a mobile phone for communication will notice a mobilization text message and will be inclined to pay attention since the information shared via text messaging is still relatively “spam” free. The message will increase the likelihood of voting because it reminds a person to complete an activity that he or she already believes is important. This hypothesis can be summarized as follows:

*Text Messaging Effect:* The Noticeable Reminder theory predicts that a potential voter receiving an impersonal, yet noticeable, mobilization text message will have an increased likelihood of voting compared to one who does not receive such a message. The Social Occasion theory predicts that the text messaging treatment will have no effect.

### Corollary Test: Turnout Effect by Election Experience

The two theories also diverge on which type of voter, by election experience, will be most affected by the treatment. Experienced voters, who have decided whether to register or whether to vote on previous occasions, are more certain about their benefits and costs of voting than new voters. The formal model predicts that the only condition for voting among individuals who accurately estimate their benefits of voting is scheduling time to cast a ballot. Thus, reminder mobilizations should increase turnout for this group. Individuals new to the process (e.g., those who have not previously been of age during a federal election), on the other hand, may overestimate the benefits or underestimate the costs of voting. Members of this group would therefore benefit from a combined mobilization effort of social connectedness and noticeable reminders.

The Social Occasion theory predicts that mobilization campaigns are most effective among individuals who are new to the political process, as they are in greater need of increased social capital.<sup>6</sup> This hypothesis is conditional on text messages increasing turnout, at least among some subset of the population.<sup>7</sup>

*Effects on Individuals New to the Political Process:* The Noticeable Reminder theory predicts that the effects of text messaging will be greatest on individuals who have had experience deciding whether to register or vote in previous elections. The Social Occasion theory predicts that the effects on individuals new to the process will be larger than the effects on those with election experience.

To evaluate these hypotheses, a nationwide field experiment was conducted. The overall effects of text messaging are tested, in addition to the differential effects the treatment had on these various types of voters.

## Experimental Design

Field experiments have become increasingly popular in recent years among political scientists seeking to measure the actual and direct effects of voter mobilization techniques (e.g., Arceneaux 2007; Cardy 2005; Gerber and Green 2000; Michelson 2006; Nickerson 2007b; Ramirez 2005). In general, these studies have tested conventional mail, landline phone calls, and canvassing tactics. As technology has changed, studies have shifted to examine the effectiveness of mobilization techniques that use new technology. For instance, recent field experiments have demonstrated that e-mail is not an effective voter mobilization tool, even when the subject population is restricted to young people (Green and Gerber 2004; Phillips 2001).

One pilot study on the use of text messaging in get-out-the-vote efforts found statistically insignificant effects (Friedrichs 2006). A limitation of that study

<sup>6</sup>This supposition follows from the logic of the social connectedness mechanism, not from the results presented by Green and Gerber (2004) showing that frequent voters are the most receptive to mobilization messages.

<sup>7</sup>Since the Social Occasion theory assumes that successful mobilization campaigns are effective because they increase social connectedness, their position is presumed to be that text messages, if effective, must have increased connectedness. If text messages were ineffective, this test would be moot.

was its very small sample size—500 participants. This study broadens the subject universe to include a sample of over 8,000 people, increasing the likelihood of identifying small effects between groups.<sup>8</sup> Additionally, this study targeted individuals who were less likely to receive other mobilization messages in the 2006 election.

This field experiment was designed to test the net effectiveness of text messaging on turnout. The experiment began with a potential sample size of 12,740 participants. Although all participant phone numbers were verified as cell phone numbers,<sup>9</sup> there was some drop-off in the size of the population due to unsuccessful registration and lack of 2006 voting records.<sup>10</sup>

## Participant Recruitment

The voter registration organizations that supported this project collectively registered nearly 150,000 individuals for the 2006 election. A subset of that population was included in this study. Although the participants were all newly registered voters in the 2006 election, they were not all “new” voters, i.e., many had voted before but were re-registering in a new location. The two contributing voter registration organizations were the following:

*Working Assets:* Working Assets is a company that donates a portion of the charges related to its phone and credit card services to social causes. Since 2005, over 70,000 individuals registered with [www.govote.org](http://www.govote.org), a website affiliated with Working Assets and another of the partners, Mobile Voter. The majority of visitors to the website were directed there through Google keyword

<sup>8</sup>To broaden the potential pool of participants, this study includes individuals who registered up until two weeks before the November 2006 election.

<sup>9</sup>Phone numbers were determined to be valid by examining their numerical properties. Survey Sampling International, a company that specializes in producing random-digit dialing samples, analyzed each phone number's area code, exchange, and “1000-block” (7th digit of a 10-digit number). This process determined if the number was a mobile number, a residential landline, or a business line. Only those numbers designated as mobile were kept in the universe. Due to typos, some of these phone numbers might still have been invalid, although the results from a postexperiment telephone survey indicate that the vast majority of numbers did connect to cell phones.

<sup>10</sup>The phone numbers used in this experiment were collected when an individual registered to vote with one of the partner organizations. Some of the participants in the study may not have been registered successfully due to administrative error or because of duplicate registrations. After checking a near-nationwide voter registration database after the election, the registration rate is 81%.

searches; the remaining traffic was directed to the website through blast e-mails sent by several nonprofit organizations to their customer or membership lists. Of these new registrants, 5,343 provided a valid cell phone number to the company and gave permission for Working Assets to contact them via text messaging in the future.

*The Student PIRGs:* The Student Public Interest Research Groups (PIRGs) are independent, non-partisan, state-based student organizations that organize around public interest problems related to the environment, consumer protection, and government reform. The Student PIRGs registered 75,000 young people to vote on college campuses in 22 states across the country in the 2006 elections. They captured contact information, including cell phone numbers, from new registrants through voter registration forms and PIRG interest cards. Unlike Working Assets, the PIRG registrants did not explicitly check a box indicating that the organization could contact them via text messaging in the future. The Student PIRGs provided information for this study for 7,397 newly registered voters with valid cell phone numbers in locations where the Student PIRGs did not have resources to run comprehensive mobilization efforts.

An additional group contributed to the execution of the experiment:

*Mobile Voter:* Mobile Voter is a nonprofit, non-partisan organization that uses Internet technology to connect young people with politics. In this experiment, Mobile Voter sent out a portion of the text messages to the treatment groups and collaborated with Working Assets on the [www.govote.org](http://www.govote.org) web initiative.

## Treatment Text Messages

In addition to ascertaining the overall effect of text message reminders to vote, the field experiment tested two treatment dimensions: the addition of a polling place information hotline and a variation in the type of appeal to vote. Because of the paucity of prior research on text messaging mobilization, these dimensions were included to explore the possible nuances within text effects. All messages were sent between 11:00 a.m. and 7:00 p.m.

local time on the day before the 2006 election (Monday, November 6th). Each message began with the text “A friendly reminder that TOMORROW is Election Day” and ended with the name of the organization that initially registered the individual, as well as the name of the organization responsible for sending the text message.<sup>11</sup>

The organization People for the American Way operated a “National Voter Assistance Hotline” in the days leading up to the election. One of the primary purposes of this call center was to help individuals determine their polling location. Half of the treated participants received a clause in their text message that directed them to this hotline. Those messages read: “Polling place info @ 866-687-8683.”

Two different types of appeals were tested to examine whether variations in the content of the message have a different impact on voters. The first type of message was a civic duty appeal that read, “Democracy depends on citizens like you—so please vote!” The second appeal was a “close elections” message that read: “Elections often come down to a few votes—so please vote!”<sup>12</sup> These messages were designed to be short since most mobile carriers limit text messages to 160 characters. The breakdown for message content and the number of recipients can be found in Table 5.

Before randomization, registrants who provided cell phone numbers were isolated. Registrants without valid mobile numbers were dropped from the experiment. The remaining participant population (the group with valid mobile numbers) was divided into equally sized treatment and control groups based on a stratified-random procedure, stratifying across states. A second set of random numbers was generated to divide the treated population into message groups.<sup>13</sup> After the election, Catalist, LLC, a company that specializes in nationwide voting databases, matched participant records to registration information.<sup>14</sup> Catalist provided the following information: whether a ballot was cast in 2006, voter gender, voter ethnicity, and—in cases where an individual was registering again—previous vote history.

<sup>11</sup> Mobile Voter sent the text messages to the Student PIRGs’ participants. Working Assets sent the messages to their own participants.

<sup>12</sup> The messages in this study are shorter versions of the paragraph-length appeals tested by Gerber and Green (2000).

<sup>13</sup> Differences in recipient group sizes are the result of lack of divisibility of the number of participants. The determination of which groups received the extra participant was random.

<sup>14</sup> Records that matched at the 70%-confidence level or above were included in the final analysis. Varying this confidence threshold changes the overall intent-to-treat effect by, at most, 0.2%.

TABLE 5 Message Content Sent to Each Treatment Group

Treatment Group	No. of Original Recipients/ No. Matched to Voter File	Message Text (with Group Signature)
Civic duty without hotline	1,593 / 1,003	“A friendly reminder that TOMORROW is Election Day. Democracy depends on citizens like you-so please vote! -PIRG/TxtVoter.org”
Civic duty with hotline	1,592 / 1,030	“A friendly reminder that TOMORROW is Election Day. Democracy depends on citizens like you-so please vote! Polling place info @ 866-687-8683 -PIRG/TxtVoter.org”
Close election without hotline	1,592 / 973	“A friendly reminder that TOMORROW is Election Day. Elections often come down to a few votes-so please vote! -PIRG/TxtVoter.org”
Close election with hotline	1,593 / 1,001	“A friendly reminder that TOMORROW is Election Day. Elections often come down to a few votes-so please vote! Polling place info @ 866-687-8683 -GoVote.org”
Control	6,370 / 4,046	[None]

## Results of the Field Experiment

The field experiment demonstrates that text messaging is a powerful tool for mobilizing voters. The overall intent-to-treat effect is 3.0 percentage points ( $n = 8,053$ , s.e. of 1.1). The turnout rate for the control group is 56.4% while the turnout rate for the treatment group is 59.4% (Figure 1). A posttreatment survey was conducted to establish that the contact rate was 80% and that the percentage of participants who voted before Election Day was 14.9%.<sup>15</sup> Accordingly, the implied treatment-on-treated effect is estimated to have been 4.1 percentage points.<sup>16</sup> The positive effect of text messaging on turnout supports the Noticeable Reminder theory under the Main Effect Test.

A potential alternative explanation for the main effect is that lingering personal effects from registration are influencing the effect of text message reminders. To

<sup>15</sup>Because of asymmetric reporting of early and absentee voting at the state level, these and all subsequent calculations include some early and absentee voters. If absentee voters and all participants in vote-by-mail states (Oregon and Washington State, outside of King and Pierce counties) are excluded from the sample, the ITT effect increases to 3.1 percentage points (s.e. of 1.1,  $n = 7,480$ ).

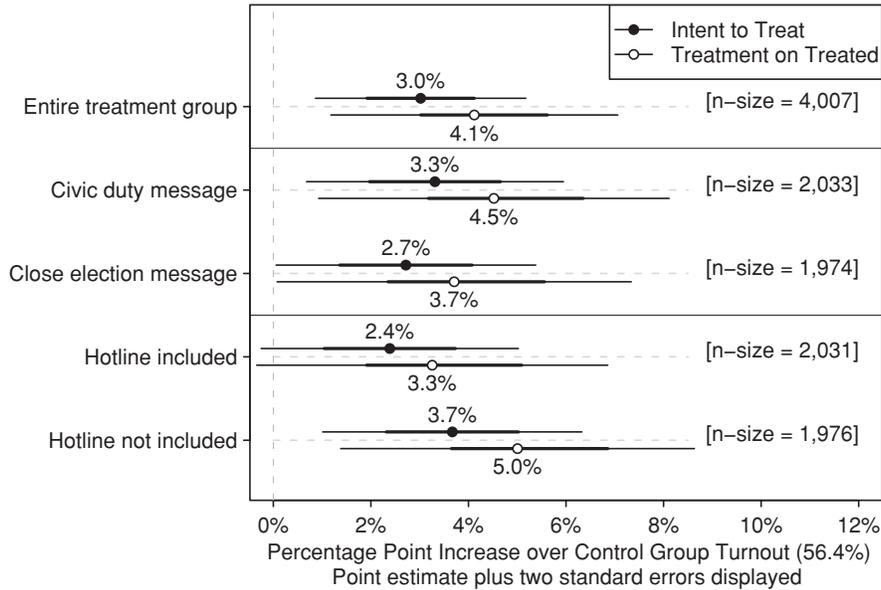
<sup>16</sup>A posttreatment survey indicates that 85.1% of voters “voted in person on Election Day” (i.e., had not voted before receiving the treatment); thus, about 91.5% ( $1 - 56.4\% * (1 - 85.1\%)$ ) of individuals in the treatment group had not voted when the messages were delivered (where 56.4% is the control group turnout rate). Since the percent of wrong numbers and recall of text message rates (“Did you receive a text message. . .”) indicate that about 80% of the treatment group received a text message, 73.2% ( $80\% * 91.5\%$ ) of the treatment group could have been affected by the treatment (assuming independence of probabilities). The treatment-on-treated effect is 4.1 percentage points (3.0 percentage points / 73.2%).

evaluate this explanation, an interaction is tested between closeness of the registration date to the election and the treatment. If there were a holdover effect from the social connection of registration, participants who registered closer to the election would have a stronger memory of that connection and would therefore react more positively to the text message treatment. The interaction has a statistically insignificant result, and the sign of the coefficient of interest is in the opposite direction than would be expected if this alternative explanation were true. Thus, lingering effects from registration can be ruled out.

Comparing these results to past experiments (Gerber and Green 2000), the overall effects of text messaging are on par with a canvassing mobilization treatment when intent-to-treat is considered. Canvassing is more effective than text messaging on a person-by-person basis, but the contact rate during canvassing is much lower than that for text messaging. When considering the treatment-on-treated effect, text messaging is twice as effective as three physical mailings (Gerber and Green 2000) and about as effective as a professional, quality phone call made in the week before Election Day (Ha and Karlan 2009; Nickerson 2007b).

The results indicate no significant difference between the two message appeals, although the point estimate for the effect of the civic duty message is somewhat higher than for the close election message. Gerber and Green (2000) also find no significant difference in effect between these two messages, although the close election appeal worked slightly better in their experiment. Interestingly, adding a polling place hotline number in the text message does not induce individuals to vote—in fact, those who

**FIGURE 1 Increase in Turnout in Percentage Points for NonExclusive Treatment Groups**



*Notes:* The results support the Noticeable Reminder theory over the Social Occasion theory for the Main Test. For each group, the intent-to-treat effect (upper horizontal line), treatment-on-treated effects (lower horizontal line), and number of treatment group participants are displayed. The standard errors are displayed by the ranges of the lines; the thick lines represent one standard error in both directions and the thin lines represent the 95%-confidence intervals.

received the hotline information vote at a lower rate than the control group. Working Assets participants are more responsive to the treatment, a result that could be due to differences in how the two groups registered participants; the Noticeable Reminder theory does not offer a prediction for why the two groups would be different.<sup>17</sup> (For more detailed results, including information by state, see the appendix.)

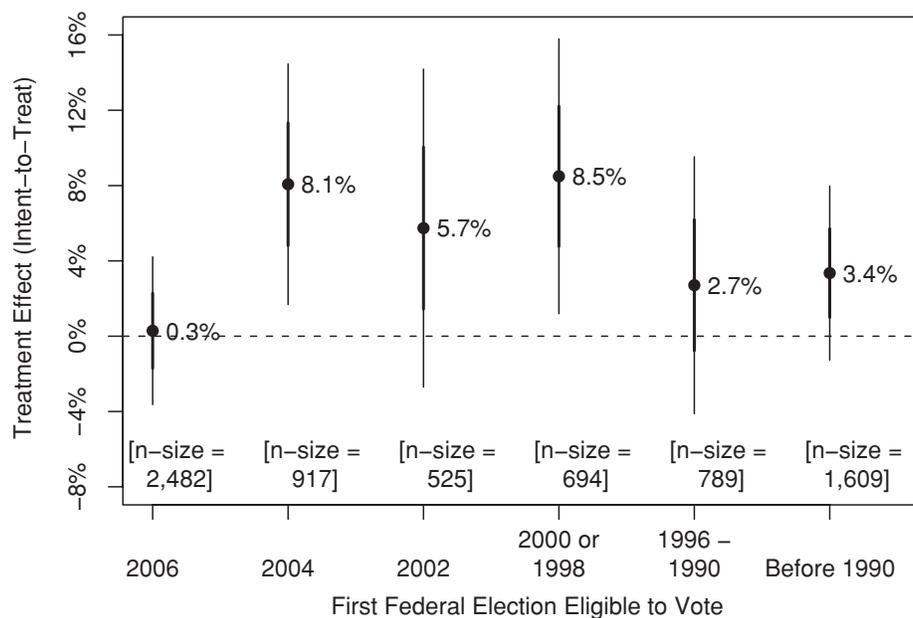
### Corollary Test Results

For the Corollary Test, participant experience is measured two ways: (1) the age of the participant and (2) the prior registration record that Catalist appends to a new record created when an individual changes an address

<sup>17</sup>The difference between groups could be explained by the fact that PIRG participants did not explicitly opt-in to receive a text message in the same way that Working Assets participants did (though the Working Assets participants did not opt-in to receive a voting reminder, per se). Attributing the stronger effect for Working Assets participants to the opt-in factor is mainly conjecture.

or a name.<sup>18</sup> With the first measure, the data (Figure 3) suggest that the Noticeable Reminder theory accurately explains the mobilization mechanism behind text messaging. Among 18- and 19-year-olds (i.e., those for whom 2006 is their first federal election) the text message fails to produce a meaningful effect; turnout among these potential voters increases by only 0.2 percentage points in the treated group (Figure 2). This result is all the more relevant since the mobilization mechanism is technological in nature and is adopted more readily by young people. Among the next age cohort of participants, those between the ages of 20 and 21, the treatment effect is a statistically significant 8.1 percentage points ( $p = 0.01$ , one-tailed). This older cohort was eligible to vote in a previous federal election, which, the Noticeable Reminder theory argues, improves the likelihood that this group estimated their cost-benefit analysis correctly. The difference between these two cohorts, as well as the difference between

<sup>18</sup>While age is not a perfect proxy for election experience (some older voters, such as immigrants, may be new to the political process), voting age requirements dictate that 18- or 19-year-olds are certain to be new voters.

**FIGURE 2 Increase in Turnout by Cohort**

*Notes:* Circles are the point estimates of the treatment effect (intent-to-treat) in percentage points broken down by the first federal election for which participants were eligible to vote. The standard errors are displayed by the ranges of the lines; the thick lines represent one standard error in both directions and the thin lines represent the 95%-confidence intervals. Some participants are excluded from this analysis because their age is unknown.

participants new to the process and all others, is statistically significant at conventional levels ( $p = 0.014$  and  $p = 0.08$ , respectively, two-tailed).

Because the characteristic of being new to the process is exactly correlated with being a certain age, a second measure is used to analyze the effect of text messaging across voter experience types within the two different organizations. Similar to the age-based corollary test, the Noticeable Reminder hypothesis predicts that since new registrants would misestimate their benefits and costs of voting more than reregistrants, the text messaging reminder would be more effective among reregistrants. The Social Occasion theory would predict the opposite, that turnout would be boosted more among new registrants.

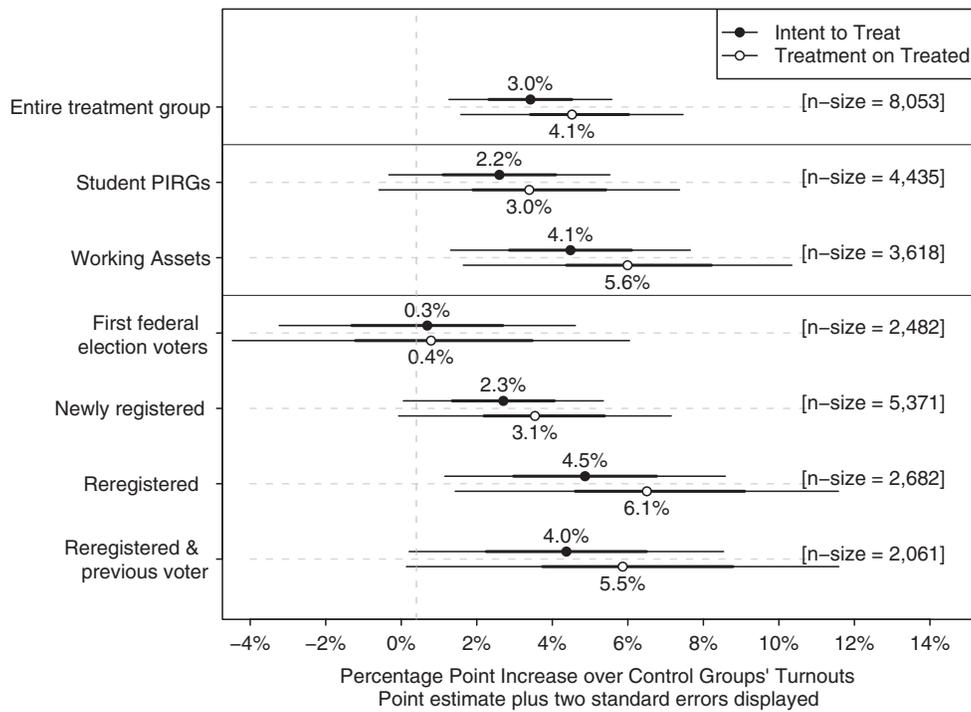
The evidence in this case is mixed. Across the entire sample, the treatment effect is higher for reregistrants (4.5 percentage points, s.e. 1.9) than new registrants (2.3 percentage points, s.e. 1.4), though this difference is not significant (Figure 3). A similar relationship exists between new registrants and participants who have cast ballots in previous elections (4.0 percentage points, s.e. 2.1). A large portion of these differences in treatment effects is

due to the lack of response to the text messages from 18- and 19-year-olds. Analyses of participants within the two registering organizations at least 20 years of age yield opposing heterogeneous treatment effects.<sup>19</sup> For participants registered by the Student PIRGs at least 20 years old, the treatment is more effective among reregistrants (as the Noticeable Reminder theory predicts). Among Working Assets participants over 20 years old, the reverse is true (as the Social Occasion theory predicts). Neither of these heterogeneous treatment effects is statistically significant.

The magnitude of the difference in treatment effects between the youngest two cohorts (18- and 19-year-olds vs. 20- and 21-year-olds) is larger than expected. It is possible that an intervening factor that disproportionately affects 18- and 19-year-olds could explain some of the gap. Future research may be able to explore this finding more fully.

<sup>19</sup>Two separate analyses are conducted (one for each registering organization) because the attribute of being a new registrant is highly correlated with having been registered by the Student PIRGs ( $\rho = 0.44$ ).

**FIGURE 3 Turnout Effect among Key Groups**



Notes: Circles are the point estimates of the increase in turnout in percentage points for participants broken down by their registering organization, election experience, and registration and vote history. These topline results are consistent with the Noticeable Reminder theory, although a deeper analysis yields mixed evidence. For each group, the intent-to-treat effect (upper horizontal line), treatment-on-treated effects (lower horizontal line), and number of participants (control and treatment) are displayed. The standard errors are displayed by the ranges of the lines; the thick lines represent one standard error in both directions and the thin lines represent the 95%-confidence intervals.

### Regression Analysis

A regression analysis (Figure 4, column (a)) demonstrates that the positive effect of text messaging on turnout is not the result of likely voters being assigned to the treatment group by chance.<sup>20</sup> When controlling for treatment group and demographic variables, the estimated intent-to-treat effect of a close election, nonhotline text message for a participant with median characteristics is 4.5 percentage points.<sup>21</sup> With respect to demographics, younger participants, African Americans, and Hispanics are less likely to

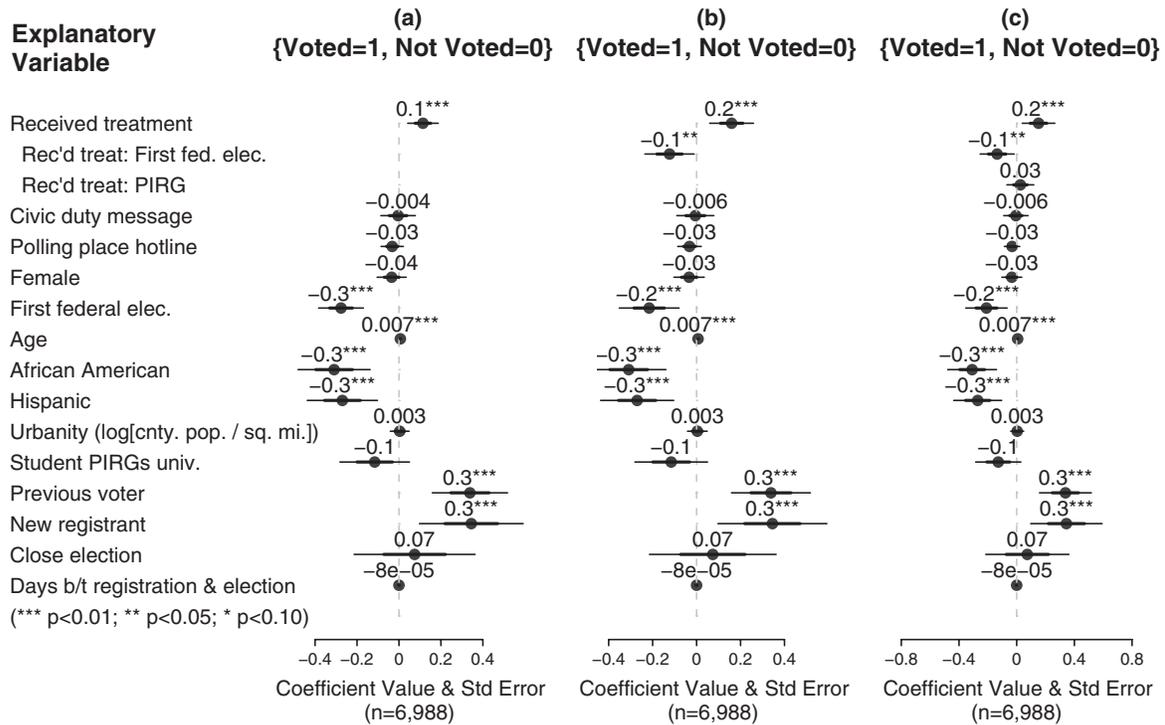
vote regardless of treatment (at a statistically significant level). Additionally, those who had records of voting from previous registrations are more likely to vote. New registrants are also more likely to vote, implying the intuitive result that reregistrants with a history of not voting are the least likely to turn out.

Adding an interaction term for voting experience yields results consistent with the Noticeable Reminder theory. The coefficient of the interaction term for those experiencing their first federal election (column (b) of Figure 4) indicates that the effect of text message reminders on the median younger (under 20 years old) participant is 4.9 percentage points lower than the effect on the median older participant (1.4 vs. 6.3 percentage points;  $p = 0.03$ , two-tailed). Repeating this regression with an additional interaction term for registering organization (column (c)) demonstrates that this heterogeneous treatment effect is not caused by differences in registering tactics or by self-selection into one of the

<sup>20</sup>Freedman (2008) demonstrates that regressions of experimental data produce biased (though asymptotically consistent) estimates of the treatment effect. Regression analyses are presented for completeness; the unbiased point estimates of treatment effects are those displayed in Figure 1.

<sup>21</sup>The median participant is a 21-year-old, white, non-Hispanic male, registered by the Student PIRGs with no registration or voting history.

**FIGURE 4 Probit Regression Estimate of Average Treatment Effect and Interaction Effects with Controls**



Notes: The regressions are probit with errors clustered at the state level (to account for state-level electioneering effects). All variables are dichotomous except for age, urbanity, and days between registration and the election. The results demonstrate that the text message reminders had a positive effect on turnout even when controlling for relevant participant characteristics (column (a)). Consistent with the Noticeable Reminder theory, text messages had less of an effect for the youngest cohort (columns (b) and (c), which include interaction terms). The point estimate for each independent variable is displayed as a solid circle. The standard errors for these estimates are displayed as lines; the thick line represents one standard error in both directions and the thin line represents the 95%-confidence intervals.

registration pools.<sup>22</sup> Further tests of the interaction of registration history and treatment effect among participants at least 20 years of age do not yield statistically significant results.

These empirical results strongly support the theory that an impersonal, noticeable reminder can increase the likelihood that a recipient will cast a ballot on Election Day. The overall treatment effect demonstrates that voter mobilization organizations can boost turnout with a message delivered through an impersonal medium. The corollary test result shows that the reminder is most effective among those who are better able to judge that they plan to vote when registering. These results do not rule out the effectiveness of the Social Occasion mechanism in explaining other types of turnout appeals (e.g., face-to-face canvassing); rather, these tests buttress the claim that the

Noticeable Reminder mechanism is activated in the case of text messaging.

## Discussion

The significant effect of text messaging in increasing voter turnout contradicts the Social Occasion theory's claim that a mobilization message must be personal to be successful. Text message reminders represent a critical test for the Social Occasion theory; neither the lack of social content nor the impersonal medium of text messages prevented this approach from boosting turnout. An update to Table 1 (now Table 6, below) shows that these results on text messaging—and other results that the Social Occasion theory has been unable to explain—upend the general empirical pattern upon which the Social Occasion theory is based. Impersonal text messages are as

<sup>22</sup>This additional test is needed since a disproportionate number of inexperienced voters are registered through the Student PIRGs.

**TABLE 6** Effects of Mobilization Strategies Listed from Most Effective to Least Effective

Mobilization Strategy	Effect
Face-to-Face Canvass	8%
Average Volunteer Phone Calls	3%
Text Messaging	3%
Street Signs in New York City	3%
Leaflets	1.2%
Direct Mail	0.6%
Average Commercial Phone Calls	0.55%
Robo Calls	none
E-mail	none

*Note:* The data in this table come from Nickerson (2007b), Green and Gerber (2004), and Panagopoulos (2009).

effective as other, more personal, forms of voter mobilization. The Noticeable Reminder framework fills some of the gaps left by the Social Occasion theory in explaining prior research.

The results presented in this article do not seek to supplant the Social Occasion theory. Rather, they show that there are conditions under which an impersonal, noticeable reminder is all that is necessary to mobilize voters. The large and significant average treatment effect for text messaging shows that these reminders are effective among potential voters who register or reregister during the current election cycle. Voters who registered in the months before the 2006 election likely projected their costs and benefits of voting in the shadow of that particular election—making their cost-benefit analysis more accurate. Thus, the population of this study would be expected to respond favorably to an impersonal, noticeable reminder to vote. Additionally, the results for the corollary test show that reminders are most effective among voters who were eligible to vote in federal elections before 2006. These voters should be better able to calculate the costs associated with voting through their experience with past elections. Taken together, the main effect and corollary results support the Noticeable Reminder theory's premise that reminders are most effective among voters who have calculated their benefit of voting accurately.

The Noticeable Reminder theory offers a promising beginning for thinking about conditions under which different mobilization tactics are effective. There is much more research to be done, however, in probing the explanatory power of this proposed framework. At least two questions—in addition to a replication of the general effects of text messaging—could be explored to build upon the results and assumptions in this study. First, it

would be useful to know how to distinguish a need for social connectedness from a need for a reminder among voters who are unlikely to vote in a particular election. Perhaps a large-scale survey of experimental participants could be conducted to determine the characteristics of participants who responded to a noticeable treatment as opposed to a social connectedness treatment.

A second direction for future research would be to explore the limits of the “noticeability” of a reminder. Future studies could vary a treatment along noticeable and personal dimensions to provide a more accurate understanding of how both personal and noticeable reminders motivate voters to go to the polls. This might also shed light on the line between noticeable and annoying. As political and commercial entities grow ever more desperate to grab the attention of voters, is there a point where attention-seeking reminders start to have a diminishing return?

Overall, these results demonstrate that text messaging can be a powerful mobilization device. As cell phones become ubiquitous in American society, the proportion of the population reachable via text messaging grows.<sup>23</sup> The low cost of sending text messages underscores the usefulness of this tactic. When compared with face-to-face canvassing mobilization, text messaging has a lower cost of delivering the treatment and a higher contact rate. The cost of sending text messages is, at most, 10 cents per recipient, which, based on the results of this study, translates into a cost per vote of \$3.<sup>24</sup> In contrast, Nickerson (2007b) surveyed the mobilization literature and found the cheapest cost per vote of traditional campaign activities (via a professional, personalized phone bank) to be \$19. The contact rate for this study is estimated to be 80%, while traditional canvassing efforts contact only about 30% of the targeted population (Green, Gerber, and Nickerson 2003). Thus, the intent-to-treat effects for text messaging are similar to those found by canvassing at a much lower cost.

## Conclusion

The results from this text messaging experiment cannot be explained by the theory that has developed from prior research on mobilization. In contrast to prior research

<sup>23</sup>A nationwide Center for Disease Control and Prevention survey projected that approximately 18–19% of American households were cell phone-only by the 2008 presidential election.

<sup>24</sup>The estimated cost of \$0.10 is conservative. The actual costs to send the messages for Working Assets and Mobile Voter were \$0.035 and \$0.06, respectively. For this study, the cost per vote was \$1.56.

that has largely demonstrated the advantages of personal forms of political mobilization, this study shows that impersonal forms of communication can be effective. With some voters, the personal nature of a message is less important than the use of an outreach strategy that both accommodates a mobile lifestyle and can penetrate filters used to keep out unwanted information.

The model detailed in this article demonstrates that the Noticeable Reminder theory is compatible with the notion of social connectedness as a foundation for the voting process, starting with registration. Although analyses of social capital appear to be misapplied to the question of turnout among registered voters, the Social Occasion theory may be the best approach for understanding successful efforts to bring citizens into the political process for the first time or after a lapse in participation. Additionally, the fact that text messaging has a lower effect for new voters indicates that a mobilization strategy more rooted in social connectedness may be more effective in encouraging the youngest age cohort to go to the polls.

Americans lead busy lives. Even for those who decide that voting is an important part of civic life, making a trip to the polling place is not a routine activity—time must be specifically set aside for the voting process. Unless citizens schedule their Election Day with a trip to the polls in mind, they may end up reporting excuses for not voting, such as “I was too busy,” on a survey taken after the election. A straightforward, noticeable reminder that Election Day is imminent—such as a text message—helps ensure that citizens who want to vote, do vote.

## Appendix:

### Additional Results and Analyses

The results below provide a more detailed view of the effect of the treatment.

**TABLE A1 Results and Balance Information by Treatment Group and State**

Treatment Group	N-size		Percent Voted in 2006			Pct Voted in a Pre-2006 Elec.		
	Control	Treatment	Control	Treatment	Diff (T-C)	Control	Treatment	Diff (T-C)
All Treatment Groups	4112	4062	55.9%	58.9%	3.0%	25.7%	24.9%	−0.8%
Civic Duty w/o Hotline	4112	1018	55.9%	59.1%	3.3%	25.7%	25.1%	−0.5%
Close Election w/o Hotline	4112	987	55.9%	59.7%	3.8%	25.7%	24.7%	−1.0%
Civic Duty w/Hotline	4112	1041	55.9%	59.3%	3.4%	25.7%	23.7%	−2.0%
Close Election w/Hotline	4112	1016	55.9%	57.4%	1.5%	25.7%	25.9%	0.2%

State	N-size		Percent Voted in 2006			Pct w/ Pre-2006 Vote History		
	Control	Treatment	Control	Treatment	Diff (T-C)	Control	Treatment	Diff (T-C)
Arizona	152	149	38.2%	43.0%	4.8%	42.1%	38.3%	−3.9%
Arkansas	13	12	61.5%	41.7%	−19.9%	15.4%	8.3%	−7.1%
California	731	734	55.5%	57.8%	2.2%	26.4%	29.4%	3.0%
Colorado	134	133	61.9%	60.2%	−1.8%	38.1%	43.6%	5.5%
Delaware	5	4	40.0%	50.0%	10.0%	60.0%	0.0%	−60.0%
District of Columbia	5	4	20.0%	50.0%	30.0%	100.0%	0.0%	−100.0%
Florida	123	117	54.5%	47.9%	−6.6%	54.5%	52.1%	−2.3%
Georgia	58	51	58.6%	52.9%	−5.7%	39.7%	17.6%	−22.0%
Idaho	2	4	100.0%	100.0%	0.0%	50.0%	75.0%	25.0%
Illinois	128	114	48.4%	55.3%	6.8%	45.3%	43.0%	−2.3%
Iowa	35	35	57.1%	68.6%	11.4%	68.6%	54.3%	−14.3%
Kansas	17	13	58.8%	69.2%	10.4%	35.3%	53.8%	18.6%
Kentucky	15	16	20.0%	50.0%	30.0%	6.7%	43.8%	37.1%
Louisiana	16	14	37.5%	42.9%	5.4%	18.8%	35.7%	17.0%
Maryland	266	257	35.7%	37.0%	1.3%	18.4%	15.6%	−2.9%

*continued*

TABLE A1 Continued

State	N-size		Percent Voted in 2006			Pct w/ Pre-2006 Vote History		
	Control	Treatment	Control	Treatment	Diff (T-C)	Control	Treatment	Diff (T-C)
Michigan	25	20	60.0%	75.0%	15.0%	20.0%	25.0%	5.0%
Minnesota	60	55	55.0%	61.8%	6.8%	50.0%	43.6%	-6.4%
Mississippi	9	12	33.3%	25.0%	-8.3%	22.2%	25.0%	2.8%
Missouri	22	20	54.5%	30.0%	-24.5%	36.4%	50.0%	13.6%
Nebraska	8	7	62.5%	42.9%	-19.6%	37.5%	42.9%	5.4%
Nevada	121	123	59.5%	56.1%	-3.4%	19.8%	22.8%	2.9%
New Jersey	141	150	38.3%	46.7%	8.4%	20.6%	22.0%	1.4%
New Mexico	20	16	60.0%	62.5%	2.5%	55.0%	50.0%	-5.0%
New York	144	135	53.5%	63.7%	10.2%	44.4%	39.3%	-5.2%
North Carolina	44	47	61.4%	57.4%	-3.9%	36.4%	36.2%	-0.2%
Ohio	95	100	48.4%	60.0%	11.6%	52.6%	47.0%	-5.6%
Oklahoma	13	14	61.5%	64.3%	2.7%	38.5%	35.7%	-2.7%
Oregon	87	85	58.6%	56.5%	-2.2%	37.9%	28.2%	-9.7%
Pennsylvania	87	86	65.5%	64.0%	-1.6%	39.1%	37.2%	-1.9%
Rhode Island	6	8	50.0%	87.5%	37.5%	33.3%	25.0%	-8.3%
South Carolina	227	233	34.8%	39.9%	5.1%	9.3%	6.9%	-2.4%
South Dakota	6	6	83.3%	100.0%	16.7%	33.3%	83.3%	50.0%
Tennessee	39	33	46.2%	66.7%	20.5%	43.6%	39.4%	-4.2%
Texas	170	184	55.3%	66.3%	11.0%	35.9%	39.7%	3.8%
Utah	27	28	66.7%	78.6%	11.9%	59.3%	50.0%	-9.3%
Washington	50	53	58.0%	50.9%	-7.1%	64.0%	45.3%	-18.7%
West Virginia	4	3	75.0%	33.3%	-41.7%	75.0%	66.7%	-8.3%
Wisconsin	1007	987	71.5%	73.7%	2.2%	3.8%	3.7%	0.0%

Note: Variation in pre-2006 voter turnout data is due in part to differences in the quality of vote history data obtained from the states.

## References

- Achen, C. H. 2008. "Registration and Voting under Rational Expectations: The Econometric Implications." Presented at the Annual Meeting of the Society for Political Methodology.
- Addonizio, E. M., D. P. Green, and J. M. Glaser. 2007. "Putting the Party Back into Politics: An Experiment Testing Whether Election Day Festivals Increase Voter Turnout." *PS: Political Science & Politics* 40: 721-27.
- Aldrich, J. H. 1993. "Rational Choice and Turnout." *American Journal of Political Science* 37(1): 246-78.
- Arceneaux, K. 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.
- Campbell, A., P. Converse, W. Miller, and D. Stokes. 1960. *The American Voter*. Chicago: University of Chicago Press.
- Cardy, E. A. 2005. "An Experimental Study of the GOTV and Persuasion Effects of Partisan Direct Mail and Phone Calls." *The ANNALS of the American Academy of Political and Social Science* 601(1): 28-40.
- Caspi, A., and D. J. Bem. 1990. "Personality Continuity and Change Across the Life Course." In *Handbook of Personality: Theory and Research*, ed. L. A. Pervin. New York: Guilford Press.
- Downs, A. 1957. *An Economic Theory of Democracy*. New York: Harper and Row.
- Edlin, A., A. Gelman, and N. Kaplan. 2007. "Voting as a Rational Choice: Why and How People Vote to Improve the Well-Being of Others." *Rationality and Society* 19(3): 293-314.
- File, T. 2008. "Voting and Registration in the Election of November 2006." Current Population Reports. U.S. Census Bureau.
- Freedman, D. 2008. "On Regression Adjustments in Experiments with Several Treatments." *Annals of Applied Statistics* 2: 176-96.
- Friedrichs, R. 2006. *Voter Mobilization in 2004*. Redwood City, CA: Skyline Public Works.
- Gerber, A. S., and D. P. Green. 2000. "The Effects of Canvassing, Telephone Calls, and Direct Mail on Voter Turnout: A Field Experiment." *The American Political Science Review* 94(3): 653-63.
- Gerber, A. S., D. P. Green, and R. Shachar. 2003. "Voting May Be Habit-Forming: Evidence from a Randomized Field

- Experiment." *American Journal of Political Science* 47(3): 540–50.
- Gosnell, H. F. 1927. *Getting Out the Vote: An Experiment in the Stimulation of Voting*. Chicago: University of Chicago Press.
- Green, D. P., and A. S. Gerber. 2004. *Get Out the Vote! How to Increase Voter Turnout*. Washington, DC: Brookings Institution Press.
- Green, D. P., A. S. Gerber, and D. W. Nickerson. 2003. "Getting Out the Vote in Local Elections: Results from Six Door-to-Door Canvassing Experiments." *The Journal of Politics* 65(4): 1083–96.
- Ha, S. E., and D. S. Karlan. 2009. "Get-Out-the-Vote Phone Calls: Does Quality Matter?" *American Politics Research* 37(2): 353–69.
- Kinder, D. R. 2002. "Communication and Politics in the Age of Information." In *Handbook of Political Psychology*, ed. D. O. Sears, L. Huddy, and R. L. Jervis. Oxford: Oxford University Press.
- Lupia, A., and M. D. McCubbins. 1998. *The Democratic Dilemma: Can Citizens Learn What They Need to Know?* New York: Cambridge University Press.
- McDonald, M. P., and S. L. Popkin. 2001. "The Myth of the Vanishing Voter." *American Political Science Review* 95(4): 963–74.
- Michelson, M. R. 2003. "Getting Out the Latino Vote: How Door-to-Door Canvassing Influences Voter Turnout in Rural Central California." *Political Behavior* 25(3): 247–63.
- Michelson, M. R. 2006. "Mobilizing the Latino Youth Vote: Some Experimental Results." *Social Science Quarterly* 87(s1): 1188–1206.
- Nickerson, D. W. 2005. "Partisan Mobilization Using Volunteer Phone Banks and Door Hangers." *The ANNALS of the American Academy of Political and Social Science* 601: 10–27.
- Nickerson, D. W. 2007a. "Does Email Boost Turnout?" *Quarterly Journal of Political Science* 2(4): 369–79.
- Nickerson, D. W. 2007b. "Quality Is Job One: Professional and Volunteer Voter Mobilization Calls." *American Journal of Political Science* 51(2): 269–82.
- Nickerson, D. W., R. D. Friedrichs, and D. C. King. 2006. "Partisan Mobilization Campaigns in the Field: Results from a Statewide Turnout Experiment in Michigan." *Political Research Quarterly* 59(1): 85–97.
- Nickerson, D. W., and T. Rogers. Forthcoming. "Do You Have a Voting Plan? Implementation Intentions, Voter Turnout, and Organic Plan-Making." *Psychological Science*.
- Panagopoulos, C. 2009. "Street Fight: The Impact of a Street Sign Campaign on Voter Turnout." *Electoral Studies* 28(2): 309–13.
- Pew Research Center. 2006. "Regular Voters, Intermittent Voters, and Those Who Don't: Who Votes, Who Doesn't, and Why." Washington, DC.
- Phillips, J. A. 2001. "Using E-mail to Mobilize Voters: A Field Experiment." Unpublished manuscript. Yale University.
- Powell, G. Bingham, Jr. 1986. "American Voter Turnout in Comparative Perspective." *The American Political Science Review* 80(1): 17–43.
- Putnam, R. D. 2000. *Bowling Alone*. New York: Simon and Schuster.
- Ramirez, R. 2005. "Giving Voice to Latino Voters: A Field Experiment on the Effectiveness of a National Nonpartisan Mobilization Effort." *The ANNALS of the American Academy of Political and Social Science* 601(1): 66–84.
- Riker, W. H., and P. C. Ordeshook. 1968. "A Theory of the Calculus of Voting." *The American Political Science Review* 62(1): 25–42.
- Rosenstone, S. J., and J. M. Hansen. 1993. *Mobilization, Participation, and Democracy in America*. New York: Macmillan.
- Squire, P., R. E. Wolfinger, and D. P. Glass. 1987. "Residential Mobility and Voter Turnout." *The American Political Science Review* 81(1): 45–65.
- Wolfinger, R. E., and S. J. Rosenstone. 1980. *Who Votes?* New Haven, CT: Yale University Press.
- Wong, J. S. 2005. "Mobilizing Asian American Voters: A Field Experiment." *The ANNALS of the American Academy of Political and Social Science* 601: 102–14.
- Zaller, J. R. 1992. *The Nature and Origins of Mass Opinion*. New York: Cambridge University Press.