

Text Messaging as a Youth Mobilization Tool: An Experiment with a Post-Treatment Survey¹

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Abstract

Young voters are underrepresented in the American electorate; they are also more likely than older voters to rely exclusively on mobile technology as a primary means of communication. This study uses a field experiment and mobile phone survey in the 2006 election to determine how mobile technology can be used to encourage young people to vote. The research design consists of two nationwide experiments: one large experiment (n=12,572) that tests the basic effectiveness of text messaging as a mobilization tool, and a small “pilot” experiment (n=1,567) that tests the impact of including detailed polling place information in a mobilization text message. Preliminary results from voter rolls for roughly one-seventh of our expected matched sample indicate a strongly positive, yet not quite statistically significant, effect of sending a text message reminder to vote. A follow-up mobile phone survey of those in the treatment group indicates that the small backlash to the text messaging treatment is minor relative to the positive reaction from participants.

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Introduction

Young people are under-represented in the American electorate, and traditional campaign mobilization techniques are not designed with today's mobile youth in mind. This research explores one potential technique of youth turnout: mobile phone text messaging. We designed one large-scale, nationwide field study in three parts. First, we measure the effectiveness of sending a text message reminder to vote through a large n field experiment. Second, we evaluate the usefulness of including polling place information in the text message via a pilot experiment. And, third, we use a post-treatment survey to test for a backlash from the use of this potentially-intrusive technology.

Preliminary results from 11 states (comprising one-seventh of our universe size) demonstrate a strongly positive, but thus far statistically insignificant, effect of reminding young people to vote on their cell phones. If the intent-to-treat effect of 3.2% for the main experiment holds constant as we acquire the remainder of the voting records, we will obtain a statistically significant result overall. As expected, the results of the pilot study are not significant. However, the pilot study demonstrates the feasibility of this technology as 75% of participant addresses were matched to a specific polling location for inclusion in the text message. The survey responses are consistent with the above two findings; they demonstrate that the backlash from using text messaging is small. Additionally, they show that Hispanics are more likely to feel positively about the mobilization technique than other groups. We also find that young voters prefer passive forms of political communication, such as e-mail and text messaging, to more interactive and traditional avenues of communication (e.g., phone call or canvass).

Background on Voter Participation

The heterogeneity of voter participation in the United States has been well-documented in the field of political science. Some scholars concerned about low levels of voting have looked to demographic variables to understand why some groups of citizens vote at higher rates than others. Wolfinger and Rosenstone argue that education and age are the best predictors of voter participation (1980). Brady et al. find that time, money and civic skills are resources that positively impact a citizen's likelihood to vote (1995) while Rosenstone argues that economic adversity decreases turnout (1982).

Another branch of research in voter behavior has worked to integrate a consideration for life-cycle effects on voter turnout with these resource models. Plutzer finds that resources such as political knowledge, parental voting habits, and parental education significantly affect initial turnout. However, he finds that these parental factors have less of an impact on a voter over time (2002). Highton and Wolfinger demonstrate that young adults vote at varying levels, contrary to the universally low youth turnout predicted by "adult roles theory" (2001). Gerber et al. show that the act of voting or nonvoting can create behavioral patterns that become habit-forming over time (2003), a finding that reinforces the importance of voting at the first opportunity an individual has.

Finally, a third perspective looks at institutional factors that can affect voter turnout. Powell finds that registration laws put Americans at a disadvantage in voter turnout in comparative perspective (1986). Squire et al. argue that high levels of residential mobility translate into low levels of voting participation. They argue that registration is a low priority for people that have recently moved (1987). Campaign mobilization, which could be looked at from this institutional perspective, can also

increase voter mobilization. Several studies have found that personal mobilization messages can significantly increase voter turnout (Eldersveld 1956; Gerber and Green 2000; Green and Gerber 2001; Patterson and Caldeira 1983).

Our study on text messaging is situated within these last two areas of research in voter behavior. We build upon previous research by starting with the assumption in the institutional literature that political campaigns can make a difference by targeting and mobilizing groups of people to vote. We believe that young people are particularly constrained by their high mobility and reliance upon mobile technology. Finally, we believe that mobilizing young voters is important if this group is to develop long-term habits of voting participation.

Constraints Facing Young Voters

The 2006 election was a striking success for those wishing to see young people (those 29 years old and younger) vote at the same rate as their parents' generation. By some estimates, the youth vote was, for a midterm election, the largest since 1994 (CIRCLE, 2006). However, young voters are still underrepresented in the electorate, a fact that scholars have long noted (Wolfinger and Rosestone, 1980; Highton and Wolfinger 2001). Working from an institutional perspective on how campaigns can affect voter turnout, we believe that the approaches campaigns use in mobilizing voters may explain disparities among different age cohorts. Previous studies of college students support this view by showing that the youth population is particularly responsive to voter mobilization efforts (Green and Gerber, 2001). Specifically, this study seeks to determine if advances in new technology can help to bridge the gap between young people and the voting booth.

Political campaigns have traditionally delivered persuasion and mobilization messages to voters via U.S. mail and landline phone canvassing, both of which frequently overlook young and new voters. As a mobile population, young voters are less likely than older generations to have a stable address and phone number. Furthermore, a growing percentage of this population no longer uses a landline at all, relying exclusively on their cell phone. A quarter of Americans under the age of 25 were mobile-only in the first half of 2006 (Blumberg and Luke, 2007). A study by In-Stat/MDR (2004) predicts that the mobile-only population will reach nearly 30 percent of the *entire American public* by the 2008 presidential election. An even larger barrier to promoting campaign-to-voter communication is the fact that many young voters register to vote in the months before an election and are therefore absent from campaign mobilization lists of previously-registered voters.

This study uses two field experiments and mobile-only survey to test the hypothesis that text messaging is an effective tool for driving young voters to the ballot box. The main experiment examines the differences in turnout rates among participants in the treatment group—those who received one text message reminding them to vote in the 2006 general election—and those in the control group, who did not receive a message. A smaller pilot experiment tests the impact and feasibility of including specific polling information in the text message. Because participants may not appreciate being contacted on their personal cell phone by a political group, a post-treatment survey seeks to detect the presence and magnitude of any backlash against the treatment. These findings will allow voter mobilization organizations to better assess and implement text messaging campaigns in future elections.

Experimental Design

Field experiments have become increasingly popular in recent years among political scientists seeking to measure the actual, direct effects of voter mobilization techniques (e.g., Gerber and Green, 2000 and Michelson, 2004). In general, these studies have tested conventional mail, phone and canvassing tactics and have found that personal mobilization methods increased turnout more than impersonal methods. As technology has changed, studies have shifted to examine the efficiency of techniques that utilize 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 (Phillips, 2001; Gerber and Green, 2004).

One pilot study on the use of text messaging in get-out-the-vote efforts found statistically insignificant effects (Freidrichs, 2006). We hope that our study improves upon that project in several ways. First, we broadened the subject universe to include a sample of about 12,500 people in the main experiment, whereas the Freidrichs study consisted of less than 500 participants. Second, participants in our study are young, mostly first-time voters who are not very likely to vote in a midterm election. This creates a more fertile environment for a significant effect to be found from a mobilization effort like text messaging. Third, when possible, we targeted individuals who were less likely to receive targeted mobilization messages from other organizations.

The field experiment component of this study comprises two separate, but similar experiments: one large, main experiment that tests the basic effectiveness of text messaging, and a small “pilot” experiment that tests the impact of including detailed polling place information in the message. The first experiment includes 12,572

participants; the second includes 1,567 participants. All participant phone numbers have been verified as cell phone numbers,⁴ but, since information was collected from individuals as they registered to vote, there is some drop-off in the size of the population due to unsuccessful registration.⁵ The aim of the main experiment is to estimate the effect of text message mobilization with a reasonable amount of certainty. For the pilot experiment, the small number of participants precludes this possibility; instead, we venture to demonstrate the technological feasibility of matching individual addresses to polling locations within text messages.

Participant Recruitment

In order to identify a sample for this field survey, we partnered with three voter registration organizations who shared information on approximately 84,000 newly registered individuals:

- Working Assets: Working Assets is a company that donates a portion of the charges related to their phone and credit card services to liberal causes. Since 2005, over 60,000 individuals have registered with govotest.org, a website affiliated with Working Assets. While the majority of visitors to the website were directed there through Google keyword searches, the remaining traffic was directed to the website through blast emails sent by several liberal organizations to their customer or membership lists. Of these new registrants, over 5,317 provided a working cell phone number to the company and gave permission for Working Assets to contact them via text messaging. These individuals were assigned to the first experiment.
- Student PIRG: Working through local affiliates in 24 states, Student PIRG registered young people to vote on college campuses across the country in the 2006 election. The group captured cell phone numbers from new registrants by requesting that students fill out a PIRG information card in addition to the voter

⁴ Phone numbers were determined to be valid by examining their numerical properties. With help from Survey Sampling International, a company that specializes in producing random-digit dialing samples, we analyzed each phone number's area code, exchange and "1000-block" (7th digit of a 10-digit number). This allowed us to determine if the number was a mobile number, a residential landline, or a business. Only those numbers designated as mobile were kept in our universe. Due to typos, some of these phone numbers might still be invalid, though the results from our survey indicate that the vast majority of numbers did connect to cell phones.

⁵ With voter registration data in from 11 states, the current match rate is 79%.

registration form. Participants residing in low-priority GOTV target states for Student PIRG (states without a top-targeted race) are included in our main experiment, approximately 7,255 people.⁶ A similar process in high-target area resulted in 1,214 complete records for the pilot experiment.

- Mobile Voter: Mobile Voter is a non-partisan voter enrollment organization that registered voters for the 2006 election via text messaging and the internet. Mobile Voter registers voters via text messaging. An individual can register to vote with Mobile Voter by sending a text message to a 5-digit number to request a registration card. Throughout the 2006 campaign, Mobile Voter registered about 500 individuals through text messaging (i.e., numbers that are unique from those collected on govote.org). Of these potential participants, 353 had addresses that could be matched to a specific polling location and were included in the pilot experiment.

Treatment Text Messages

In the first experiment, we tested the overall effect of text message voting reminders as well as two treatment dimensions: the addition of a polling place information hotline and the type of appeal to vote. All messages were sent between 11:00 am and 7:00 pm local time on the day before 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 who initially registered the individual, as well as the name of the organization responsible for sending the text message.⁷

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.”

⁶ PIRG submitted over 14,000 low-target records for use in the main experiment, about 11,500 of which included phone numbers. Of this potential pool, 7,255 unique records had valid cell phone numbers and adequate address information.

⁷ Mobile Voter sent the text messages to their participants and PIRG’s participants. Working Assets sent the messages to their own participants.

We tested two different types of appeals to examine if any particular type of message can have an especially powerful impact on young voters. The first type of message was a civic duty appeal which read, “Democracy depends on citizens like you—so please vote!” The second appeal consisted of a “close elections” message that read: “Elections often come down to few votes—so please vote!”⁸ These messages are short because most mobile carriers limit text messages to 160 characters. See Appendix A for examples of entire treatment messages.

The participant population 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. Differences in group sizes are only due to lack of divisibility of the overall population size. The determination of which groups received the extra participant was also random.

The pilot experiment had a small universe of 1,567 participants and tested the proposition that including specific polling place information in the text message increases voting participation. The control group comprised half of the total universe; these participants received a generic text message reminder. The individuals in the treatment group received a text message reminder that included their specific place to vote (e.g., First Presbyterian Church) and that location’s address (e.g., 57 State St.). Sample text messages can be found in Appendix A.

Results of Field Experiments

The main field experiment demonstrates that text messaging is a powerful tool for mobilizing voters. The overall intent-to-treat effect was 3.2%; the turnout rate for the

⁸ Gerber and Green (2000) found that, of the mobilization messages they tested, the “close election” appeal had the most effect, followed by a “civic duty” appeal. Our message wordings are shorter versions of their paragraph-length appeals.

control group was 53.9% while those in the treatment group voted at a rate of 57.1% (Table 1). Using data from the post-treatment survey results, we establish our contact rate (80%) and the percent of participants who voted before Election Day (11%). Accordingly, we determine the implied treatment-on-treated effect to be 4.5%. Since data from only 11 states has been collected, the results are preliminary and not statistically significant. If the results remain consistent as data collection is completed, the overall treatment effect will reach conventionally accepted levels of statistical significance.

Group	Turnout Rate	Turnout Difference (S.E)	Implied Treatment Effect (S.E.)	N-size
Control	53.9%	--	--	560
Entire treatment group	57.1%	3.2% (3.0%)	4.5% (4.2%)	525
Civic duty message	59.0%	5.1% (3.7%)	7.2% (5.2%)	266
Close election message	55.2%	1.3% (3.7%)	1.8% (5.2%)	259
Hotline included	52.8%	-1.1% (3.7%)	-1.5% (5.2%)	256
Hotline not included	61.7%	7.8% (3.7%)	11.0% (5.2%)	269

Turnout rates that differ from the control group rate at a statistically significant level (90%, one-tailed) are in **bold**.

Table 1: Basic voter turnout statistics for the treatment groups

Comparing these results to past experiments (Green and Gerber, 2000), the overall effects for 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 those exhibited in this experiment. When considering the treatment-on-treated effect, text messaging is about as effective as three physical mailings (Green and Gerber, 2000).

Initial results indicate no significant difference between the two message appeals, though the point estimate for the effect of the civic duty message is somewhat higher than

for the close election message. Green and Gerber (2000) also found no statistical effect between these two messages, though 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 received the hotline information voted at a lower rate than even the control group. This negative finding is corroborated by the survey results (see next section).

The regression analyses presented in Table 2 demonstrate the potentially large effects of text messages. The cumulative effect of a civic-duty message with the hotline was 9.4%, though more data is needed to improve the certainty of this estimate. As the control variables show, women and college-aged (22 years old and younger) participants were less likely vote; those who registered to vote through PIRG were more likely to vote. Of these initial findings, only the age result is statistically significant. A probit analysis—which is more appropriate for dichotomous dependent variables, though produces coefficients that are harder to interpret—is presented on the right-side of Table 2.

Variable	OLS Coefficient (S.E.)	Probit Coefficient (S.E.)
Received treatment	0.061 (0.043)	0.157 (0.111)
Civic duty message	0.034 (0.043)	0.088 (0.111)
Polling place hotline	-0.088 (0.043)	-0.227 (0.111)
Female	-0.039 (0.03)	-0.100 (0.077)
College-aged	-0.09 (0.036)	-0.228 (0.093)
PIRG	0.048 (0.041)	0.123 (0.104)
Constant	0.579 (0.028)	0.200 (0.07)

Dependent variable is whether participant voted (1=voted, 0=not voted). All independent variables are dichotomous. Values at the 90%-level (two-tailed) are in **bold**. (n=1085)

Table 2: Effect of Treatment Type and Demographics on Turnout

Only 180 participants have been matched for the pilot experiment, which is not enough to make any inferences with reasonable certainty. Tentatively, however, there

does not appear to be a positive effect of including polling place information in the text message. Of this small sample, those who received the name and address of their specific polling location were less likely to vote.

Post-Treatment Survey

Background

Field experiments in political science frequently do not include a post-treatment survey. However, the possibility of backlash in this study compels us to ask participants how they reacted to the treatment. Cell phones are personal devices, and many treatment recipients may feel that a generic voter mobilization message violates their sense of privacy. A Pew Research (2005) study of a related technology, e-mail, finds that many computer users are uncomfortable with campaign communications in their inboxes. In the case of text messaging, a post-treatment survey complements the quantitative analysis of voting outcomes with a more qualitative examination of participants' attitudes toward participation.

Gerber and Green (2004) note that post-experiment surveys are subject to considerable non-response bias: those who answer the survey are the same people who were amenable to the treatment. Two exceptional field experiments that *do* include post-treatment surveys (Phillips, 2001; Gerber and Green, 2001) do not measure backlash and do not correct for non-response bias. We alleviate this bias by recording the initial disposition of every potential respondent who answers their cell phone and then weight the survey results by the measure of disposition (Fuller, 1974).

Cell phone surveys are a relatively new phenomenon. The Pew Research Center has been a pioneer in the area of cell phone opinion research (2006b). Pew provides a

monetary incentive to potential respondents to increase their response rate among mobile phone users who may be disinclined to converse with a caller from an unknown number. They also leave messages in mobile phone voice mail with a response number to call. We follow Pew's lead in adopting several of these procedures.

Survey Sample Design

The survey was conducted on the two weekends immediately following the election (November 11, 12, 18, and 19) via McGuire Research Services (as the calling house) and The Mellman Group (as the survey firm intermediary). No calls were conducted on weekdays to reduce the possibility that respondents had to pay for cell phone minutes. The length of the interview was kept to between five and six minutes (on average) to minimize any calling costs to the respondent.

The approach to surveying the experiment's participants is rather straightforward; we employ the language of Groves (2004) in discussing the sampling methodology. The "target population" of the survey was comprised of all participants who received a text message in the experimental phase of this study. Participants in the control group were not surveyed because a backlash to a text message they did not receive could not plausibly exist. The "sample frame" consists of all members of the target population, since a cell phone number was required to send the participant the treatment text message. The only conceivable way for a person to receive the treatment on November 6th and have no possibility of being called in the subsequent survey would be for the participant to change their cell phone number in the intervening 5 to 13 days. Of those participants with the potential to be called, non-English-speakers would be the only individuals without an opportunity to be interviewed. During the execution of the survey,

five potential respondents could not converse with the interviewer in a common language. The survey “sample” was, on the first order, simply a random draw of the survey frame.⁹

We consider respondents to be those who were both (1) willing to complete the survey and (2) recalled that they received the treatment text message. To account for the pernicious non-response bias of participants unwilling to take a survey on their cell phone, the initial “disposition” (e.g., annoyed or pleasant) of every person who answered their cell phone was recorded. This information is used when weighting the survey. In total, 707 participants answered their phone; a subset of this group either did not recall receiving the treatment or declined to take the survey. The remaining 300 respondents were fully interviewed.

To induce annoyed participants to take the survey, a \$5 Amazon.com gift certificate was offered to those individuals that initially declined to complete the survey. This offer was also extended to those whose cell phone package did not include unlimited weekend calling.¹⁰

⁹ Two deviations from this procedure occurred. First, mistakenly, more participants who received polling information in their treatment text message were sampled than were participants who simply received a reminder to vote. This error is corrected when the survey is weighted (see below). Second, men were less likely to complete the survey than women, and men were thus slightly over-sampled on the second weekend. This change reduces the need to weight by gender.

¹⁰ Of the 477 unweighted participants who answered the question about their cell phone plan, 83% reported that they had a plan with unlimited weekend calling. In general, the Amazon.com offer was not an effective incentive. For instance, of the 72 participants whose dispositions were recorded as being “somewhat annoyed,” 19 were willing to take the survey, and only one person decided to stay on the line after agreeing to take the gift certificate. Overall, 18 participants (among those, 15 respondents) accepted the gift certificate; the majority of those participants were individuals with limited weekend calling plans (13 participants). In addition, among the 459 participants willing to take the survey (before 159 were screened out), only 7 were the result of “unpleasant” individuals being swayed by the prospect of earning the \$5 gift certificate.

Survey Instrument Design

The primary goal of the survey instrument is to detect a backlash among participants who received the treatment text message. As this backlash is an actual phenomenon and not a theoretical construct, the validity of the survey questions ideally should be tested by correlating responses to real-world action. Since this behavior is unobserved (an exception being the extreme backlash of deciding *not* to vote based on receiving the treatment), other validity tests are necessary.

This survey relies on both “face validity” and the presence of multiple indicators to justify the survey instruments.¹¹ We simply ask an individual how they reacted to receiving a text message, allowing them to provide any response. If the respondent is confused by the question (since people are not often asked how they react to text messages), they were asked how “did they FEEL” about receiving the text. These responses are then grouped into categories. (For exact question wording and categorization of responses, see the Appendix.)

In addition to the open-ended question, we ask respondents to categorize their reaction as either positive or negative. Specifically, we inquire as to whether the text message was “helpful” or whether the respondent was “bothered” by it. We also ask how the text message affected the respondent’s likelihood to vote. While we do not expect respondents to accurately report their own behavior, this measure is still informative on the extent of the backlash. We order the open-ended question before the close-ended questions so as not to bias the open-ended responses (Babbie, 2004).

¹¹ In the case of the self-reporting “did you vote?” question, we relied on the criterion validity research of others (Prior, 2006) to inform question wording.

Measuring the respondents' initial disposition relies on the interviewer being able to determine the emotional state of the respondent from word choice and tone of voice. Interviewers are given a scale to place the respondent on, from "very pleasant" through "indifferent" to "very annoyed." The option "immediate hang-up" is available if the period of interviewer contact is too short to discern a mood. Also, if the interviewer cannot place the respondent's initial disposition on the scale, an "other" category is available, though its use was discouraged.¹²

Weighting the Survey

The survey is weighted on several dimensions to adjust for sampling error, randomness, and non-response bias. The distribution of participant voter registration organization, treatment group, age, and sex is known for the entire population. Weighting on these dimensions is straightforward. In addition, differences in recall-rate compel us to weight based on the weekend the participant was interviewed (i.e., either November, 11-12 or 18-19). To alleviate non-response bias, we weight the disposition of respondents who completed the survey to the disposition of everyone who answered their mobile phone.

The survey is initially weighed by factors that are exogenous to the process of surveying the population. Due to a systematic sampling error, the participants who received polling place information (either as the hotline number or address location) need to be down-weighted to 50% of the respondent population. Respondents are also weighted by which organization registered them to vote.

¹² Face validity is difficult to establish in this case because there is no actual question for the respondent. Instead, we use construct validity to justify the use of this question. Theoretically, annoyed respondents should be less likely to take the survey and more likely to express negative feelings toward the treatment text message. Indeed, this correlation was exhibited by the data.

The results are then weighted by factors more endogenous to the survey. Older participants are underrepresented in the unweighted sample because young people are more willing to speak on their cell phones. To simplify weighting by age, participants are divided between those older than 19, those 19 years-of-age and younger, and those whose ages are unknown (due to missing information from partner organizations). The split at 19 years-of-age roughly divides the dataset in half, excluding those for whom no age information is available.

Next, the dataset is weighted by which weekend the interview took place. Because more respondents recall receiving the treatment during the first weekend than the second weekend, the first weekend is a more accurate representation of the population as a whole. To up-weight the first weekend accordingly, it is necessary to establish the theoretical contact rate among potential survey respondents (i.e., participants with working cell phone numbers). Algebraic calculations reveal that 19 more people would have been interviewed on the second weekend if the recall rate had been constant over the course of the survey.¹³ These 19 people are only represented in the results from the first weekend, and first weekend respondents are up-weighted to reflect that reality.

Finally, the survey is weighted by initial disposition and gender. The differences between the initial disposition of participants who completed the survey and those who did not, separated by gender, are displayed in Table 3. There is a stark contrast between the disposition of those participants who chose to take the survey and those who did not, which helps illustrate the expected non-response bias. The first obvious problem with

¹³ The first evening of the survey had the highest recall rate, with 79% of participants who were willing to answer questions recalling delivery of the treatment. The actual contact rate is estimated to be 85%, a number slightly higher than the recall rate on the first night. Multiplying this contact rate with the percent of people with known working phone numbers (94%) yields the overall contact rate for the field experiment: $85\% * 94\% = 80\%$.

simply weighting the categories to their overall disposition value is that no participant who immediately hangs-up goes on to complete the survey. This means that there is no response to up-weight without collapsing the categories. Even if somewhat annoyed, very annoyed, and immediate hang-ups were combined into one category, the three “annoyed” women who completed the survey would be up-weighted to about 12 times their initial importance. This type of extreme weighting creates even larger variance than that which existed in the unweighted results. As a remedy, more categories need to be combined.

<u>Disposition</u>	Men		Women	
	<u>% of Completed</u>	<u>% of All</u>	<u>% of Completed</u>	<u>% of All</u>
	<u>Interviews</u>	<u>Interviews</u>	<u>Interviews</u>	<u>Interviews</u>
Very pleasant	53.5	38.3	62.5	44.0
Somewhat pleasant	15.7	17.8	14.4	15.1
Indifferent	17.6	17.2	13.1	11.3
Somewhat annoyed	7.6	10.9	1.5	9.0
Very annoyed	0	3.2	.4	3.2
Immediate hang-up	0	7.3	0	11.8
Other	5.6	5.3	8.1	5.5
Total	100	100	100	100

Table 3: Initial Disposition of Respondents by Gender and Completion of Survey

To compare the weighting schemes, we present the results from the close-ended question asking whether the text message reminder was helpful or annoying. Three approaches are compared: unweighted, combining the bottom four disposition categories, and combining the bottom five disposition categories. As displayed in Table 4, weighting makes a considerable difference, but the results of the two weighting schemes are still similar. Slightly more polarization occurs in the more granular weighting scheme that combines four categories. Because this coarse approach yields such similar results (note the similar “helpful - bothered” margin), and is less prone to random variance since it pools more respondents, we employ the 5-category scheme to weight the survey.

Response to Q6.	Weighting Scheme		
	Unweighted	Combine 4 Categories	Combine 5 Categories
Helpful, strongly	29.0	26.7	25.4
Helpful, not so strongly	34.0	32.6	33.3
No effect/[DK]	17.7	17.8	18.5
Bothered, not so strongly	9.0	9.2	9.8
Bothered, strongly	10.3	13.7	12.9
Total helpful	63.0	59.3	58.7
Total bothered	19.3	22.9	22.7
Total: helpful – bothered	43.7	36.4	36.0
Total	100	100	100

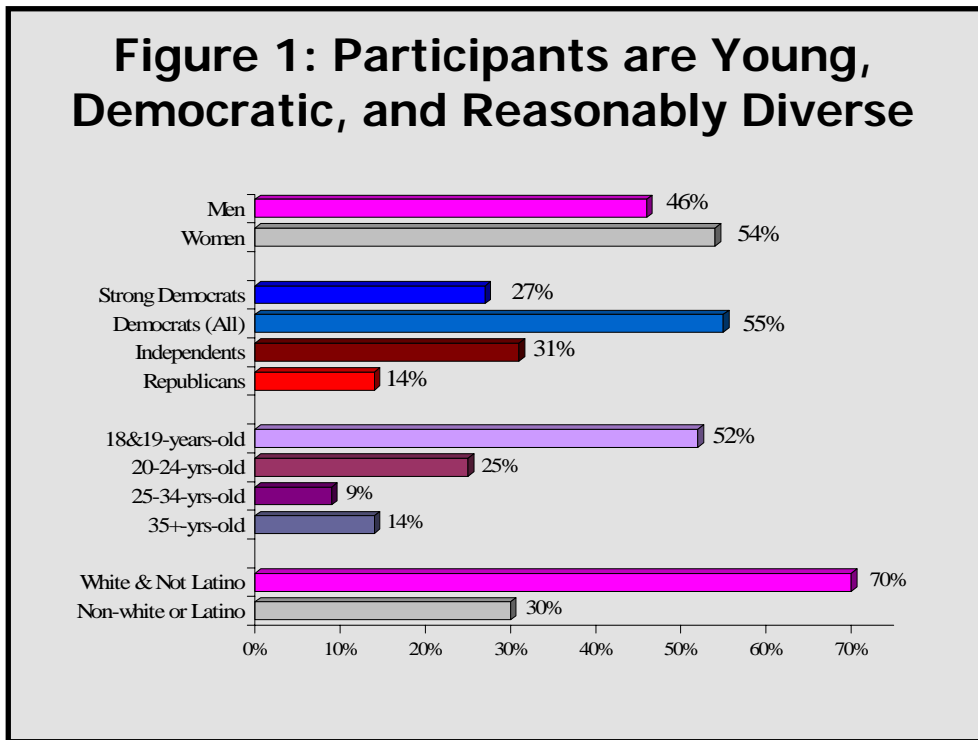
Table 4: Effect of Weighting Schemes on Helpful/Bothered Question

Survey Results

The first benefit of the survey results is that they provide a view of the demographic profile of the overall population. As can be seen in Figure 1, the weighted survey population has a higher distribution of women than men, and is overall very young, reasonably diverse, and overwhelming affiliated with the Democratic Party. While respondents were not asked their age on the survey, dates of births were available from the registration information associated with each participant’s mobile phone number. Over half of the population is either 18 or 19 years old. Almost a third (31%) of the respondents are either non-white or Latino, a percentage that falls only slightly below the nationwide average (33% according to the 2005 Census Bureau estimate). Many more respondents identified with the Democratic Party (57%) than the Republican Party (13%).

The survey provides evidence of a small backlash to receiving a text message. This backlash is dwarfed, however, by the size of the positive reaction from participants. When respondents are asked, without any prompting, the open-ended “reaction” question, a sizable plurality (43%) reports a positive feeling. In fact, a quarter (25%) of respondents

indicate that the treatment helped remind them to vote. In contrast, only a tenth of the respondents report a negative reaction (e.g., annoyance). A third cluster of respondents (21%) report being confused or surprised by the text message, a percentage that would undoubtedly shrink if more campaigns employed this technology.



When the respondents are asked to think about the treatment in terms of their likelihood to vote, about a quarter (26%) report an increased chance in voting. A vanishingly small proportion (1%) believes that the text message suppressed their desire to cast a ballot. Thus, unless those who were dissuaded from voting are reporting *much* more accurately than their positively-influenced counterparts, the positive effects of text reminders quantified above are not significantly dampened by voter backlash. In regards to the treatment being helpful or annoying, there is again a large margin between a positive response (59% total helpful) and a negative answer (23% total bothered).

Since the helpful/bothered question is the instrument that best discriminates between positive and negative reactions to the treatment, we use that measurement as the dependent variable for two regression analyses. Such an analysis allows us to identify factors that make a participant more or less likely to find a text message helpful. This dependent variable is coded on a 5-point scale from -2 to +2, with higher values corresponding to a more positive reaction (“don’t know” is re-coded as 0). Each independent variable is described in such a way as to make it readily apparent whether it is an indicator variable (e.g., male, attends college, Working Assets), an artificially-scaled variable (e.g., party), or a naturally-scaled variable (e.g., age). Artificially-scaled variables have neutral and “don’t know” responses set at zero and each available category is set a unit step apart from the others.¹⁴

An ordinal regression analysis (Table 5) reveals that the only demographic characteristic (broadly defined as anything but the treatment assignments and survey responses) that is statistically significant besides “initial disposition” is “Hispanic.” While the other variables are insignificant, many of them take on the expected sign: displeasure with the treatment increases with age. Positive reactions are more prevalent among undergraduate students, Working Assets participants, and Hispanics.¹⁵ Interestingly, Democrats are slightly more likely to have a positive reaction and non-whites a negative reaction. Though, again, only the effect among Hispanics is significant at the 90% level.

¹⁴ Party: Strong Democrat +3, Strong Republican -3; Disposition: Very pleasant +2; ver annoyed -2; other is coded as missing

¹⁵ See Pew (2006a) for evidence that Hispanics use text messaging more often than other segments of the population.

Indep. Variable	Demographic Variables Only		Demos + Treatment	
	Coefficient	Std. Err.	Coefficient	Std. Err.
Length of Treatment			-.013	.007
Pilot Study			.130	.391
Initial Disposition	.742	.125	.786	.127
Male	-.181	.241	-.153	.242
Age	-.015	.014	-.017	.014
Party	.064	.067	.077	.068
Working Assets	.422	.339	.496	.349
Undergraduate	.096	.388	.066	.388
Graduate Student	-.343	.537	-.239	.539
Non-white	-.404	.267	-.406	.269
Hispanic	.878	.465	.886	.469
County Pop. Density	7.5e-06	1.3e-05	.000	.000

Table 5: Effects (Estimated By Ordinal Regression) of Demographic and Treatment Variables on Response to Bothered/Helpful Question. Effects significant at the 90% confidence level are in **bold**. (Weighted n=253)

An expanded regression analysis that includes treatment type yields results consistent with the preliminary findings of the field experiment. We do not find any positive effects of including polling place information in the text message. In fact, participants who demonstrate the least amount of backlash are those who receive the *shortest, most direct* text message. Also, though not displayed in the table, no significant differences were found between the use of either the “civic duty” or “close election” appeals. The key to effective text messaging mobilization appears to be the inclusion of a simple reminder; the content matters little and too much information can distract or annoy the respondent.

Survey responses also shed light on how young voter mobilization techniques could be improved. A near-majority (44%) of the non-voters (n=72) proffer “lack of time” as their excuse for not voting. In contrast, only 5% of the non-voting respondents answered that lack of information kept them from the polls. It appears as though it is

more important to remind young people to make time for voting in advance of an upcoming election than it is to provide polling location information. Alternately, the question of whether the “lack of time” response reflects a low prioritization of voting among other time-consuming activities could be explored in future research.

Young voters also indicate a preference for passive communication, whereby a voting reminder is received without needing response from the voter. When asked to choose their preferred method of get-out-the-vote contact, respondents ranked all three passive forms of communication—text message (31%), e-mail (30%), and USPS mail (17%)—above all interactive forms. Perhaps surprisingly, only 6% of individuals listed a personal visit as their favorite contact, despite the proven effectiveness of personal methods of mobilization.

Discussion, Future Work and Conclusion

Our motivation for conducting this study was to identify new methods for political campaigns to communicate with the next generation of voters. Specifically, we wanted to test whether or not mobile technology could be used to mitigate institutional constraints faced by younger voters in receiving political messages. Our preliminary results indicate that text messaging is a powerful tool to reach new voters and drive them to the polls. Minimal backlash exists for short, direct messages.

While previous research by the Pew Foundation found that a majority of respondents responded unfavorably to email correspondence, this study indicates that only 10% had a negative response to text messaging (a similar type of technology). Our initial results show that the treatment group in the main experiment voted at a rate 3.2% higher than the control group; this is a strong margin and could change a close election.

Further, a strong plurality of 43% responded favorably to the text message treatment and a quarter (25%) of respondents indicated that the treatment helped remind them to vote. Importantly, a miniscule fraction of the treatment group reported a decreased chance of voting. Unless self-reporting accuracy is asymmetric, this result indicates that the boost in turnout provided by text messaging is not dampened by backlash.

The survey respondents' professed preference for text messaging and e-mail seem to be at odds with the experimental results that demonstrate that these tools have a small or no impact. Clearly, interactive forms of political communication, while shown to be effective in previous research, do not endear young people to the political process. Perhaps political scientists and practitioners can look to current phenomena, such as facebook.com, that are effective at encouraging active participation of young people.

In particular, future work may focus on the peer-to-peer or "viral" benefits of text messaging. Peer-to-peer mobilization can be very politically powerful, as evidenced through several cases outside of the United States. In the 2004 general election in Spain, a viral text messaging campaign is thought to have mobilized young and urban voters in such a way that may have contributed to giving an unexpected victory to the Spanish Socialist Labour Party (Suarez, 2005). In Korea and China, peer-to-peer text messaging is used to organize flash mobs and large protest rallies on short notice (Hong, 2005).

This study also begins to address a puzzle that can be explored further in the 2008 election relating to how mid-term elections yield lower turnout levels among young voters than presidential elections. Achen (2005) finds that young, educated voters are the demographic group that are both theoretically and empirically most likely to vote in a presidential election—but not a midterm, congressional election. Many of the participants

in this experiment are college students, and thus fit into the young, educated demographic. This study creates a baseline for analyzing text messaging in a midterm election. A replication of this study in the 2008 presidential election can provide a contrast to examine how the mobilization factor may influence the disparity in turnout between the two types of elections.

Increased youth turnout in 2006 clearly demonstrates that young people can be motivated to go to the polls. Mobilization research, as well as related work on voting registration, continues to shed light on effective techniques to politically motivate young people. This research demonstrates that young voters want to use technology to communicate with political organizations, and that these new forms of communication are powerful at increasing turnout. In sum, this area of research can help encourage young people to develop habits of voting that will strengthen political participation among the newest generation of voters in the United States.

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Appendix A: Example Text Messages

Experiment I

Democracy appeal with hotline:

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 elections appeal without hotline:

A friendly reminder that TOMORROW is Election Day. Democracy depends on citizens like you-so please vote! -GoVote.org

Experiment II

Treatment group:

Hi Michael! Just a reminder that TOMORROW is Election Day. Please vote @ Meadowbrook Elementary, 29200 Meadowbrook Road. -TxtVoter.org

Control group:

Hi Anne! Just a reminder that TOMORROW is Election Day. Please vote. -TxtVoter.org

**Appendix B: Post-Treatment Survey (n=300, weighted)
November 11-12 & 18-19, 2006**

Hello [NAME ON LIST], my name is [FIRST NAME ONLY]. I realize that I am calling you on your cell phone. We at [Calling House] are conducting a five-minute opinion survey of mobile phone users, we're not selling anything and I would like to ask you some questions.

[IF VOICEMAIL, GO TO SCRIPT AT END OF SURVEY.]

[IF UNCOOPERATIVE, SKIP TO Q.B. FOR ANY REFUSAL, SKIP TO Q.13]

A. Before we begin, most cell phone users have unlimited calling time on the weekend. Is that true for your plan?

- Yes, weekend calling unlimited..... 87
- No, weekends are not free..... 4
- Don't know [VOL] 7
- Refuses survey [VOL] 3

[ASK Q.B IF Q.A = WEEKENDS ARE NOT FREE, OR REFUSE, Q.A=2 OR 4]

B. We are offering you a five-dollar amazon.com gift certificate if you complete the five-minute survey. We will send you the coupon code in a text message within a week. Would you like to continue?

- Would like the gift certificate 73
- Will take survey, but declines offer 27
- Refuses to take survey..... 0

[RESUME ASKING ALL RESPONDENTS]

1. Earlier this month there was an election for offices such as US Congress. Some non-partisan voter mobilization groups in your state used text messaging to remind people to vote. Did you receive a text message from one of these groups?

- Yes 100
- No..... 0
- Don't remember [VOL] 0

2. Thinking of this recent election for US Congress, while 80 million people voted, many people lead busy lives and could not vote. Did things come up that kept you from voting, or did you happen to vote?

[IF VOTED:] Did you vote in person on Election Day, before Election Day by mail, or before Election Day in person?

- Voted in person, Election Day 65
- Voted, before Election Day by mail..... 8
- Voted, before Election Day in person..... 3
- Did not vote..... 24
- Don't remember [VOL] 0
- Refused [VOL] 0

[ASK Q.3 IF Q.2 = 4 (DID NOT VOTE)]

3. What would you say is the main reason that you did not vote earlier this month? **[Open-ended]** _____

Lack Of Time	44
Not Registered	15
Not Informed Enough To Make Good Decisions.....	10
Didn't Receive Absentee Ballot.....	9
Didn't Vote At All	4
Lost I.D.....	1
Wasn't old enough	1
Didn't know where to vote.....	5
No transportation	2
Out of town.....	5
Didn't want to.....	3
Forgot to mail ballot	1
Refused/Don't Know.....	0

[RESUME ASKING EVERYONE]

4. Thinking about the text message you received in the days leading up to the election, what was your reaction to receiving it? **[Open-ended; if confused by question ask:]** How DID YOU FEEL about receiving the text message? _____

Reminded Me To Vote / It Helped	25
General Positive / Good Idea / Liked It.....	18
Neutral / No Effect	15
Disregarded Message.....	6
Received After Voting.....	3
Surprised.....	14
Confusion	2
Didn't Know They Did That/Could Be Done	1
How Did They Get My Number?	3
Annoyance.....	4
General Negative / Didn't Like It	4
Unhappy / Upset	3
Refused/Don't Know.....	2
Total Positive.....	43
Total Neutral.....	26
Total Surprised/Confused.....	21
Total Negative	10

5. Did receiving the text message make you more or less likely to vote in the election, or did it have no effect on your decision whether to vote? **[If MORE/LESS ASK:]** Would you say the text message made you much (more/less) likely or only somewhat (more/less) likely to vote?

Much more likely	8	24
Somewhat more likely	16	
No effect.....	75	
Somewhat less likely.....	1	
Much less likely	0	1
Don't know [VOL]	0	

6. With which of the following statements do you agree with more:

[ROTATE]

__The text message I received was helpful.

OR

__It bothered me that someone sent me a text message.

[If Helpful/Bothered] Do you feel that way strongly, or not so strongly?

Helpful, strongly	25	59
Helpful, not so strongly.....	33	
Bothered, not so strongly	10	
Bothered, strongly.....	13	23
Neither [VOL]	17	
Both, equally [VOL]	1	
Don't know [VOL]	1	

7. Imagine that a political organization wanted to remind you to vote just before Election Day. How would you prefer that they contact you? By...

[READ & ROTATE]

__ Mail.....	17
__ E-mail.....	30
__ Cell phone call	3
__ Cell phone text message	31
__ Landline phone call.....	3
__ Talk in-person	6

[DO NOT READ]

Other [VOL]	8
Don't know [VOL]	3

THANK YOU. NOW, JUST A FEW QUESTIONS FOR STATISTICAL PURPOSES ONLY.

8. In politics TODAY, do you consider yourself a Republican, Democrat, or Independent? **[IF REPUBLICAN OR DEMOCRAT ASK:]** Do you consider yourself a strong (Republican/Democrat) or a not so strong (Republican/Democrat)? **[IF INDEPENDENT ASK:]** As of today do you lean more to the Republican Party or more to the Democratic Party?

strong Republican.....	6	13
not so strong Republican	4	
Independent leans Republican.....	3	
Independent	18	
Independent leans Democratic	12	
not so strong Democrat.....	15	
strong Democrat	30	57
Other party [VOL]	4	
Don't know/refused [VOL].....	8	

9. Are you currently enrolled in a college or a university? **[IF YES, ASK:]** Is that as an undergraduate student or as a graduate student?

Attend, undergraduate	59	
Attend, graduate student.....	9	
Attend, don't know [VOL].....	12	80
Does not attend	16	
Ref [VOL].....	5	

10. Are you of Hispanic origin or background?

Yes.....	8
No	89
dk/ref [VOL]	4

11. Would you describe yourself as black, white, Asian, some other race, or mixed race?

Black.....	8
White	71
Asian.....	8
Other/mixed.....	8
ref [VOL]	5

12. What is your current zip code? _____

Thank you for your time and for answering these questions. Have a nice day/evening.

[INTERVIEWER INFORMATION ONLY – DO NOT READ]

13. **[RECORD, BUT DO NOT ASK, SEX]**

Male 46
Female 54

14. **[RECORD, BUT DO NOT ASK: JUDGE RESPONDENTS' INITIAL REACTION]**

Very pleasant 41
Somewhat pleasant 16
Indifferent 24
Somewhat annoyed..... 6
Very annoyed..... 0
Immediate hang-up; mood not available 0
Other 11

[IF VOICEMAIL – SAY THE FOLLOWING:]

Hello ___[NAME ON LIST]___, we're conducting a quick, 5-minute survey of cell phone users over the next two weekends. We aren't selling anything or asking for a contribution, so please answer your phone even if you see an unlisted or blocked number. We look forward to hearing your opinions. Thank you and have a nice day.