

THE COMPARATIVE EFFECTIVENESS ON TURNOUT OF POSITIVELY VERSUS  
NEGATIVELY FRAMED DESCRIPTIVE NORMS IN MOBILIZATION CAMPAIGNS

Alan S. Gerber  
Yale University, Professor  
Department of Political Science  
Institution for Social and Policy Studies  
77 Prospect Street, PO Box 208209  
New Haven, CT 06520-8209  
alan.gerber@yale.edu

Gregory A. Huber\*  
Yale University, Professor  
Department of Political Science  
Institution for Social and Policy Studies  
77 Prospect Street, PO Box 208209  
New Haven, CT 06520-8209  
gregory.huber@yale.edu

Albert H. Fang  
Yale University, Postdoctoral Associate  
Institution for Social and Policy Studies  
77 Prospect Street, PO Box 208209  
New Haven, CT 06520-8209  
albert.fang@yale.edu

Catlan E. Reardon  
University of California-Berkeley, Ph.D. Student  
Travers Department of Political Science  
210 Barrows Hall, #1950  
Berkeley, CA 94720-1950  
catlan.reardon@berkeley.edu

\*Corresponding Author

January 29, 2018

## **Abstract**

Are mobilization appeals that include information about descriptive voting norms more effective at increasing turnout when the descriptive norm is framed positively (by highlighting a referent's desirable behavior and encouraging consistent behavior) instead of negatively (by highlighting a referent's lack of desirable behavior as problematic but also encouraging that behavior)? Few published studies have experimentally assessed this question and yield mixed results. We address the need for additional replication by designing and analyzing data from two field experiments conducted across four states in the 2014 primary and general elections. We find no differential effects on turnout of framing descriptive voting norms positively or negatively. The results are not sensitive to election context, the mode of treatment delivery, or whether the descriptive norm appeals involve a group or self referent. Additional research is needed to understand the conditions under which positive versus negative descriptive norm framing has distinguishable effects on turnout.

**Keywords:** field experiment; voter mobilization; descriptive norms; framing effects; political participation

## **The Comparative Effectiveness on Turnout of Positively versus Negatively Framed Descriptive Norms in Mobilization Campaigns**

An ongoing debate in political science is whether voter mobilization appeals that combine an injunctive normative appeal to vote with information about descriptive norms, specifically information describing a referent's typical voting behavior, are more effective when the descriptive norm is framed positively (i.e., the referent does the behavior, that behavior is desirable, and you should do it too) as opposed to negatively (i.e., the referent does not do the behavior, but that is problematic because the behavior is desirable, and you should do the behavior).<sup>1</sup> The conventional wisdom in political science is that positively framed descriptive norm appeals to vote are more effective than negatively framed descriptive norm appeals to vote when either is paired with an injunctive normative appeal to vote (e.g., Gerber and Rogers 2009).

However, insights from other research on the determinants of voter turnout offer conflicting theoretical expectations about the comparative effectiveness of framing the descriptive norm component of such mobilization treatments in a positive or negative way. On the one hand, if any negatively framed descriptive norm is communicated, subjects may perceive that it is in fact less desirable to do that behavior. When that normative appeal is paired with an injunctive appeal to vote that frames voting as a desirable behavior, subjects assigned to the negatively framed descriptive norm condition receive messages that voting is both desirable and undesirable and may perceive the desirability of voting to be a weighted average of the two: somewhere between desirable and undesirable. Thus, as compared to subjects who receive a positively framed descriptive norm with an injunctive norm appeal to vote (i.e., a pair of consistent and therefore unambiguous signals that voting is a desirable behavior), subjects who receive a negatively framed descriptive norm appeal may be less likely to vote because they are more likely to think that voting is undesirable than desirable.

On the other hand, we may expect the positively and negatively framed descriptive norm appeals in such treatments to have no differential effect on turnout, or for negatively framed descriptive voting norms to increase turnout. First, citizens may vote for a variety of instrumental and

normative reasons that carry greater weight (relative to the contribution of any descriptive normative consideration, regardless of how it is framed) in their calculus of voting.<sup>2</sup> Second, negatively framed descriptive voting norms may increase turnout if an individual who perceives that turnout is uncommon may be more likely to vote (rather than not vote) because she believes her vote has a higher likelihood of being pivotal or because she believes she has a civic duty to step in and vote when others do not. Third, as prior mobilization experiments have shown, it may be the case that what matters to increase turnout is simply being contacted (with any appeal to vote) and the content of the message does not (e.g., Gerber and Green 2000; Nickerson 2006; Arceneaux and Nickerson 2010; Trivedi 2005).<sup>3</sup> Finally, it could be possible that the injunctive appeal alone counteracts the negative or positive descriptive framing, although this is not what prior research testing similar bundled messages has found (e.g., Cialdini et al. 2006, 1990).

Existing experimental research offers mixed support for the argument that mobilization appeals are more effective when framed positively than negatively. Table 1 summarizes the existing literature. Only four published studies have experimentally assessed the comparative effectiveness of communicating positive and negative appeals about voting on turnout, and results are mixed across these studies (Gerber et al. 2010; Murray and Matland 2014; Panagopoulos et al. 2014; Keane and Nickerson 2015). Thus additional experimental replication is needed to generate a body of credible evidence to understand whether framing descriptive norms about voting positively or negatively alters their effectiveness in increasing turnout.

[TABLE 1 ABOUT HERE]

In this research note, we contribute new field experimental evidence on the comparative effectiveness in increasing turnout of Get Out the Vote (GOTV) mobilization campaigns that employ positively or negatively framed descriptive norms about a referent's typical voting behavior. We analyze data from two experiments, one conducted during the 2014 primary election and another conducted during the 2014 general election, in which nonpartisan, non-profit organizations sent campaign communications urging registrants to vote. In both experiments, the organizations randomly varied whether the information about descriptive voting norms contained in the mobilization

appeals were framed positively or negatively. Three features of the experimental designs notably improve on past designs. First, we are able to assess whether the effects of positively versus negatively framed descriptive norm appeals are robust to different referents used in the appeals. In one study the treatments communicate descriptive norms about the past voting behavior of others (i.e., a group-based social referent) and randomly vary whether this information is framed positively or negatively. In the other study the treatments communicate information about the past voting behavior of the subject (i.e., the self as referent) and randomly vary whether this information is framed positively or negatively. Second, we compare the effects of positively and negatively framed descriptive norm appeals to a pure control condition in one study and to a placebo condition in the other study, which allows us to assess robustness to different comparison group definitions. Third, the experiments were conducted using large sample sizes across multiple electoral contexts (including primary elections in three states and a general election in a fourth state), which reduces the possibility that our results are driven by sample selection and provides adequate statistical power to detect potentially small effects while minimizing the likelihood of false positives.

To preview our results, in both experiments we find no difference between the effectiveness in increasing turnout of GOTV campaigns employing positively versus negatively framed descriptive norm appeals. This result does not seem to be sensitive to primary versus general election context, to the mode of treatment delivery, or to whether the GOTV appeal involved a group referent or a self referent. In a follow-on experiment, we conducted manipulation checks of the field experimental treatments to explore potential reasons why we observe no difference in effects between the positively and negatively framed descriptive norm conditions. The results of the manipulation checks suggest that the treatments involving a group referent failed to have differential effects on turnout despite inducing their intended psychological responses by changing subjects' perceptions of descriptive voting norms. By contrast, we find that the treatments involving a self referent may not have been effective because they did not affect the hypothesized psychological mechanism of interest: subjects' construal of descriptive voting norms. For the experimental manipulation involving a self referent, the result raises the possibility that framing descriptive voting

norms positively or negatively alongside an injunctive normative appeal to vote, social pressure, and information about one's past instances of both voting and non-voting has neither psychological nor behavioral effects because the descriptive norm framing component of the treatment is overwhelmed by some or all of the other treatment components. Our findings therefore suggest the need for future research investigating the conditions under which framing descriptive norms about voting either positively or negatively in a mobilization campaign have distinguishable effects on turnout and, more generally, how individuals psychologically and behaviorally respond to specific normative appeals when they are bundled with other normative and informational appeals (as is likely in real-world interventions).

### **Design**

We designed and analyze data from two field experiments that assess the comparative effectiveness on turnout of GOTV campaigns that, in addition to communicating an injunctive appeal to vote, provide either positively or negatively framed information about the past voting behavior of either a self or group referent. The use of a combined treatment that includes both information about descriptive norms about voting (framed either positively or negatively) and an injunctive appeal to vote is justified by designs from prior social psychological and voter mobilization experiments and by the need for treatment realism. Prior research has argued that providing information about descriptive norms suggesting a behavior as undesirable (i.e., negatively framed norms) could impair the effectiveness of a contrasting injunctive appeal regarding that behavior (for example, a message that combines a negative descriptive norm by emphasizing recycling is rare with an injunctive appeal that people should recycle) (e.g., Cialdini et al. 2006, 1990; Gerber and Rogers 2009). Thus, for parallelism, information about (negative or positive) descriptive norms should be paired with an injunctive normative appeal about a prosocial and arguably desirable behavior. While the fact that our treatments are bundled has ambiguous implications for how our treatment effects are interpreted (which we discuss below), the difference in the effectiveness of positively versus negatively framed descriptive norms is causally identified because we hold all other factors across the

two treatment conditions constant. We now briefly describe the design of each experiment before presenting results.<sup>4</sup>

### **Study 1: Testing Appeals Communicating Positively or Negatively Framed Descriptive Norms in the 2014 Primary Election**

The first experiment was designed to test the effect of GOTV appeals communicating positive or negative descriptive norms about voting on turnout in the 2014 primary elections in Michigan, Missouri, and Tennessee. Subjects were randomly assigned to receive either a GOTV appeal communicating a positive descriptive norm, a GOTV appeal communicating a negative descriptive norm, or an apolitical placebo message. The scripts, detailed below, were delivered during the four days before each state's primary election day using live telephone calls conducted by a consulting firm specializing in direct voter contact programs.

The experiment originally included 2,122,738 subjects<sup>5</sup> who were block randomized<sup>6</sup> to receive the positive norm treatment call (n=25,274), the negative norm treatment call (n=25,276), or the apolitical placebo call (n=50,557). We focus our analysis among the subset of subjects who are Ever Voters, defined as individuals who had ever voted in any prior election, and who were successfully contacted.<sup>7</sup> This yields an analysis sample of 8,263 subjects, of whom 2,105 were assigned to the positive norm treatment, 2,112 were assigned to the negative norm treatment, and 4,046 were assigned to the placebo condition.

We briefly describe the treatment and placebo scripts.<sup>8</sup> Both norm treatment scripts begin with information about the upcoming primary election. Only subjects assigned to the positive norm condition are then read the following script: *“In the 2012 primary election, [NUMBER] of [STATE]’s eligible voters actually voted. Many hope this high level of engagement will continue in the upcoming primary election on [DATE OF ELECTION]. We encourage you to continue this high level of participation and vote!”* This script communicates to subjects that past voter turnout has been relatively high and that there is a collective expectation for citizens to vote. The last line explicitly encourages subjects to conform their behavior to the group's behavior by voting. In

contrast, subjects assigned to the negative norm condition are read the following script after being provided with information about the upcoming election: *“In the 2012 primary election, [NUMBER] of [STATE]’s eligible voters did not actually vote. Many fear this low level of engagement will continue in the upcoming primary election on [DATE OF ELECTION]. We encourage you to break from this low level of participation and vote!”* This script emphasizes that past turnout has been relatively low and that this is expected to continue. The last line encourages subjects to vote by not conforming their behavior to the group’s behavior of non-voting.<sup>9</sup> For both norm treatment scripts, subjects are then asked how likely they think they are to vote in the upcoming primary election.<sup>10</sup> The placebo script included an apolitical message asking subjects how often they had been to the grocery store in the last two weeks and contained neither information about the upcoming election nor appeals to vote.

## **Study 2: Testing Appeals Communicating Positively or Negatively Framed Information about Subjects’ Past Voting Behavior in the 2014 General Election**

The second experiment was designed to test the effect of GOTV appeals communicating positively or negatively framed information about subjects’ own past voting behavior on turnout in the 2014 general election. The same consulting firm also implemented this experiment. The study includes 244,940 subjects comprised of intermittent voters in Mississippi who voted at least once in the 2008, 2010, 2011, or 2012 general election and who never voted in a Republican primary election.<sup>11</sup> Subjects were randomly assigned to receive either a GOTV mailer communicating a positively framed appeal highlighting a prior election in which the subject voted (n=7,000), a GOTV mailer communicating a negatively framed appeal highlighting a prior election in which the subject did not vote (n=7,000), or no mailer (n=210,940).

Treatment mailings were sent by the Mississippi Center for Voter Information, a nonprofit organization, 5 days prior to Election Day.<sup>12</sup> Both treatment conditions presented subjects with their past vote history in the 2008, 2010, 2011, and 2012 general elections. The positively (negatively) framed treatment mailer then highlights the last election which the subject voted (did not vote) by



stating “*We noticed you [voted/didn’t vote] in November XX.*” Then both treatment mailers encouraged the subject to vote in the upcoming election. Both treatment mailers also contained standard appeals applying social pressure to vote. Thus both treatments in this experiment combine positively or negatively framed descriptive norms about voting with surveillance and the injunctive norm of voting. A sample mailing is shown in the Supplemental Appendix. Note that by construction, all voter histories (which included at least one case of voting and one case of not voting) could be framed positively or negatively.

## Results

We estimate the effect on turnout of the positively and negatively framed treatments relative to placebo (in Study 1) or control (in Study 2).<sup>13</sup> The outcome measure of turnout is obtained from state voter files and is coded 1 if the subject voted and 0 otherwise. To assess the comparative effectiveness of the positively and negatively framed appeals for each study, we then test the null hypothesis that the difference in estimated mean effects is equal to zero.<sup>14</sup>

[FIGURE 1 ABOUT HERE]

Figure 1 summarizes the results for Study 1 (left panel) and Study 2 (right panel).<sup>15</sup> In each panel, we first plot the effect of the positively framed appeal (left-most line) and the negatively framed appeal (second line) with 95% confidence intervals, and then plot the difference in estimated effects with 95% confidence intervals on the far right. In Study 1, which is the placebo-controlled experiment testing the effects on turnout of GOTV appeals communicating either positive or negative descriptive norms, we find that the positive norm treatment increases turnout by 2.4 points relative to the placebo group (s.e.=.01,  $p<.05$ ) and the negative norm treatment increases turnout by 2.2 points (s.e.=.01,  $p<.05$ ). (The average placebo group turnout rate is 32.2%.) We find no substantively or statistically significant difference between the effectiveness of the positive and negative norm treatments (difference=.0016, s.e.=.012,  $p=.889$ ). In Study 2, which tests the effects on turnout of GOTV appeals communicating positively or negatively framed information about

subjects' past voting behavior, we find that the positively framed appeal increases turnout by 3.1 points relative to the control group (s.e.=.005,  $p < .01$ ) and the negatively framed appeal increases turnout by 3.7 points (s.e.=.005,  $p < .01$ ). (The average control group turnout rate is 26.9%.) We similarly find no substantively or statistically significant difference between the effectiveness of the positively and negatively framed appeals (difference=-.006, s.e.=.007,  $p = .437$ ).

Thus while both the positively and negatively framed treatments are effective at increasing turnout relative to the placebo group in Study 1 and relative to the control group in Study 2, in both studies neither framing is more effective than the other.

## Discussion

Do GOTV campaigns that make appeals to vote by communicating information about the voting behavior of a given referent have differential effects on turnout when the referent's behavior is framed positively or negatively? In the burgeoning experimental literature assessing the comparative effectiveness of GOTV campaigns that employ positive versus negative framing, results are mixed and therefore prompt a need for further replication. Addressing this need, we report results from two field experiments and find no substantively or statistically significant difference between the effectiveness of GOTV campaigns containing information about descriptive voting norms that are positively framed and otherwise identical campaigns that are negatively framed. This finding does not seem to be sensitive to primary versus general election context, whether treatments are delivered by mail or phone, or to whether the GOTV appeal involved a group referent or a self referent.

One possible reason why there is no differential effect of positively versus negatively framed descriptive norm appeals in these mobilization treatments is that subjects did not construe the descriptive norm messages as we intended (and as prior work has assumed they are interpreted). To empirically assess how subjects construed positively versus negatively framed descriptive norms about voting, we conducted manipulation checks in a follow-on experiment that replicated the treatments from the original field experiments and asked subjects to report their descriptive norm

perceptions (i.e., their perceptions of the level of the referent's voting behavior). The survey experiments were fielded on January 17, 2018, using 1,206 Workers recruited from Amazon Mechanical Turk who were U.S. adult residents.<sup>16</sup> Workers were randomly assigned to complete the manipulation check for Study 1 involving a group referent (n=610) or the manipulation check for Study 2 involving a self referent (n=596).<sup>17</sup> (Full details of the design and analyses for both manipulation checks are reported in Supplemental Appendix C.)

For our manipulation check of the treatments in Study 1, subjects were asked to imagine living in Texas, a state where in the 2016 general election the number of eligible voters and the number of eligible non-voters were effectively the same (about 9 million).<sup>18</sup> This allows us to keep fixed the number of voters or non-voters across the positively versus negatively framed descriptive norm conditions while not deceiving subjects. Subjects were randomly assigned with equal probability to a positively framed or negatively framed descriptive norm condition, and all subjects were then provided with the injunctive normative appeal to vote. Subjects are then asked: "Which of the following best represents how you would characterize the level of turnout among eligible voters in Texas in the 2016 general election? The percentage of eligible voters who voted was... [0=Extremely low; 1=Low; 2=Somewhat low; 3=Somewhat high; 4=High; 5=Extremely high]." We find that the positively framed norm treatment, as compared to the negatively framed norm treatment, increases the perception that the turnout level of among eligible voters in Texas was high (difference=1.745; s.e.=0.084;  $p<0.01$ ). We therefore infer that the positively versus negatively framed descriptive norm treatments worked as intended in Study 1. We additionally measured whether subjects stated they were likely to vote in the upcoming 2018 general election (6-point scale, 0=Not at all likely to 5=Absolutely certain to vote). Consistent with findings from earlier survey experimental work by Gerber and Rogers (2009) and Glynn et al. (2009), we find that the positively framed descriptive norm treatment increases subjects' stated likelihood of voting (unadjusted difference=0.214, s.e.=0.116,  $p=0.06$ ; covariate adjusted difference=0.313, s.e.=0.109,  $p<0.01$ ). These results, showing evidence that framing descriptive norms involving a group referent positively instead of negatively has differential effects on both descriptive norm perceptions

and stated vote intention, suggest that the lack of differential framing effects on turnout behavior in Study 1 is unlikely due to treatment failure.

By contrast, we find evidence suggesting treatment failure in Study 2. For our manipulation check of the treatments in Study 2, subjects were presented with a near-identical mailer (only the years of the prior and upcoming elections were altered) and were randomly assigned to receive either the positively framed or the negatively framed descriptive norm about one's own past behavior. The mailer also included the injunctive norm appeal to vote for parallelism across treatment arms. To hold fixed the level of one's prior voting behavior, the vote history shown to all subjects included two elections in which they voted and two elections in which they did not vote. Immediately after being shown the mailer and on the same screen, subjects were asked: "Which of the following statements best represents how you would characterize YOUR past voting behavior? [0=I very rarely voted; 1=I rarely voted; 2=I sometimes voted; 3=I often voted; 4=I voted a lot]." Subjects were also asked how likely they would be to vote in the next general election in 2018 (on the same 6-point scale). We find that the positively framed descriptive norm condition did not increase subjects' perception of how frequently they previously voted as compared to the negatively framed descriptive norm condition (difference=0.099; s.e.=0.07;  $p=0.146$ ) and also did not affect subjects' stated likelihood of voting in the 2018 general election (difference=-0.135, s.e.=0.109;  $p=0.212$ ). We also find no evidence of heterogeneity in the differential effectiveness of positively versus negatively framed descriptive norm appeals by subjects' assumed vote history or by the election emphasized on the mailer, which was also randomized (full estimation results for these analyses are shown in Supplemental Appendix Table A16). The results of this manipulation check imply that positively or negatively framing descriptive voting norms may not matter when subjects are provided information about past instances of their own voting and non-voting,<sup>19</sup> suggesting that the other elements of the bundled treatment (social pressure, information provision, or the injunctive norm of voting) overwhelm the positive or negative descriptive norm framing element of the treatment.

Taken together, these results cast doubt on whether, in the context of a voter mobilization

campaign that communicates both descriptive and injunctive normative appeals to vote, framing descriptive voting norms positively instead of negatively has any effect on actual turnout behavior. This does not, however, mean that how this information is framed and perceived does not matter in other settings where efforts to convert nonvoters into marginal voters include information about behavioral voting norms. We argue that the results suggest three fruitful avenues for future research. First, there is a need for additional research that examines how individuals psychologically and behaviorally respond to specific normative appeals when they are bundled with other normative and informational appeals. Second, future field experiments should employ factorial designs that manipulate the communication of information about the voting behavior of a given referent, how this information is framed, and the context in which this information is communicated. This would provide leverage to empirically assess the possibility that other features of a message alter the importance of how normative appeals to the behavior of the referent are framed. Third, to assess the plausibility of hypothesized psychological mechanisms explaining observed effects and to generate new testable hypotheses about the existence of heterogeneous responses to information about such appeals, future designs should measure how subjects construe information about the behavioral patterns of referents, the degree to which subjects vary in their construal of this information, and the extent to which the construal of normative information and behavioral responses to that information are correlated.<sup>20</sup>

## Notes

<sup>1</sup>These definitions of positively or negatively framed descriptive norms are consistent with those used in prior social psychological research on the effects of descriptive norm perceptions on prosocial behavior (Cialdini et al. 2006; Gerber and Rogers 2009). We note that in practice, researchers testing the effects of positively or negatively framed descriptive norm appeals couple that information with an injunctive normative appeal that one ought to do the behavior of interest.

<sup>2</sup>For a review of this literature, see Feddersen (2004) and Fiorina (1976).

<sup>3</sup>But see Bennion (2005) and a sub-experiment in Nickerson (2007) examining whether messages focusing on comparisons of candidates were more effective at mobilizing turnout than messages focusing on comparisons of parties.

<sup>4</sup>For both studies, the Supplemental Appendix presents balance tables and randomization checks. We infer that the randomization procedure is valid for both studies.

<sup>5</sup>See the Supplemental Appendix for details on the construction of the subject pool.

<sup>6</sup>We blocked on subjects' state of residence, past vote history, and the competitiveness of their congressional district. Block-specific assignment probabilities are presented in the Supplemental Appendix.

<sup>7</sup>Conditioning on successful contact is customary in experimental analyses of mobilization campaigns. Subjects are successfully contacted if the targeted subject is contacted and confirms their state of residence, a determination made before any specific treatment condition was delivered (i.e., if a subject subsequently terminated contact after treatment is delivered, they are still coded as being in the treatment group, so as to not introduce post-treatment bias). We show in the Supplemental Appendix that contact rates are balanced across treatment arms by block and that treatment assignment does not predict contact and admission into the analysis sample.

<sup>8</sup>The full text of the treatment and placebo scripts are presented in the Supplemental Appendix.

<sup>9</sup>The state-specific turnout rates from the 2012 primary used in the treatment scripts are as follows: In Michigan, 1.3 million voted and 6.2 million did not vote. In Missouri, 895,000 voted and 3.3 million did not vote. In Tennessee, 666,000 voted and 3.2 million did not vote.

<sup>10</sup>The lead-in statement to this question item is: "In talking to people about elections, we often find that a lot of people are not able to vote because they are sick, they have important obligations, or they just don't have time." This language was included to reduce potential acquiescence bias and to encourage subjects who did not intend to vote to truthfully report their stated likelihood of voting. However, this language also potentially reduces the perception that voting is desirable, which would presumably have an effect on one's propensity to vote. To rule out the possibility that this occurs, we conducted a follow-on survey experiment that randomizes whether this statement priming potential voting costs is included before the stated vote intention question or not. We find that this statement has no effect on descriptive norm perceptions (Supplemental Appendix Table A12) and no effect on the stated likelihood of voting in

the next election (Supplemental Appendix Table A15).

<sup>11</sup>The composition of the subject pool was determined by the consulting firm based on population subgroups they wished to target in the election. See the Supplemental Appendix for complete details on the procedure used to construct the experimental sample for this study.

<sup>12</sup>Election Day was November 4, 2014. Mailings were sent on October 30, 2014.

<sup>13</sup>Specifically we use OLS to regress turnout on treatment assignment indicators, with covariate adjustment and weighting to account for assignment probabilities. As shown in the Supplemental Appendix, results are not sensitive to weighting or covariate adjustment. For Study 1 controls include age; gender; race; years since the date of voter registration; the total number of past general, primary, and special elections in which the subject voted; flags for missing covariates that are imputed with the sample mean; state fixed effects; and state-by-covariate interactions. For Study 2 controls include age; gender; race; prior vote history in 2008, 2010, 2011, and 2012; and flags for missing covariates that are imputed with the sample mean.

<sup>14</sup>Formally, we test the null hypothesis that  $\beta_{positive} - \beta_{negative} = 0$ .

<sup>15</sup>Regression tables are presented in the Supplemental Appendix.

<sup>16</sup>To recruit Workers for the follow-on survey, we required Workers to have 95% or more of their prior Mechanical Turk assignments approved and to have completed at least 10 Mechanical Turk assignments. These additional qualifications were included to reduce the likelihood of having inattentive subjects.

<sup>17</sup>In both samples, only 7 subjects stated that they were not citizens and about 99% of subjects are self-reported citizens. Thus these samples are composed almost entirely of citizens who could potentially vote.

<sup>18</sup><http://www.electproject.org/2016g>.

<sup>19</sup>Compare this to the experiment reported in Gerber et al. (2010), which assigned subjects to either (1) a civic duty appeal, (2) a civic duty appeal and showing only one prior election where they voted, or (3) a civic duty appeal and showing only one prior election where they did not vote. Their design only provided subjects with information about one past instance of either voting or non-voting (rather than multiple instances of each) and found that disclosing past voting behavior had stronger effects on turnout when it communicated that the subject did not vote (instead of communicating that the subject did vote).

<sup>20</sup>See Paluck and Shafir (2016) for an extended discussion on design-based approaches to address concerns about the construal of treatments in experiments and implications for the interpretation of experimental data.

## References

- Arceneaux, K. and Nickerson, D. W. (2010). Comparing negative and positive campaign messages: Evidence from two field experiments. *American Politics Research*, 38(1):54–83.
- Bennion, E. A. (2005). Caught in the ground wars: Mobilizing voters during a competitive congressional campaign. *The Annals of the American Academy of Political and Social Science*, 601(1):123–141.
- Cialdini, R. B., Demaine, L. J., Sagarin, B. J., Barrett, D. W., Rhoads, K., and Winters, P. L. (2006). Activating and aligning social norms for persuasive impact. *Social Influence*, 1(1):3–15.
- Cialdini, R. B., Reno, R. R., and Kallgren, C. A. (1990). A focus theory of normative conduct: Recycling the concept of norms to reduce littering in public places. *Journal of Personality and Social Psychology*, 58(6):1015–1026.
- Feddersen, T. J. (2004). Rational choice theory and the paradox of not voting. *Journal of Economic Perspectives*, 18(1):99–112.
- Fiorina, M. P. (1976). The voting decision: Instrumental and expressive aspects. *Journal of Politics*, 38(2):390–413.
- Gerber, A. S. and Green, D. P. (2000). The effects of canvassing, telephone calls, and direct mail on voter turnout: A field experiment. *American Political Science Review*, 94(3):653–663.
- Gerber, A. S., Green, D. P., and Larimer, C. W. (2008). Social pressure and voter turnout: Evidence from a large-scale field experiment. *American Political Science Review*, 102(1):33–48.
- Gerber, A. S., Green, D. P., and Larimer, C. W. (2010). An experiment testing the relative effectiveness of encouraging voter participation by inducing feelings of pride or shame. *Political Behavior*, 32(3):409–422.
- Gerber, A. S. and Rogers, T. (2009). Descriptive social norms and motivation to vote: Everybody's voting and so should you. *Journal of Politics*, 71(1):178–191.
- Glynn, C. J., Huges, M. E., and Lunney, C. E. (2009). The influence of perceived social norms on college students' intention to vote. *Political Communication*, 26(1):48–64.
- Keane, L. D. and Nickerson, D. W. (2015). When reports depress rather than inspire: A field experiment using age cohorts as reference groups. *Journal of Political Marketing*, 14(4):381–390.
- Mann, C. B. (2010). Is there backlash to social pressure? a large-scale field experiment on voter mobilization. *Political Behavior*, 32(3):387–407.
- Murray, G. R. and Matland, R. E. (2014). Mobilization effects using mail: Social pressure, descriptive norms, and timing. *Political Research Quarterly*, 67(2):304–319.
- Nickerson, D. W. (2006). Volunteer phone calls can increase turnout: Evidence from eight field experiments. *American Politics Research*, 34(3):271–292.



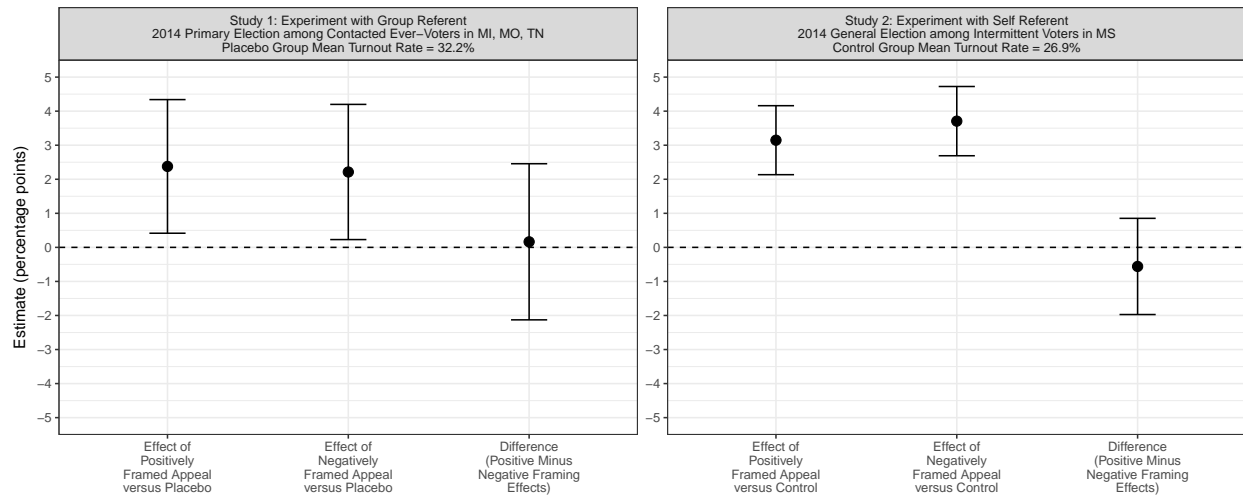
- Nickerson, D. W. (2007). Quality is job one: Professional and volunteer voter mobilization calls. *American Journal of Political Science*, 51(2):269–282.
- Paluck, E. L. and Shafir, E. (2016). The psychology of construal in the design of field experiments. In Duflo, E. and Banerjee, A., editors, *Handbook of Field Experiments*.
- Panagopoulos, C. (2011). Thank you for voting: Gratitude expression and voter mobilization. *Journal of Politics*, 73(3):707–717.
- Panagopoulos, C., Larimer, C. W., and Condon, M. (2014). Social pressure, descriptive norms, and voter mobilization. *Political Behavior*, 36(2):451–469.
- Trivedi, N. (2005). The effect of identity-based govtv direct mail appeals on the turnout of indian americans. *The Annals of the American Academy of Political and Social Science*, 601(1):115–122.

## Tables

**Table 1: Summary of Published Field Experiments Assessing the Effectiveness of Communicating Positively versus Negatively Framed Descriptive Norm Mobilization Appeals on Turnout.** Only four published studies have experimentally assessed the comparative effectiveness of communicating positively versus negatively framed appeals to vote on turnout, and these studies have found mixed results across studies (Panel A, first row). Two other studies in the literature have experimentally manipulated whether subjects receive information about positively or negatively framed appeals, but examine stated vote intention as the outcome instead of voter turnout (Panel A, second row). Other relevant experimental studies only randomly manipulate whether the behavior of the referent is framed either positively or negatively, not both (Panels B and C).

<i>Outcome Variable</i>	<i>Type of Descriptive Norm Communicated in Mobilization Campaign</i>	
	<b>Appeal Involves Self Referent</b> (i.e., the subject's past voting behavior)	<b>Appeal Involves Group Referent</b> (i.e., the past voting behavior of others in the subject's state/community/etc.)
<b>A. Experimental Comparisons of the Effects of Positively vs. Negatively Framed Appeals to Vote</b>		
Voter Turnout	<u>Negative Frame More Effective</u> • Gerber et al. (2010)	<u>Mixed Results</u> • Murray and Matland (2014) <u>Negative Frame More Effective</u> • Panagopoulos et al. (2014) <u>Positive Frame More Effective</u> • Keane and Nickerson (2015)
Vote Intention	No studies	<u>Positive Frame More Effective</u> • Gerber and Rogers (2009) • Glynn et al. (2009)
<b>B. Experiments Testing the Effect of Positively Framed Appeals to Vote Relative to Placebo/Control</b>		
Voter Turnout	<u>Positive Frame Is Effective</u> • Panagopoulos (2011)	No studies
<b>C. Experiments Testing the Effect of Negatively Framed Appeals to Vote Relative to Placebo/Control</b>		
Voter Turnout	<u>Negative Frame Is Effective</u> • Mann (2010)	<u>Negative Frame Is Effective</u> • Gerber et al. (2008) • Mann (2010)

## Figures



**Figure 1:** Estimated effects on turnout levels of Get-Out-The-Vote mobilization treatments communicating either positively or negatively framed descriptive norms, and the estimated difference in effects between the positively framed and negatively framed treatments, with 95% confidence intervals. Estimates are from weighted regressions of voting in the election on treatment assignment and covariates, where weights are the inverse of the probability of assignment to the observed treatment assignment. In both studies, we find no statistically significant difference between the effectiveness of positively and negatively framed descriptive norm appeals on turnout levels when either norm is coupled with an injunctive normative appeal to vote. (See the Supplemental Appendix for full regression tables and sensitivity analyses).