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## Subtle linguistic cues may not affect voter behavior: new evidence

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# Subtle linguistic cues may not affect voter behavior: new evidence on motivating voter turnout by invoking the self

Short Title: **Subtle linguistic cues may not increase turnout**

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**Abstract**

One of the most important recent developments in social psychology is the discovery of minor interventions that have large and enduring effects on behavior. A leading example of this class of results is Bryan et al. (2011), which shows that administering a set of survey items worded so that subjects think of themselves as voters (noun treatment) rather than as voting (verb treatment) substantially increases political participation (voter turnout) among subjects. We revisit these experiments by replicating and extending their research design in a large-scale field experiment. In contrast to the 11 to 14 percentage point greater turnout among those exposed to the noun rather than verb treatment reported in Bryan et al. (2011), we find no statistically significant difference in turnout between the noun and verb treatments (the point estimate of the difference is approximately zero). Further, when we benchmark these treatments against a standard get-out-the-vote message, we find that both are less effective at increasing turnout than a much shorter basic mobilization message. In sum, in our experiments, we find no evidence that describing a subject as a voter rather than as voting has a positive relative or absolute effect on subject behavior. In our conclusion, we detail how our study differs from Bryan et al. (2011) and discuss how our results might be interpreted.

**Significance Statement**

An important development in social psychology is the discovery of minor interventions that have large behavioral effects. A leading example is a recent PNAS paper by Bryan et al. (2011) showing that a modest intervention inspired by psychological theory—wording survey items to encourage subjects to think of themselves as voters (noun treatment) rather than as voting (verb treatment)—has a large positive effect on political participation (voter turnout). We replicate and extend these experiments. In a new large scale field experiment we find that encouraging subjects to think of themselves as voters rather than as voting has no effect on turnout and is less effective than a standard get-out-the-vote mobilization message.

Recent work in social psychology has demonstrated that very modest alterations in how a decision is described or structured can have outsized effects on the choices people make. The discovery of brief interventions that dramatically alter behavior has been called "one of the most exciting developments in psychological science in recent years," and the spectacular behavioral responses that follow minor interventions are described by one proponent as so remarkable that they sound more like "science fiction than science." And indeed, much of what is now accepted science in fields outside of psychology, from mold that cures deadly infections to power plants that transform a few tons of uranium into the energy to light a city, would once have seemed like science fiction. Walton has labelled these new approaches "wise interventions," with the double meaning that they are both brilliantly effective and also savvy to the subtle truths of our psychology (1).

A prominent example of this new approach, in which a brief intervention is crafted based on a psychological theory, is a study showing how a minor difference in survey wording leads to large differences in the respondents' voting in elections (i.e., their turnout behavior).[*] In a recent *Proceedings of the National Academy of Sciences* article, Bryan et al. (2) show that subtle linguistic differences in how the act of voting is framed can have large effects on participation. The authors ground their theoretical argument in prior work demonstrating that a behavior described using noun wording is perceived as a more stable and permanent attribute than a behavior described using a verb (3, 4). This distinction extends to self-perceptions; when a person describes an attribute as a central aspect of her identity using a noun (e.g., "I am a basketball fan") she evaluates that characteristic as stronger, more stable, and more resilient than when she describes it using a descriptive action verb (e.g., "I watch basketball a lot") (4).

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[*] This study is one of the three featured in Walton's recent article promoting "wise interventions" (1).

Drawing on this work, Bryan et al. (2) argue that priming individuals to think of themselves as voters (noun) rather than as individuals who vote (verb) raises the identity stakes associated with the decision to participate, thereby leading the noun treatment to produce a greater likelihood to vote than the verb treatment.

In three experiments with modest sample sizes, Bryan and colleagues examined whether subjects who completed a ten-item survey about voting that described voting using noun wordings (e.g., "How important is it to you to be a voter in the upcoming election") rather than using verbs (e.g., "How important is it to you to vote in the upcoming election") were more likely to participate in politics. Because the noun wording "offers the possibility of claiming or reclaiming a personal attribute by engaging in that behavior" (12653), those described as voters were expected to be more likely to turn out to vote.

Experiment 1 was a survey experiment in which 34 subjects recruited from a university-administered online participant pool were randomly assigned to either the noun or verb version of a survey about the upcoming 2008 election. Those assigned to the noun condition were subsequently more likely to express an interest in registering to vote for the election (4.4 versus 3.4 on a five point scale measured from "not at all interested" to "extremely interested"). Experiments 2 and 3 were conducted in the field and combined surveys administered online with turnout measured using state voter file records. In experiment 2, among 88 subjects successfully matched to a California voter file and not excluded for other reasons, those assigned to a noun rather than verb form of a set of survey items similar to that used in Experiment 1 were 14 percentage points (95.5 versus 81.8%) more likely to vote in the 2008 presidential election. In experiment 3, among 214 subjects successfully matched to a New Jersey voter file, those in the noun condition were 11 percentage points (89.9 versus 79.0%) more likely to vote in the 2009

gubernatorial election, a finding that is particularly interesting because only 47% of registered voters (registrants) voted in this race, compared to 79% of registrants who voted in the 2008 presidential election in California.

The substantial difference in voting rates that Bryan et al. (2) generate through very subtle wording changes is noteworthy and somewhat surprising. In their two field experiments, for example, simply altering how an individual is described (as a voter versus engaged in the act of voting) increases turnout by about 14 and 11 percentage points, respectively. Although the authors do not directly assess whether the use of noun rather than verb language raised the identity stakes of voting in the subject's subsequent decision to vote, the direction of the observed behavioral response is consistent with their asserted theoretical mechanism.

By comparison with prior field experimental research on voter mobilization, the magnitude of these treatment effects is quite large. Although the mode of treatment administration (an Internet survey) is different from that used in most other mobilization studies (e.g., direct mail or phone calls), prior work nearly always finds much smaller treatment effects. For example, a meta-analysis by Green and Gerber (5) of previous studies looking at the effect of direct mailing on turnout estimates the impact of a single piece of non-partisan, non-advocacy mail to be roughly .5 points, or about 22 times smaller than the 11 percentage-point effect found in Bryan et al.'s experiment 3. Even mail that invokes social pressure to partake in the socially desirable act of voting by threatening to publicize the names of those who do not vote, which is frequently the most effective message, on average raises turnout by only 2.3 points. Treatments administered by telephone are sometimes more effective than mailings, but compared to an uncontacted control group, the most effective calls (live calls made by volunteers) on average increase turnout by only 2.9 points. Further, the general finding in the literature is that

mobilization effects are largest in less salient elections (during which baseline mobilization efforts are low and turnout is modest), and much less effective in the highest profile races (as in the presidential election context for experiments 1 and 2 in Bryan et al.) (e.g., 6).[†]

The Bryan et al. intervention increases turnout without providing strong political reasons for voting. However, this emphasis on encouraging participation by producing positive psychological associations with the act of voting, rather than by encouraging voting for instrumental reasons, is a common and sometimes effective approach. The personal instrumental benefits from voting are likely smaller than the costs of doing so because the odds that a voter affects the outcome of a mass election (i.e., is "pivotal") is approximately zero (7). In light of this argument, researchers have studied a number of alternative motivations for political participation. Experimental interventions shown to increase turnout include efforts to apply (as mentioned above) social pressure (e.g., 8) as well as more subtle efforts to reinforce prosocial behavior by expressing gratitude for previous participation (e.g., 9). However, even the most effective messages used in previous trials appear much less effective than the novel "noun treatment" studied by Bryan et al.

Given the importance of the Bryan et al. research as both an example of an important class of interventions and as specific means to encourage political participation, we conducted a large-scale field experimental study of these interventions to understand their absolute and relative effectiveness. In addition to comparing the relative efficacy of the noun and verb survey instruments, we also benchmark the effectiveness of these interventions to simply making contact (a non-political placebo survey) and to a standard get out the vote (GOTV) message that

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[†] One reason it is hypothesized that it is harder to increase turnout in more salient races is that many more individuals are already "treated" by campaigns, the media, and the larger (social) campaign environment in ways that induce individuals to vote through many different psychological mechanisms.

provides information about the upcoming election and mentions that many other people are expected to vote (a social norms message).

We make two central contributions. First, we demonstrate that the results reported in Bryan et al. do not generalize beyond the contexts present in the original experiments.[‡] Bryan et al. note that it would be useful to understand "whether this [mobilization] effect would remain as strong if delivered at the population level" and that "many behaviors that policy-makers seek to encourage are similarly private…" (12655). Our experiment, which is conducted on a much larger scale, among a randomly selected set of all registrants, and in several states with varying levels of electoral competitiveness, provides little evidence that the noun treatment is effective in increasing the frequency of voting over the verb treatment.

Second, our experiment, which appears to be the first independent attempt to test the method the authors propose, raises the possibility that the result reported in Bryan et al. may have been a false positive, perhaps induced by sampling variability. This implies that even if the same experimental procedures used in the original study were repeated, a hypothetical proposal given that a prior electoral context cannot be perfectly reproduced, the original result might not hold. Follow-up studies that examine reproducibility and robustness are an important step in consolidating our understanding of a novel approach given the frequency with which initially promising findings fail to replicate in subsequent studies despite large effect sizes and small p-values (10, 11). Overall, our results provide important information that the larger scholarly community should take into account when evaluating the accuracy and importance of the claim

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[‡] As we use the treatment scripts tested in Bryan et al. our work can be considered a replication. However, given that some elements are different, alternatively our study may also be thought of as a test of robustness, demonstrating a failure to generalize rather than as a failure to replicate. While our study uses the same ten-item treatment battery as Bryan et al., our experiments took place in a different political context (primary elections rather than presidential or gubernatorial general elections) and used live telephone callers, rather than the internet, to deliver the treatment scripts.

that these types of interventions can be used to motivate important behavioral changes, particularly because the noun treatment appears less effective than a standard voter mobilization message.

**Study Details**

Our field experiment was conducted during the 2014 primary elections in three states (Michigan, Missouri, and Tennessee) in which all registered citizens can vote in any party's primary election. We first obtained a complete list of registered voters in each state. Prior to treatment assignment we excluded records likely to be invalid or persons who could not be contacted by phone. In households with multiple registrants, one registrant was selected at random for inclusion in the sample. From this pool, subjects were then randomly assigned to a treatment, four of which we analyze here: The noun-based ten-item survey (the same survey used in Bryan et al.), a parallel verb version of that survey (the same survey used in Bryan et al.), a non-political "placebo" intervention, and a standard GOTV message.[§] Treatment assignment was stratified by state, whether the registrant lived in a district with a competitive House race, and past record of voter participation.[**]

Each message was delivered by telephone in the four days leading up to each state's primary election by a professional survey vendor we hired for the experiment. We remotely monitored a subset of the vendor's calls to confirm that callers were following the scripts as written. After confirming contact with the selected person, all four interventions began with the same question asking whether the subject was a resident of his or her state. Subjects who were

[§] Complete phone scripts are provided in the supporting information, as are the scripts used by Bryan et al. (2) for comparison. Non-English speakers were excluded as non-contacted.
[**] Assignment stratum details are reported in the supporting information. Registrants were assigned to the placebo message at twice the rate of the other interventions.

reached by telephone and answered in the affirmative are coded as contacted. When we present

our statistical findings, we compare outcomes across treatments among subjects we successfully

contacted by phone using this common (treatment-independent) definition of contact (subjects

are coded as contacted if and only if they answered "yes" when asked if they were a resident of

their state). It is important to note that this question was asked *prior* to the portion of each script

that branches into the respective treatment. Voting in the 2014 primary was measured using

turnout as recorded in updated state voter files obtained from a vendor in March 2015 and linked

using the original voter file ID number. Individuals are coded as having voted if they are

recorded as having done so in the official record and they are coded as not having voted if they

either are recorded as not having done so in the official record or if they no longer appear in the

voter file.

Our vendor contacted 2,236 registrants in the "voter" (noun) condition, 2,232 in the

"voting" (verb) condition, 4,402 in the placebo condition, and 2,229 in the GOTV condition.

Note that the over 4,400 subjects assigned to the noun and verb conditions is many times the

sample size of the two field experiments (experiments 2 and 3) reported in Bryan et al., and

therefore the present study is less sensitive to sampling variability. Additionally, it is adequately

powered to detect even small differences in treatment effectiveness.[††]

Balance tests reported in the supporting information show that treatment groups did not

vary to a material degree for available covariates (age, year of registration, gender,

race/ethnicity, and the number of times having voted in previous general, primary, and special

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[††] Specifically, assuming a Type-I error rate of .05, a Type-II error rate of .2, and baseline turnout of about 29% (the observed rate among the subjects in the placebo condition), the study is sufficiently powered to detect about a 3-percentage-point increase in turnout over the placebo condition.

elections).‡‡

**Results: Effectiveness of Noun vs. Verb Intervention**

We examine the behavioral response associated with the treatment by conducting

differences-in-proportions tests for turnout between those in the "voter" and "voting"

conditions.§§ In contrast to Bryan et al.'s (2) findings, column (3) of Table 1 shows that

participation rates in the two groups are statistically indistinguishable. Overall participation was

1.0 point *lower* for those in the noun condition than for those in the verb condition (30.1% vs.

31.1%, n=4468, p=.45). The 95% confidence interval for this estimate (-1.8 to 3.8 points) implies

that the data is broadly consistent with effects from noun versus verb in the positive 2 percentage

point to negative 4 percentage point range. The largest effect in the 95% confidence interval, 2

points, is far smaller than the lesser of the two estimates reported in Bryan et al.

[Insert Table 1 about Here]

Nor do we find evidence that the noun intervention is more effective when we partition

the data by state, district electoral context, past patterns of voter participation, or expected

turnout rates. Turnout was higher in the verb condition by .8 points in Michigan (24.2% vs.

23.4%, n=2056, p=.67), .8 points in Missouri (34.1% vs. 33.3%, n=1140, p=.77), and 1.0 point in

Tennessee (39.3% vs. 38.3%, n=1272, p=.73). In noncompetitive primary districts turnout was

1.8 points higher for those in the verb condition (33.9% vs. 32.1%, n=2612, p=.32), while in

competitive primary districts participation was nearly identical in both conditions (27.3%,

n=1856, p=.98). Across groupings of past participation behavior the verb treatment is more

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‡‡ A chi-squared test from a multinomial logit model for all covariates predicting assignment to treatment group is not significant (p=.82).
§§ For an overall additive scale, as well as for 7 of the 10 individual items in the survey, we find that the noun treatment induced more positive assessments (p<.05) of participation than that verb treatment. This pattern suggests the treatments were successfully deployed and understood as different messages by recipients. Complete results appear in the supporting information.

effective than the noun treatment for those who have ever voted (33.8% vs. 32.6%, n=4080, p=.39), ever voted in a primary (63.2% vs. 59.6%, n=1680, p=.13), and with no record of prior voting (3.5% vs. 3.2%, n=388, p=.85). For registrants who had previously voted but had never participated in a primary, turnout is 13.5% in both treatment groups (n=2400, p=.98). Finally, among registrants with a predicted baseline probability of voting greater than 70%, turnout is *lower* in the noun than in the verb conditions.[***]

The estimates reported in column (4) show that we obtain similar null results when we analyze our data using OLS regression, an approach that allows us to account for observable covariates and the stratified nature of our sampling method and treatment assignment.[†††] The dependent variable is whether the individual voted in the 2014 primary (1=yes, 0=no), which we model as a function of assignment to the noun treatment (those receiving the verb treatment serve as the baseline category). Positive coefficient estimates indicate that turnout is higher in the noun than in the verb condition. We include as covariates indicators for the list of demographic, political, and participatory factors taken from the voter file and used in the balance tests. Each of these variables is interacted with a state indicator to capture variation in their effects across states. Full model results appear in the supporting information.

For the entire sample and the ten subsamples analyzed in Table 1, nine of the estimates for noun minus verb treatment effect are negative or zero, implying the best guess of the effect of the noun, rather than verb, treatment is that it either reduces participation or leads to no difference in relative effects. For example, for the entire sample, the point estimate is -.4

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[***] Expected turnout is constructed on the basis of the relationship between voting and demographics and electoral context using the relationship observed among those in the voting condition. See the supporting information for more details.

[†††] Data are weighted by propensity to be assigned to treatment based on vote history, state, and district competitiveness. We also include indicators (fixed effects) for each assignment strata (state x district competitiveness x vote history).

percentage points, with a 95% confidence interval of about -2.6 to 1.8 points, which again excludes the smallest treatment estimate reported in Bryan et al. In two subsamples (places where either party primary was competitive or among voters who have never participated in a primary) we estimate positive effects, but they are substantively small and far from statistically significant.

*Robustness*

The analyses in Table 1 include all individuals who confirmed their state of residence (i.e., answered the first question asked in the survey in both treatments). We could, however, adopt a stricter definition of treatment in light of the fact that some respondents break off contact (there is attrition) from this point to the end of the ten-question survey. For example, we might consider an individual treated if she instead provides a response to the second question asked in both treatments about awareness of the upcoming primary. Alternatively, we might restrict our attention to only those individuals who complete all ten survey items (although, because these items differ in the two treatment arms, this subsample may also be different across treatments, creating a possibility of selection bias). Panel A of Table S4 replicates the Table 1 analysis for those who answered the election awareness item and confirms the pattern of finding little evidence that the noun treatment increases turnout.[‡‡‡] Focusing on the regression estimates, the *largest* effect is -.4 points. Similarly, when we restrict attention in Panel B to those who completed the entire survey battery, the largest estimated regression coefficient is 1 point (with a standard error of 3.3 points).

We also consider one potential source of the difference between our results and those reported in Bryan et al. that might follow from a difference in our experimental design. In their

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[‡‡‡] Full model results for all analyses reported in Table S4 appear in the supporting information.

two field experiments, individuals were contacted the day before or the morning of the election, while our calls took place during the 4 days before each election. For this reason, in Panel C of Table S4 we restrict our attention to individuals who completed the entire survey and were contacted the day before the election. (We did not call respondents on Election Day; in Tennessee no calls were made the day before the election for budgetary reasons.) Focusing again on the regression estimates, for this entire subsample (N=885) the point estimate is .2 points (standard error 2.5 points, not statistically significant). The largest estimate is 6.5 points (standard error 8.8 points, not statistically significant) for the subsample of respondents whose predicted baseline turnout rate was greater than 70% (N=110).[§§§] Thus, even when we restrict attention to those who both completed the entire survey and did so just before the election we continue to find no evidence that the noun intervention is more effective than the verb intervention in increasing participation.

**Results: Comparative Message Effectiveness**

The preceding analysis provides little evidence that completing a survey using a noun to describe the act of voting increases participation more than when a verb is used. Despite the absence of a difference between the two treatment groups, however, both the noun and verb survey scripts might still positively affect participation and thus serve as valuable mobilization tools. Alternatively, the political environment might have been such that no mobilization script was effective. To test these possibilities, we use the two additional treatments included in our experiment: a placebo condition and a standard GOTV message. Examining the effect of the latter message also allows us to understand whether for this particular sample, electoral

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[§§§] For this subsample, we find that both the noun and verb treatments are less effective in inducing voting (have negative point estimates) compared to the non-political placebo message discussed below.

environment, and experimental protocol a commonly used message can be effective in mobilizing voters.

Across the four treatments, the interviewer asked for the selected registrant by name and, as previously explained, our analysis is restricted to those subjects who confirmed they were still residents of the state as determined from the official record.[****] After this point, the treatments diverged. Subjects in the placebo condition received no political message, but were instead asked how many times in the past 14 days they had visited the grocery store. This condition allows us to create a suitable comparison group of individuals—those who we can reach on the phone—for those who receive any message with political content. In the GOTV condition, subjects were asked a single question:

> This [DAY] [STATE] will be holding primary elections to select which candidates will be on the ballot this November. Many [STATE] citizens are expected to turn out for this [DAY]'s election. Were you aware that [STATE]'s primary elections will be held this [DAY]?

The GOTV treatment therefore differed from the noun and verb conditions in two ways. First, it ended after this item and did not include a ten-item survey. Second, it mentioned that many citizens were expected to vote, a message that may make salient a norm of participation.

Figure 1 displays the comparative effectiveness of each treatment in increasing participation relative to the placebo message (the 95% confidence interval for each estimate is indicated with the black capped lines). These estimates are derived from a regression model similar to that used in the Table 1 analysis (full results appear in the supporting information). Compared to the placebo condition, those who received the Voter (Noun) intervention are .9 points more likely to vote, although the estimated difference between this treatment and the

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[****] That is, we define treatment in the same way across conditions, avoiding concerns that differential attrition by treatment group is a consequence of the particular content of its message.

grocery (placebo) treatment is not statistically significant. Similarly, those who received the Voting (Verb) intervention are 1.3 points more likely to vote, although this estimate is also not statistically significant. As in Table 1, these treatment effects are indistinguishable from one another.

[Insert Figure 1 about Here]

Combining the noun and verb treatments, the average estimated effect relative to the placebo message is 1.1 points (p=.14). Although this is not a large effect, it is similar in magnitude to what prior research has found for other phone messages in other contexts, indicating that neither the noun nor verb message has an outsized effect on participation. Furthermore, neither message is as effective as the (much shorter) standard GOTV message that provides the same information about the upcoming election and mentions that many voters will participate. As the third bar in the figure shows, that message increases turnout by a statistically significant 2.1 percentage points (p<.05). When we compare the effect of the standard GOTV message to the pooled estimate of the noun and verb treatments we cannot reject the hypothesis that the treatments are equally effective (p=.29 from a test of a linear combination of coefficients), but the point estimate for the standard GOTV intervention is 1 point larger. Additionally, given that both the noun and verb treatments are much longer (and therefore more costly to administer), these findings suggest that those interested in mobilization are best served by employing the shorter script.

**Discussion**

One of the most exciting areas of research in psychology is the discovery of brief psychological interventions that can cause substantial behavioral change. In this paper we investigated the robustness of one of the most striking examples of this new class of

interventions. Bryan et al. (2) found that subtle wording differences in a survey, specifically the use of a noun ("voter") rather than a verb ("voting") to describe an action, can generate significantly higher turnout rates when applied to the act of voting. This finding buttresses the general claim regarding the potential for large behavioral effects from minimal interventions, a claim with implications for both public policy and our understanding of choice. It also identifies an important new means for increasing political participation.

Building on Bryan et al., we implemented their treatment language using a significantly larger sample in the context of the 2014 House primary elections. In contrast to the prior study, we find little evidence that priming individuals to think of themselves as "voters" produces higher participation rates than when describing them as engaged in the act of voting. Furthermore, these treatment calls increase turnout only modestly compared to a placebo call and appear less effective than a much shorter standard GOTV script.

Our failure to find the same differences in turnout identified by Bryan et al. (2) may stem from a number of factors. Specifically, there are several differences in the implementation of the two studies such that our study is not an exact replication of the experimental conditions in Bryan et al. First, we examine an electoral context (a primary election) that differs from that used by Bryan et al. (a presidential and a gubernatorial election). Although this is post-hoc speculation, perhaps the effect of noun versus verb wording occurs only in high- or medium-profile elections because the perceived loss of identity associated with failing to vote is weaker and less susceptible to priming in primary contests, where turnout is generally lower (turnout rates among registrants in our experimental settings were 28% in TN, 25% in MO, and 21% in MI). However, as we note above, prior experimental work suggests mobilization is typically more, not less, effective in modest turnout rather than the most salient elections (e.g., 6), a

pattern that holds for psychologically-inspired mobilization messages such as those that invoke social pressure in an effort to increase participation. In the 2014 primary elections, we find that a standard GOTV message induced a 2 percentage point increase in turnout, about 1 point larger than the average effect of the noun and verb messages. Additionally, we find null effects for the noun versus verb treatment even among registrants who are predicted to vote at high rates in these elections even absent treatment. Finally, if the intensity of the election moderated treatment effectiveness, we would expect that Bryan et al. would have found larger incremental turnout effects from the noun message in a presidential race (experiment 2, state turnout rate among registrants = 79.4%) than in a gubernatorial contest (experiment 3, state turnout rate among registrants = 47%), but their treatment effect estimates are similarly large in these two contexts.

Second, whereas Bryan et al. relied on an Internet survey that required subjects to read the ten items and manually record their answers, our survey was conducted over the phone. Although it does not seem intuitive, perhaps subject attention is greater or the differentiation between noun and verb usage is clearer to subjects when they read a survey on a computer screen and manually select answers, rather than listen to the survey items and answer questions orally.[††††] These differences would need to both favor reading on the Internet over oral communications and, as important, be sufficiently large to fully eliminate rather than mute the treatment effect. Further, if these types of treatments are indeed ineffective unless read by the subject, our study produces a result that has important implications for the generalizability of the finding about raising the identity stakes of voting.

Three other possibilities for our null finding relate to differences in the samples used. As our sample (drawn from voter files in three states) was substantially more representative than

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[††††] As footnote §§ above shows, however, we found that survey responses under the two conditions were distinguishable.

that used by Bryan et al. (2), their findings (or our findings) may be population-specific (convenience samples drawn from colleges campuses, used in the first two studies) or state-specific (the third experiment was limited to New Jersey and subjects had a much higher rate of turnout than the average registered voter in the New Jersey election studied). In addition, all subjects in Bryan et al.'s experiments previously signed up to be recruited in some manner, and these individuals may differ on some relevant characteristic(s) from those randomly sampled from the voter files who have not previously agreed to be surveyed repeatedly. A third distinction is our reliance on a sample taken from existing voter rolls, which ensures that all participants were registered voters and makes it easier to accurately identify whether they voted.[‡‡‡‡]

Finally, our failure to find similar treatment effects may be due to simple random chance, with a different random draw from the same populations in either experiment yielding different results. Although we cannot rule out this possibility, our sample was easily large enough that we could detect even a much more modest effect of the noun manipulation.

Assuming chance does not account for our findings, one interpretation of our failure to reproduce the findings of Bryan et al. is that the treatment effects previously reported are valid but highly sensitive to electoral context, mode of communication, or subject characteristics. Learning that modest differences in design eliminate the effectiveness of a psychological intervention helps to guide our understanding of the limitations of its potential general significance as a tool for promoting the broad class of pro-social behaviors that Bryan et al. suggest are analogous to voting. Given the differences between our findings and those of Bryan et al., it would be useful to pre-specify and then test the specific circumstances under which

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[‡‡‡‡] In contrast, Bryan et al. rely on self-reported registration and exclude from their analysis those they cannot manually match to voter records post-election.

theory would predict large differences in participation from the noun versus verb experimental

variation rather than our finding of no difference.

**Acknowledgements**

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**Table 1. Effect of "Voter" and "Voting" Treatments on 2014 Primary Election Turnout**

| | (1) | (2) | (3) | (4) | (5) |
|---|---|---|---|---|---|
| Sample | Proportion Voting, Voter Treatment | Proportion Voting, Voting Treatment | Difference of Proportions (Voter - Voting) [Standard Error] | Regression Estimate of Difference (Voter - Voting) [Standard Error] | Number of Observations (Voter, Voting) |
| Entire Sample | 0.301 | 0.311 | -0.010 [0.014] | -0.004 [0.011] | (2236,2232) |
| State=Michigan | 0.234 | 0.242 | -0.008 [0.019] | -0.007 [0.015] | (1041,1015) |
| State=Missouri | 0.333 | 0.341 | -0.008 [0.028] | -0.005 [0.023] | (577,563) |
| State=Tennessee | 0.383 | 0.393 | -0.009 [0.027] | 0.000 [0.021] | (618,654) |
| No Competitive House Primary | 0.321 | 0.339 | -0.018 [0.018] | -0.011 [0.015] | (1307,1305) |
| Either House Primary Competitive | 0.273 | 0.273 | 0.000 [0.021] | 0.004 [0.016] | (929,927) |
| Ever Voters | 0.326 | 0.338 | -0.013 [0.015] | -0.004 [0.012] | (2047,2033) |
| Have Voted in Primary | 0.596 | 0.632 | -0.037 [0.024] | -0.014 [0.021] | (848,832) |
| Have Voted, but Never in Primary | 0.135 | 0.135 | 0.000 [0.014] | 0.003 [0.013] | (1199,1201) |
| No Prior History of Voting | 0.032 | 0.035 | -0.003 [0.018] | -0.003 [0.018] | (189,199) |
| Predicted Turnout > 70% | 0.764 | 0.781 | -0.017 [0.030] | -0.007 [0.027] | (377,407) |

Note: Column (4) estimates generated from regression models including strata (strata x vote history x district competitiveness) fixed effects and state interacted with indicators for age, year of registration, gender, race/ethnicity, and the number of times voted in general, primary, and special elections (complete model results are reported in the supporting information). No differences in proportions or regression estimates are statistically significant (p<.05).

Figure 1: Comparative Effectiveness of Different Treatments
Point Estimates and 95% Confidence Intervals
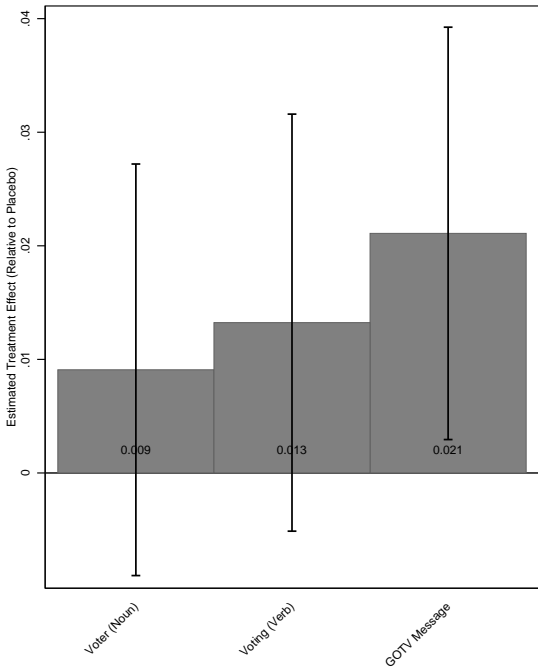
Among Those Contacted, N=11099. Placebo group turnout is 29.4%.

Supporting Information for:

**Subtle linguistic cues may not affect voter behavior: new evidence on motivating voter turnout by invoking the self**

This Supporting Information contains the following material:

**Supplemental Appendix 1. Description of Sampling Strategy**

For this study, we first obtained voter files from a private vendor for MO, TN, and MI. In all of these states, unaffiliated voters (i.e., voters not registered with a political party) can vote in any party's primary elections without taking additional steps prior to arriving at the polls on Election Day. We then excluded records that, based on experience, are likely to be bad records or people who could not be reached by mail. Using the set of records that survived this screening, for each household with multiple registrants we then randomly selected one voter from each household. We then selected a subset of these records (those with valid phone numbers for which the phone number was believed likely to be correct) for this experiment.

Every individual in the experimental samples was assigned either to control or a treatment group, but each individual in the samples did not have the same probability of being assigned to a treatment group. Assignment rates were based on two factors: individual vote history and political context. First, we constructed a dichotomous coding for whether an individual resided in a congressional district with a competitive or non-competitive primary. Those districts in our phone sample identified as having competitive partisan primaries are the following:

- Michigan:
    - Democratic: Districts 1, 8, 13, and 14
    - Republican: Districts 1, 3, 4, 7, 8, and 11
- Missouri: None
- Tennessee:
    - Democratic: District 9
    - Republican: District 4

Approximately 42% of our experimental subjects were selected from competitive districts and about 58% from non-competitive districts.

Second, we tabulated the participation history of the voter. We partitioned the subjects into 6 groups based on their turnout histories as recorded in the voter file for the years 2008-2012. These 6 groups are:

1. Primary Voters (non-Presidential): Voted in at least one non-presidential primary in 2008, 2010, or 2012.
2. Primary Voters (only Presidential): Voted in at least one presidential primary in 2008 or 2012, but did not vote in a non-presidential primary in 2008, 2010, or 2012.
3. General Election Voters (non-Presidential): Voted in at least one election between 2008 and 2012 other than the Presidential General Election in 2008 or 2012 and did not vote in any primary election in 2008, 2010, or 2012.
4. General Election Voters (only Presidential): Voted in a Presidential election in 2008 or 2012 but did not vote in any other non-primary election between 2008 and 2012, and did not vote in any primary election in 2008, 2010, or 2012.
5. Never Voters (new registrants): Never voted, but registered after November 2012.
6. Never Voters: Never voted and registered prior to November 2012.

We oversampled both types of General Election Voters (categories 3 and 4 above), thereby placing individuals who had previously voted, but not in primary elections, into treatment groups at a higher rate than the remainder of the sample. Further, we undersampled Primary Voters (categories 1 and 2 above), thereby placing individuals who already demonstrated a tendency to vote in primary elections into treatment groups at a lower rate than the remainder of the sample. Finally, we assigned Never Voters (categories 5 and 6 above) to treatment groups in proportion to their share in the overall sample.

Specifically, for each of the states included in our phone experiment, we constructed state-level sampling weights, weighting each state's population using the following formula:

.5 x (number of people in categories 1 and 2) + 2 x (number of people in categories 3 and 4) + number of people in categories 5 and 6

Then, within strata defined by state, district competitiveness, and vote history categories, individuals included in the phone experiment reported in the manuscript were randomly assigned to the noun or verb versions of the survey, or to a standard GOTV message, or to a placebo survey. For statistical reasons, twice as many individuals were assigned to the placebo group than to the other experimental treatments. The regression analysis reported in the main text accounts for this stratified sampling process.

**Supplemental Appendix 2. Scripts Used by Bryan et al. (2011)**

Experiment 1:

i) How important is it to you to (vote/be a voter) in the upcoming election?
      Not at all important
      Not too important
      Neither important nor unimportant
      Somewhat important
      Extremely important

ii) How much do you care about (voting/being a voter) in the upcoming election?
      Not at all
      Not too much
      Neither care nor don't care
      Somewhat
      Very much

iii) How much do you want to (vote/be a voter) in the upcoming election?
      Not at all
      Not too much
      Neither want nor don't want
      Somewhat
      Very much

iv) How personally relevant is it to you to (vote/be a voter) in the upcoming election?
      Not at all relevant
      Not too relevant
      Neither relevant nor irrelevant
      Somewhat relevant
      Extremely relevant

v) How difficult or easy do you think it is to (vote/be a voter) in the upcoming election?
      Very difficult
      Somewhat difficult
      Neither difficult nor easy
      Somewhat easy
      Very easy

vi) How convenient do you think it is to (vote/be a voter) in the upcoming election?
      Not at all convenient
      Not too convenient
      Neither convenient nor inconvenient
      Somewhat convenient
      Extremely convenient

vii) How consistent are your thoughts and feelings about (voting/being a voter) in the upcoming election?
      Not at all consistent
      Not too consistent
      Neither consistent nor inconsistent

Somewhat consistent
Extremely consistent

viii) How clear are your thoughts and feelings about (voting/being a voter) in the upcoming election?
Not at all clear
Not too clear
Neither clear nor unclear
Somewhat clear
Extremely clear

ix) To what extent are your *thoughts* about (voting/being a voter) in the upcoming election the same as your *feelings* about (voting/being a voter)?
Not at all
Not too much
Neither the same nor not the same
Somewhat
Very much

x) To what extent do your *thoughts* about (voting/being a voter) in the upcoming election differ from your *feelings* about (voting/being a voter)?
Not at all
Not too much
Neither differ not do not differ
Somewhat
Very much

Experiment 3:
(The second experiment uses the same language except for minor word changes and always refers to "tomorrow's" election)

i) How important is it to you to (vote/be a voter) in (tomorrow's/today's) election?
    Not at all important
    Not too important
    Neither important nor unimportant
    Somewhat important
    Extremely important

ii) How much do you care about (voting/being a voter) in (tomorrow's/today's) election?
    Not at all
    Not too much
    Neither care nor don't care
    Somewhat
    Very much

iii) How much do you want to (vote/be a voter) in (tomorrow's/today's) election?
    Not at all
    Not too much
    Neither want nor don't want
    Somewhat
    Very much

iv) How personally relevant is it to you to (vote/be a voter) in (tomorrow's/today's) election?
    Not at all relevant
    Not too relevant
    Neither relevant nor irrelevant
    Somewhat relevant
    Extremely relevant

v) How easy do you think it is to (vote/be a voter) in (tomorrow's/today's) election?
    Not at all easy
    Not too easy
    Neither difficult nor easy
    Somewhat easy
    Very easy

vi) How convenient do you think it is to (vote/be a voter) in (tomorrow's/today's) election?
    Not at all convenient
    Not too convenient
    Neither convenient nor inconvenient
    Somewhat convenient
    Extremely convenient

vii) How consistent are your thoughts and feelings about (voting/being a voter) in (tomorrow's/today's) election?
    Not at all consistent
    Not too consistent

Neither consistent nor inconsistent
Somewhat consistent
Extremely consistent

viii) How clear are your thoughts and feelings about (voting/being a voter) in (tomorrow's/today's) election?
Not at all clear
Not too clear
Neither clear nor unclear
Somewhat clear
Extremely clear

ix) To what extent are your *thoughts* about (voting/being a voter) in (tomorrow's/today's) election the same as your *feelings* about (voting/being a voter)?
Not at all
Not too much
Neither the same nor not the same
Somewhat
Very much

x) To what extent are your *thoughts* about (voting/being a voter) in (tomorrow's/today's) election different from your *feelings* about (voting/being a voter)?
Not at all
Not too much
Neither differ not do not differ
Somewhat
Very much

**Supplemental Appendix 3. Telephone Treatment Scripts**

**VAR1 – STATE**
**VAR2 – DAY**
**VAR3 – DATE**

*Hi, could I speak to [name1] or [name2]?*  (please enter id number of target reached)

*Hi. My name is [interviewer's first name], and I'm conducting a university research survey of registered voters. You can help us a lot by answering just a few questions. The survey is voluntary and you don't have to answer questions you don't want to. I'm not selling anything, and the entire questionnaire will take fewer than two minutes to complete.*

*Are you currently a resident of [VAR1]?*

| | | |
|---|---|---|
| 01 | Yes: | *GO TO RANDOMLY ASSIGNED TREATMENT* |
| 02 | No: | *Thank you for your help. Goodbye.* |
| 03 | Other: | *Thank you for your help. Goodbye.* |
| 04 | Wouldn't Disclose: | *Thank you for your help. Goodbye.* |
| 20 | Declined Conversation: | *Thank you for your help. Goodbye.* |
| 21 | Do not call: | *Thank you for your help. Goodbye.* |

**Voting (Verb) Treatment:**

*This [VAR2] [VAR1] will be holding primary elections to select which candidates will be on the ballot this November. Were you aware that [VAR1]'s primary elections will be held this [VAR2]?*

| | |
|---|---|
| 1 | Yes  GO TO Q35 |
| 2 | No  GO TO Q35 |
| 96 | Other  GO TO Q35 |
| 98 | Refused  GO TO Q35 |
| 99 | Hung up  *Thank you for your help. Goodbye.* |

*How important is it to you to vote in the upcoming primary election?*

| | |
|---|---|
| 1 | Not at all important |
| 2 | Not too important |
| 3 | Neither important nor unimportant |
| 4 | Somewhat important |
| 5 | Extremely important |
| 96 | Other |
| 98 | Refused |
| 99 | Hung up  *Thank you for your help. Goodbye.* |

*How much do you care about voting in the upcoming primary election?*

| | |
|---|---|
| 1 | Not at all |
| 2 | Not too much |
| 3 | Neither care nor don't care |
| 4 | Somewhat |
| 5 | Very much |
| 96 | Other |
| 98 | Refused |
| 99 | Hung up  *Thank you for your help. Goodbye.* |

*How much do you want to vote in the upcoming primary election?*

| | |
|---|---|
| 1 | Not at all |
| 2 | Not too much |
| 3 | Neither want nor don't want |
| 4 | Somewhat |
| 5 | Very much |
| 96 | Other |
| 98 | Refused |
| 99 | Hung up  *Thank you for your help. Goodbye.* |

*How personally relevant is it to you to vote in the upcoming primary election?*

| | |
|---|---|
| 1 | Not at all relevant |
| 2 | Not too relevant |
| 3 | Neither relevant nor irrelevant |

| 4 | Somewhat relevant |
|---|---|
| 5 | Extremely relevant |
| 96 | Other |
| 98 | Refused |
| 99 | Hung up *Thank you for your help. Goodbye.* |

*How difficult or easy do you think it is to vote in the upcoming primary election?*

| 1 | Very difficult |
|---|---|
| 2 | Somewhat difficult |
| 3 | Neither difficult nor easy |
| 4 | Somewhat easy |
| 5 | Very easy |
| 96 | Other |
| 98 | Refused |
| 99 | Hung up *Thank you for your help. Goodbye.* |

*How convenient do you think it is to vote in the upcoming primary election?*

| 1 | Not at all convenient |
|---|---|
| 2 | Not too convenient |
| 3 | Neither convenient nor inconvenient |
| 4 | Somewhat convenient |
| 5 | Extremely convenient |
| 96 | Other |
| 98 | Refused |
| 99 | Hung up *Thank you for your help. Goodbye.* |

*How consistent are your thoughts and feelings about voting in the upcoming primary election?*

| 1 | Not at all consistent |
|---|---|
| 2 | Not too consistent |
| 3 | Neither consistent nor inconsistent |
| 4 | Somewhat consistent |
| 5 | Extremely consistent |
| 96 | Other |
| 98 | Refused |
| 99 | Hung up *Thank you for your help. Goodbye.* |

*How clear are your thoughts and feelings about voting in the upcoming primary election?*

| 1 | Not at all clear |
|---|---|
| 2 | Not too clear |
| 3 | Neither clear nor unclear |
| 4 | Somewhat clear |
| 5 | Extremely clear |
| 96 | Other |
| 98 | Refused |
| 99 | Hung up *Thank you for your help. Goodbye.* |

*To what extent are your thoughts about voting in the upcoming primary election the same as your feelings about voting?*

| | |
|---|---|
| 1 | Not at all |
| 2 | Not too much |
| 3 | Neither the same nor not the same |
| 4 | Somewhat |
| 5 | Very much |
| 96 | Other |
| 98 | Refused |
| 99 | Hung up *Thank you for your help. Goodbye.* |

*To what extent do your thoughts about voting in the upcoming primary election differ from your feelings about voting?*

| | |
|---|---|
| 1 | Not at all *Thank you for your help. Goodbye.* |
| 2 | Not too much  *Thank you for your help. Goodbye.* |
| 3 | Neither differ nor not differ  *Thank you for your help. Goodbye.* |
| 4 | Somewhat  *Thank you for your help. Goodbye.* |
| 5 | Very much  *Thank you for your help. Goodbye.* |
| 96 | Other  *Thank you for your help. Goodbye.* |
| 98 | Refused  *Thank you for your help. Goodbye.* |
| 99 | Hung up  *Thank you for your help. Goodbye.* |

**Voter (Noun) Treatment:**

*This [VAR2] [VAR1] will be holding primary elections to select which candidates will be on the ballot this November. Were you aware that [VAR1]'s primary elections will be held this [VAR2]?*

> 1      Yes   GO TO Q46
> 2      No   GO TO Q46
> 96     Other   GO TO Q46
> 98     Refused   GO TO Q46
> 99     Hung up   *Thank you for your help. Goodbye.*

*How important is it to you to be a voter in the upcoming primary election?*

> 1      Not at all important
> 2      Not too important
> 3      Neither important nor unimportant
> 4      Somewhat important
> 5      Extremely important
> 96     Other
> 98     Refused
> 99     Hung up   *Thank you for your help. Goodbye.*

*How much do you care about being a voter in the upcoming primary election?*

> 1      Not at all
> 2      Not too much
> 3      Neither care nor don't care
> 4      Somewhat
> 5      Very much
> 96     Other
> 98     Refused
> 99     Hung up   *Thank you for your help. Goodbye.*

*How much do you want to be a voter in the upcoming primary election?*

> 1      Not at all
> 2      Not too much
> 3      Neither want nor don't want
> 4      Somewhat
> 5      Very much
> 96     Other
> 98     Refused
> 99     Hung up   *Thank you for your help. Goodbye.*

*How personally relevant is it to you to be a voter in the upcoming primary election?*

> 1      Not at all relevant
> 2      Not too relevant
> 3      Neither relevant nor irrelevant

| | |
|---|---|
| 4 | Somewhat relevant |
| 5 | Extremely relevant |
| 96 | Other |
| 98 | Refused |
| 99 | Hung up *Thank you for your help. Goodbye.* |

*How difficult or easy do you think it is to be a voter in the upcoming primary election?*

| | |
|---|---|
| 1 | Very difficult |
| 2 | Somewhat difficult |
| 3 | Neither difficult nor easy |
| 4 | Somewhat easy |
| 5 | Very easy |
| 96 | Other |
| 98 | Refused |
| 99 | Hung up *Thank you for your help. Goodbye.* |

*How convenient do you think it is to be a voter in the upcoming primary election?*

| | |
|---|---|
| 1 | Not at all convenient |
| 2 | Not too convenient |
| 3 | Neither convenient nor inconvenient |
| 4 | Somewhat convenient |
| 5 | Extremely convenient |
| 96 | Other |
| 98 | Refused *Thank you for your help. Goodbye.* |
| 99 | Hung up *Thank you for your help. Goodbye.* |

*How consistent are your thoughts and feelings about being a voter in the upcoming primary election?*

| | |
|---|---|
| 1 | Not at all consistent |
| 2 | Not too consistent |
| 3 | Neither consistent nor inconsistent |
| 4 | Somewhat consistent |
| 5 | Extremely consistent |
| 96 | Other |
| 98 | Refused |
| 99 | Hung up *Thank you for your help. Goodbye.* |

*How clear are your thoughts and feelings about being a voter in the upcoming primary election?*

| | |
|---|---|
| 1 | Not at all clear |
| 2 | Not too clear |
| 3 | Neither clear nor unclear |
| 4 | Somewhat clear |
| 5 | Extremely clear |
| 96 | Other |
| 98 | Refused |

99  Hung up *Thank you for your help. Goodbye.*

*To what extent are your thoughts about being a voter in the upcoming primary election the same as your feelings about being a voter?*

1  Not at all
2  Not too much
3  Neither the same nor not the same
4  Somewhat
5  Very much
96  Other
98  Refused
99  Hung up *Thank you for your help. Goodbye.*

*To what extent do your thoughts about being a voter in the upcoming primary election differ from your feelings about being a voter?*

1  Not at all *Thank you for your help. Goodbye.*
2  Not too much *Thank you for your help. Goodbye.*
3  Neither differ nor not differ *Thank you for your help. Goodbye.*
4  Somewhat *Thank you for your help. Goodbye.*
5  Very much *Thank you for your help. Goodbye.*
96  Other *Thank you for your help. Goodbye.*
98  Refused *Thank you for your help. Goodbye.*
99  Hung up *Thank you for your help. Goodbye.*

**Placebo**:

*How many times in the last fourteen days have you been to the grocery store?*

| | |
|---|---|
| 1 | Response provided [do not record response] *Thank you for your help. Goodbye.* |
| 96 | Other *Thank you for your help. Goodbye.* |
| 97 | Don't know GO TO NEXT QUESTION |
| 98 | Refused GO TO NEXT QUESTION |
| 99 | Hung up *Thank you for your help. Goodbye.* |

*If you had to guess, how many times in the last fourteen days have you been to the grocery store?*

| | |
|---|---|
| 1 | Response provided [do not record response] *Thank you for your help. Goodbye.* |
| 97 | Don't know *Thank you for your help. Goodbye.* |
| 98 | Refused *Thank you for your help. Goodbye.* |
| 99 | Hung up *Thank you for your help. Goodbye.* |

**Standard GOTV Treatment:**

*This [VAR2] [VAR1] will be holding primary elections to select which candidates will be on the ballot this November. Many [VAR1] citizens are expected to turnout for this [VAR2]'s election. Were you aware that [VAR1]'s primary elections will be held this [VAR2]?*

|     |                                             |
| --- | ------------------------------------------- |
| 1   | Yes  *Thank you for your help. Goodbye.*    |
| 2   | No  *Thank you for your help. Goodbye.*     |
| 96  | Other  *Thank you for your help. Goodbye.*  |
| 98  | Refused  *Thank you for your help. Goodbye.* |
| 99  | Hung up  *Thank you for your help. Goodbye.* |

**Table S1. Tests of Balance for Experimental Treatment Assignment**

| Variable | Treat=Voting (Verb) | Treat=Voter (Noun) | Treat=Placebo | Treat=GOTV Message |
|---|---|---|---|---|
| Years Since Registration Date | 20.503 | 21.007 | 20.753 | 20.689 |
| | [13.7437] | [13.7808] | [13.8209] | [13.7647] |
| Years Since Registration Date Missing | 0.008 | 0.009 | 0.007 | 0.005 |
| | [.0898] | [.0955] | [.0855] | [.0699] |
| Election day age (in years) | 61.625 | 61.982 | 61.831 | 61.405 |
| | [16.2924] | [16.0834] | [16.0225] | [15.7959] |
| Gender=Male (1=yes) | 0.419 | 0.432 | 0.409 | 0.437 |
| | [.4936] | [.4955] | [.4917] | [.4961] |
| Gender=Unknown (1=yes) | 0.003 | 0.003 | 0.004 | 0.005 |
| | [.0505] | [.0513] | [.0602] | [.0724] |
| Race=Black (Yes = 1) | 0.094 | 0.088 | 0.097 | 0.100 |
| | [.2916] | [.2834] | [.2959] | [.3001] |
| Race=Latino (Yes = 1) | 0.009 | 0.009 | 0.010 | 0.009 |
| | [.0919] | [.0964] | [.1015] | [.095] |
| Race=Unknown (Yes = 1) | 0.001 | 0.003 | 0.002 | 0.004 |
| | [.0353] | [.0545] | [.0456] | [.0619] |
| Race=Other (Yes = 1) | 0.015 | 0.016 | 0.017 | 0.014 |
| | [.123] | [.1252] | [.1305] | [.1162] |
| Total General Election Votes | 2.292 | 2.280 | 2.276 | 2.291 |
| | [1.1168] | [1.1091] | [1.1108] | [1.1119] |
| Total Primary Election Votes | 1.097 | 1.044 | 1.061 | 1.059 |
| | [1.6406] | [1.5794] | [1.6019] | [1.6049] |
| Total Special Election Votes | 0.449 | 0.436 | 0.417 | 0.438 |
| | [.8541] | [.827] | [.8256] | [.8592] |
| | | | | |
| Observations | 2232 | 2236 | 4402 | 2229 |

Note: Cell entries are means with standard deviations in brackets. Multinomial logit was used to predict treatment assignment with all variables in the table used as predictors. The chi-squared test for all covariates predicting assignment is not significant ($\chi2(36) = 28.13$, p = .82). AAPOR response rates 1 and 2 are both 12.0%.

**Table S2. Effect of "Voter" and "Voting" Treatments on Survey Item Response**

| VARIABLES | (1) Ten Item Scale | (2) Importance of Voting | (3) Care about Voting | (4) Want to Vote | (5) Personal Relevance of Vote | (6) Easy to Vote? | (7) Convenient to Vote? | (8) Consistency of Thoughts and Feelings toward Voting | (9) Clarity of Thoughts and Feelings toward Voting | (10) Thoughts about voting in the upcoming election same as feelings about voting? | (11) Thoughts about voting in the upcoming election differ from feelings about voting? (Reverse coded) |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Voter treatment versus Voting treatment (1=Voter, 0=Voting) | 0.948 | 0.151 | 0.136 | 0.125 | 0.168 | 0.038 | 0.061 | 0.119 | 0.140 | 0.093 | -0.184 |
|  | [0.337]** | [0.045]** | [0.045]** | [0.047]** | [0.049]** | [0.044] | [0.041] | [0.045]** | [0.046]** | [0.046]* | [0.065]** |
| Constant | 40.583 | 4.032 | 4.107 | 4.104 | 3.990 | 4.281 | 4.242 | 4.092 | 4.065 | 4.132 | 3.002 |
|  | [0.240]** | [0.032]** | [0.032]** | [0.034]** | [0.035]** | [0.031]** | [0.029]** | [0.032]** | [0.032]** | [0.033]** | [0.046]** |
| Observations | 2254 | 3381 | 3246 | 3135 | 3014 | 2899 | 2852 | 2739 | 2723 | 2591 | 2478 |
| R-squared | 0.003 | 0.003 | 0.003 | 0.002 | 0.004 | 0.000 | 0.001 | 0.003 | 0.003 | 0.002 | 0.003 |

Note: OLS regression coefficients with standard errors in brackets. Dependent variable is five category Likert scale (coded 1-5); higher values correspond to viewing participation more positively. *** $p<0.01$, ** $p<0.05$, * $p<0.1$

**Supplemental Appendix 5. Expected Turnout Calculation Details**

Predicted turnout is calculated using a logit model that predicts turnout using strata (State x district competitiveness x vote history) and observed covariates (state x [years since registered, years since registered missing, age, gender, gender unknown, and race indicators]) among cases in the labeled as voting condition.

| VARIABLES | (1) Entire Sample | (2) State=Michigan | (3) State= Missouri | (4) State= Tennessee | (5) No Competitive House Primary | (6) Either House Primary Competitive | (7) Ever Voters | (8) Have Voted in Primary | (9) Have Voted, but Never in Primary | (10) No Prior History of Voting | (11) Predicted Turnout > 70% |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Voter treatment versus Voting treatment (1=Voter, 0=Voting) | -0.004 | -0.007 | -0.005 | 0.000 | -0.011 | 0.004 | -0.004 | -0.014 | 0.003 | -0.003 | -0.007 |
|  | [0.011] | [0.015] | [0.023] | [0.021] | [0.015] | [0.016] | [0.012] | [0.021] | [0.013] | [0.018] | [0.027] |
| MI-Years Since Registration Date | 0.000 | 0.000 |  |  | 0.003** | -0.001 | 0.000 | 0.000 | 0.001 | -0.001 | 0.001 |
|  | [0.001] | [0.001] |  |  | [0.001] | [0.001] | [0.001] | [0.001] | [0.001] | [0.001] | [0.002] |
| MI-Years Since Registration Date Missing | 0.178** | 0.178** |  |  |  | 0.174** | 0.254** | 0.330*** | 0.141 | 0.003 | 0.344*** |
|  | [0.080] | [0.080] |  |  |  | [0.084] | [0.101] | [0.084] | [0.170] | [0.012] | [0.095] |
| MI-Election day age (in years) | 0.000 | 0.000 |  |  | 0.001 | 0.000 | 0.001 | 0.003* | 0.000 | -0.001 | 0.004 |
|  | [0.001] | [0.001] |  |  | [0.001] | [0.001] | [0.001] | [0.001] | [0.001] | [0.001] | [0.003] |
| MI-Gender=Male (1=yes) | 0.015 | 0.015 |  |  | 0.011 | 0.013 | 0.012 | -0.006 | 0.023 | 0.038* | 0.029 |
|  | [0.015] | [0.015] |  |  | [0.028] | [0.018] | [0.017] | [0.036] | [0.017] | [0.020] | [0.056] |
| MI-Race=Black (Yes = 1) | 0.009 | 0.009 |  |  | 0.024 | 0.003 | 0.017 | 0.048 | -0.003 | -0.021* | 0.019 |
|  | [0.028] | [0.028] |  |  | [0.079] | [0.030] | [0.033] | [0.068] | [0.033] | [0.012] | [0.136] |
| MI-Race=Latino (Yes = 1) | -0.016 | -0.016 |  |  | -0.013 | -0.010 | -0.014 | 0.159*** | -0.028 | -0.017 | 0.210** |
|  | [0.055] | [0.055] |  |  | [0.035] | [0.083] | [0.061] | [0.058] | [0.062] | [0.015] | [0.084] |
| MI-Race=Unknown (Yes = 1) | -0.097*** | -0.097*** |  |  | -0.117*** | -0.074 | -0.097*** |  | -0.088*** |  |  |
|  | [0.036] | [0.036] |  |  | [0.035] | [0.055] | [0.037] |  | [0.033] |  |  |
| MI-Race=Other (Yes = 1) | -0.048 | -0.048 |  |  | -0.092** | -0.035 | -0.054 | 0.004 | -0.064** | -0.031 | -0.812*** |
|  | [0.035] | [0.035] |  |  | [0.044] | [0.042] | [0.040] | [0.243] | [0.028] | [0.019] | [0.086] |
| MI-Total General Election Votes | 0.049*** | 0.049*** |  |  | 0.071*** | 0.040** | 0.049*** | 0.061*** | 0.042*** |  | 0.056 |
|  | [0.014] | [0.014] |  |  | [0.024] | [0.017] | [0.014] | [0.027] | [0.015] |  | [0.051] |
| MI-Total Primary Election Votes | 0.120*** | 0.120*** |  |  | 0.108*** | 0.124*** | 0.119*** | 0.118*** |  |  | 0.156*** |
|  | [0.014] | [0.014] |  |  | [0.027] | [0.017] | [0.016] | [0.016] |  |  | [0.037] |
| MI-Total Special Election Votes | 0.053*** | 0.053*** |  |  | 0.065*** | 0.050*** | 0.053*** | 0.038** | 0.084*** |  | 0.067*** |
|  | [0.014] | [0.014] |  |  | [0.025] | [0.016] | [0.014] | [0.017] | [0.026] |  | [0.020] |
| MO-Years Since Registration Date | -0.001 |  | -0.001 |  | -0.001 |  | -0.001 | -0.001 | -0.002* | 0.001 | 0.001 |
|  | [0.001] |  | [0.001] |  | [0.001] |  | [0.001] | [0.002] | [0.001] | [0.001] | [0.002] |
| MO-Years Since Registration Date Missing | -0.139 |  | -0.139 |  | -0.138 |  | -0.150 | -0.260* | -0.023 | -0.042 |  |
|  | [0.088] |  | [0.088] |  | [0.088] |  | [0.096] | [0.149] | [0.109] | [0.027] |  |
| MO-Election day age (in years) | 0.000 |  | 0.000 |  | 0.000 |  | 0.000 | -0.001 | 0.001 | -0.001 | 0.000 |
|  | [0.001] |  | [0.001] |  | [0.001] |  | [0.001] | [0.002] | [0.001] | [0.001] | [0.003] |
| MO-Gender=Male (1=yes) | 0.034 |  | 0.034 |  | 0.034 |  | 0.041 | -0.008 | 0.097*** | -0.047 | 0.006 |
|  | [0.025] |  | [0.025] |  | [0.025] |  | [0.027] | [0.042] | [0.033] | [0.059] | [0.059] |
| MO-Gender=Unknown (1=yes) | -0.011 |  | -0.011 |  | -0.010 |  | -0.007 | 0.018 | 0.034 | -0.059 | 0.068 |
|  | [0.078] |  | [0.079] |  | [0.079] |  | [0.094] | [0.190] | [0.109] | [0.038] | [0.120] |
| MO-Race=Black (Yes = 1) | -0.010 |  | -0.010 |  | -0.011 |  | -0.006 | -0.016 | -0.003 | -0.054 | 0.091 |
|  | [0.042] |  | [0.042] |  | [0.043] |  | [0.045] | [0.091] | [0.052] | [0.039] | [0.101] |
| MO-Race=Latino (Yes = 1) | -0.267** |  | -0.267** |  | -0.267** |  | -0.304** | -0.425*** | 0.177 | -0.103 |  |
|  | [0.131] |  | [0.131] |  | [0.131] |  | [0.151] | [0.145] | [0.313] | [0.069] |  |
| MO-Race=Unknown (Yes = 1) | -0.110*** |  | -0.109*** |  | -0.106*** |  | -0.130*** |  | -0.126*** | -0.053 |  |
|  | [0.026] |  | [0.028] |  | [0.026] |  | [0.036] |  | [0.039] | [0.048] |  |
| MO-Race=Other (Yes = 1) | -0.055 |  | -0.055 |  | -0.054 |  | -0.048 | 0.058 | -0.116*** | -0.052 | 0.071 |
|  | [0.082] |  | [0.082] |  | [0.082] |  | [0.098] | [0.191] | [0.034] | [0.046] | [0.199] |
| MO-Total General Election Votes | 0.076*** |  | 0.076*** |  | 0.076*** |  | 0.076*** | 0.107*** | 0.064*** |  | 0.038 |
|  | [0.017] |  | [0.017] |  | [0.017] |  | [0.017] | [0.027] | [0.022] |  | [0.065] |
| MO-Total Primary Election Votes | 0.086*** |  | 0.086*** |  | 0.085*** |  | 0.085*** | 0.090*** |  |  | 0.108*** |
|  | [0.019] |  | [0.019] |  | [0.019] |  | [0.019] | [0.020] |  |  | [0.034] |
| MO-Total Special Election Votes | 0.044** |  | 0.044** |  | 0.044** |  | 0.044** | 0.017 | 0.128*** |  | 0.002 |
|  | [0.018] |  | [0.018] |  | [0.018] |  | [0.018] | [0.021] | [0.037] |  | [0.028] |
| TN-Years Since Registration Date | 0.000 |  |  | 0.000 | 0.000 | -0.001 | 0.000 | -0.002* | 0.002* | 0.001 | -0.002* |
|  | [0.001] |  |  | [0.001] | [0.001] | [0.001] | [0.001] | [0.001] | [0.001] | [0.001] | [0.001] |
| TN-Election day age (in years) | -0.001** |  |  | -0.001** | -0.001 | -0.003** | -0.002* | -0.002 | -0.002* | -0.001 | 0.001 |
|  | [0.001] |  |  | [0.001] | [0.001] | [0.001] | [0.001] | [0.001] | [0.001] | [0.001] | [0.001] |
| TN-Gender=Male (1=yes) | -0.001 |  |  | -0.001 | -0.028 | 0.058 | -0.004 | -0.038 | 0.027 | 0.057 | -0.028 |
|  | [0.022] |  |  | [0.022] | [0.026] | [0.038] | [0.023] | [0.034] | [0.031] | [0.048] | [0.036] |
| TN-Race=Black (Yes = 1) | -0.053* |  |  | -0.053* | -0.046 | -0.069 | -0.055* | -0.030 | -0.067* | -0.035 | -0.066 |
|  | [0.030] |  |  | [0.030] | [0.042] | [0.043] | [0.032] | [0.060] | [0.035] | [0.025] | [0.064] |
| TN-Race=Latino (Yes = 1) | 0.004 |  |  | 0.004 | 0.091 | -0.162** | 0.014 |  | 0.059 | 0.021 | -0.034 |
|  | [0.141] |  |  | [0.141] | [0.189] | [0.069] | [0.167] |  | [0.176] | [0.038] | [0.052] |
| TN-Race=Unknown (Yes = 1) | -0.131*** |  |  | -0.131*** | -0.100** |  | -0.183*** |  | -0.159*** | -0.075 | -0.230 |
|  | [0.037] |  |  | [0.037] | [0.040] |  | [0.033] |  | [0.039] | [0.055] | [0.187] |
| TN-Race=Other (Yes = 1) | -0.037 |  |  | -0.037 | 0.046 | -0.172 | -0.037 | -0.287*** | 0.097 | -0.055 |  |
|  | [0.134] |  |  | [0.133] | [0.182] | [0.114] | [0.154] | [0.096] | [0.233] | [0.040] |  |
| TN-Total General Election Votes | 0.081*** |  |  | 0.081*** | 0.070*** | 0.095*** | 0.081*** | 0.112*** | 0.051** |  | 0.060 |
|  | [0.020] |  |  | [0.021] | [0.026] | [0.032] | [0.021] | [0.032] | [0.025] |  | [0.063] |
| TN-Total Primary Election Votes | 0.116*** |  |  | 0.116*** | 0.113*** | 0.118*** | 0.116*** | 0.122*** |  |  | 0.097*** |
|  | [0.014] |  |  | [0.014] | [0.018] | [0.023] | [0.014] | [0.015] |  |  | [0.022] |
| TN-Total Special Election Votes | 0.032 |  |  | 0.032 | 0.016 | 0.045* | 0.032 | 0.015 | 0.090 |  | 0.021 |
|  | [0.021] |  |  | [0.021] | [0.035] | [0.027] | [0.021] | [0.022] | [0.064] |  | [0.023] |
| Constant | 0.002 | 0.003 | 0.063 | 0.122*** | -0.051 | -0.001 | -0.053 | -0.352*** | -0.009 | 0.073 | -0.498** |
|  | [0.038] | [0.038] | [0.051] | [0.046] | [0.060] | [0.037] | [0.039] | [0.122] | [0.038] | [0.053] | [0.242] |
| Observations | 4468 | 2056 | 1140 | 1272 | 2612 | 1856 | 4080 | 1680 | 2400 | 388 | 784 |
| R-squared | 0.397 | 0.381 | 0.324 | 0.437 | 0.383 | 0.418 | 0.380 | 0.253 | 0.085 | 0.163 | 0.281 |

Note: OLS regression coefficients with robust standard errors in brackets. Dependent variable is voted in 2014 primary election (1=yes, 0=no). All models include state x voter history x district competitiveness fixed effects. Weighted analysis. *** p<0.01, ** p<0.05, * p<0.1

**Table S4. Effect of "Voter" and "Voting" Treatments on 2014 Primary Election Turnout, Robustness Checks**

**Panel A: Among those who Completed Election Awareness Question**

| Sample | (1) Proportion Voting, Voter Treatment | (2) Proportion Voting, Voting Treatment | (3) Difference of Proportions (Voter - Voting) [Standard Error] | (4) Regression Estimate of Difference (Voter - Voting) [Standard Error] | (5) Number of Observations (Voter, Voting) |
|---|---|---|---|---|---|
| Entire Sample | 0.302 | 0.324 | -0.022 [0.015] | -0.014 [0.012] | (2007,2000) |
| State=Michigan | 0.236 | 0.256 | -0.020 [0.020] | -0.016 [0.016] | (925,908) |
| State=Missouri | 0.335 | 0.353 | -0.019 [0.029] | -0.015 [0.025] | (532,515) |
| State=Tennessee | 0.382 | 0.404 | -0.022 [0.029] | -0.011 [0.022] | (550,577) |
| No Competitive House Primary | 0.323 | 0.352 | -0.029 [0.020] | -0.020 [0.016] | (1185,1164) |
| Either House Primary Competitive | 0.271 | 0.283 | -0.012 [0.022] | -0.008 [0.017] | (822,836) |
| Ever Voters | 0.326 | 0.350 | -0.024 [0.016] | -0.015 [0.012] | (1841,1829) |
| Have Voted in Primary | 0.601 | 0.643 | -0.043 [0.025] | -0.023 [0.022] | (764,760) |
| Have Voted, but Never in Primary | 0.131 | 0.141 | -0.010 [0.015] | -0.008 [0.014] | (1077,1069) |
| No Prior History of Voting | 0.036 | 0.041 | -0.005 [0.021] | -0.004 [0.021] | (166,171) |
| Predicted Turnout > 70% | 0.759 | 0.780 | -0.021 [0.031] | -0.016 [0.028] | (345,373) |

**Panel B: Among those who Completed Entire Voter/Voting Battery**

| Sample | (1) Proportion Voting, Voter Treatment | (2) Proportion Voting, Voting Treatment | (3) Difference of Proportions (Voter - Voting) [Standard Error] | (4) Regression Estimate of Difference (Voter - Voting) [Standard Error] | (5) Number of Observations (Voter, Voting) |
|---|---|---|---|---|---|
| Entire Sample | 0.321 | 0.339 | -0.018 [0.018] | -0.015 [0.014] | (1415,1412) |
| State=Michigan | 0.263 | 0.271 | -0.008 [0.025] | -0.004 [0.020] | (654,628) |
| State=Missouri | 0.352 | 0.401 | -0.049 [0.035] | -0.038 [0.029] | (392,394) |
| State=Tennessee | 0.390 | 0.385 | 0.006 [0.035] | -0.009 [0.026] | (369,390) |
| No Competitive House Primary | 0.336 | 0.370 | -0.034 [0.023] | -0.025 [0.019] | (831,835) |
| Either House Primary Competitive | 0.300 | 0.293 | 0.007 [0.027] | -0.000 [0.021] | (584,577) |
| Ever Voters | 0.343 | 0.363 | -0.020 [0.019] | -0.015 [0.015] | (1310,1300) |
| Have Voted in Primary | 0.617 | 0.656 | -0.039 [0.029] | -0.015 [0.026] | (564,541) |
| Have Voted, but Never in Primary | 0.135 | 0.154 | -0.019 [0.018] | -0.011 [0.018] | (746,759) |
| No Prior History of Voting | 0.048 | 0.054 | -0.006 [0.030] | -0.014 [0.031] | (105,112) |
| Predicted Turnout > 70% | 0.788 | 0.777 | 0.010 [0.037] | 0.010 [0.033] | (245,265) |

**Panel C: Among those who Completed Entire Voter/Voting Battery & Contacted Day Before Election**

| Sample | (1) Proportion Voting, Voter Treatment | (2) Proportion Voting, Voting Treatment | (3) Difference of Proportions (Voter - Voting) [Standard Error] | (4) Regression Estimate of Difference (Voter - Voting) [Standard Error] | (5) Number of Observations (Voter, Voting) |
|---|---|---|---|---|---|
| Entire Sample (Missouri and Michigan) | 0.291 | 0.276 | 0.015 [0.030] | 0.002 [0.025] | (450,435) |
| State=Michigan | 0.272 | 0.258 | 0.014 [0.036] | 0.009 [0.029] | (298,287) |
| State=Missouri | 0.329 | 0.311 | 0.018 [0.054] | -0.012 [0.047] | (152,148) |
| State=Tennessee | | | N/A (No Observations) | | |
| No Competitive House Primary | 0.320 | 0.286 | 0.034 [0.042] | -0.010 [0.037] | (244,224) |
| Either House Primary Competitive | 0.257 | 0.265 | -0.008 [0.043] | 0.013 [0.034] | (206,211) |
| Ever Voters | 0.317 | 0.295 | 0.022 [0.032] | 0.004 [0.027] | (413,400) |
| Have Voted in Primary | 0.634 | 0.597 | 0.037 [0.056] | 0.014 [0.055] | (164,144) |
| Have Voted, but Never in Primary | 0.108 | 0.125 | -0.017 [0.029] | -0.000 [0.028] | (249,256) |
| No Prior History of Voting | 0.000 | 0.057 | -0.057 [0.039] | -0.041 [0.034] | (37,35) |
| Predicted Turnout > 70% | 0.780 | 0.706 | 0.074 [0.084] | 0.065 [0.088] | (59,51) |

Note: Column (4) estimates generated from regression models including strata (strata x vote history x district competitiveness) fixed effects and state interacted with indicators for age, year of registration, gender, race/ethnicity, and the number of times voted in general, primary, and special elections (complete model results are reported in the supporting information). No differences in proportions or regression estimates are statistically significant (p<.05).

# Table S5. Full Regression Results for Table S4, Panel A

| VARIABLES | (1) Entire Sample | (2) State=Michigan | (3) State= Missouri | (4) State= Tennessee | (5) No Competitive House Primary | (6) Either House Primary Competitive | (7) Ever Voters | (8) Have Voted in Primary | (9) Have Voted, but Never in Primary | (10) No Prior History of Voting | (11) Predicted Turnout > 70% |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Voter treatment versus Voting treatment (1=Voter, 0=Voting) | -0.014 | -0.016 | -0.015 | -0.011 | -0.020 | -0.008 | -0.015 | -0.023 | -0.008 | -0.004 | -0.016 |
|  | [0.012] | [0.016] | [0.025] | [0.022] | [0.016] | [0.017] | [0.012] | [0.022] | [0.014] | [0.021] | [0.028] |
| MI-Years Since Registration Date | 0.001 | 0.001 |  |  | 0.002 | 0.000 | 0.001 | 0.000 | 0.001 | -0.001 | 0.002 |
|  | [0.001] | [0.001] |  |  | [0.001] | [0.001] | [0.001] | [0.002] | [0.001] | [0.001] | [0.002] |
| MI-Years Since Registration Date Missing | 0.213** | 0.212** |  |  |  | 0.211** | 0.328*** | 0.322*** | 0.273 | 0.002 | 0.380*** |
|  | [0.088] | [0.088] |  |  |  | [0.089] | [0.111] | [0.079] | [0.249] | [0.014] | [0.101] |
| MI-Election day age (in years) | 0.000 | 0.000 |  |  | 0.001 | 0.000 | 0.000 | 0.003* | 0.000 | -0.001 | 0.004 |
|  | [0.001] | [0.001] |  |  | [0.001] | [0.001] | [0.001] | [0.002] | [0.001] | [0.001] | [0.003] |
| MI-Gender=Male (1=yes) | 0.015 | 0.015 |  |  | 0.018 | 0.011 | 0.011 | -0.005 | 0.021 | 0.044* | 0.053 |
|  | [0.016] | [0.016] |  |  | [0.031] | [0.019] | [0.018] | [0.038] | [0.019] | [0.023] | [0.059] |
| MI-Race=Black (Yes = 1) | 0.007 | 0.007 |  |  | 0.011 | 0.004 | 0.017 | 0.039 | 0.004 | -0.025 | 0.016 |
|  | [0.030] | [0.030] |  |  | [0.082] | [0.032] | [0.035] | [0.074] | [0.035] | [0.015] | [0.168] |
| MI-Race=Latino (Yes = 1) | -0.020 | -0.020 |  |  | -0.016 | -0.012 | -0.019 | 0.153** | -0.031 | -0.020 | 0.216** |
|  | [0.055] | [0.055] |  |  | [0.037] | [0.083] | [0.061] | [0.062] | [0.062] | [0.019] | [0.087] |
| MI-Race=Unknown (Yes = 1) | -0.094** | -0.093** |  |  | -0.159*** | -0.078 | -0.094** |  | -0.083** |  |  |
|  | [0.043] | [0.042] |  |  | [0.044] | [0.051] | [0.043] |  | [0.038] |  |  |
| MI-Race=Other (Yes = 1) | -0.106*** | -0.106*** |  |  | -0.100** | -0.103*** | -0.118*** | -0.308 | -0.096*** | -0.043* | -0.846*** |
|  | [0.028] | [0.028] |  |  | [0.046] | [0.034] | [0.031] | [0.245] | [0.017] | [0.026] | [0.092] |
| MI-Total General Election Votes | 0.049*** | 0.049*** |  |  | 0.080*** | 0.036** | 0.049*** | 0.064** | 0.041** |  | 0.092* |
|  | [0.015] | [0.015] |  |  | [0.026] | [0.018] | [0.015] | [0.029] | [0.016] |  | [0.054] |
| MI-Total Primary Election Votes | 0.114*** | 0.114*** |  |  | 0.097*** | 0.119*** | 0.114*** | 0.113*** |  |  | 0.167*** |
|  | [0.015] | [0.015] |  |  | [0.030] | [0.018] | [0.015] | [0.017] |  |  | [0.039] |
| MI-Total Special Election Votes | 0.050*** | 0.050*** |  |  | 0.065** | 0.046** | 0.050*** | 0.032* | 0.082*** |  | 0.065*** |
|  | [0.015] | [0.015] |  |  | [0.026] | [0.018] | [0.015] | [0.018] | [0.027] |  | [0.021] |
| MO-Years Since Registration Date | -0.001 |  | -0.001 |  | -0.001 |  | -0.001 | -0.001 | -0.002 | 0.001 | 0.000 |
|  | [0.001] |  | [0.001] |  | [0.001] |  | [0.001] | [0.002] | [0.001] | [0.001] | [0.002] |
| MO-Years Since Registration Date Missing | -0.090 |  | -0.090 |  | -0.089 |  | -0.095 | -0.192 | -0.007 | -0.045 |  |
|  | [0.093] |  | [0.093] |  | [0.093] |  | [0.102] | [0.169] | [0.118] | [0.029] |  |
| MO-Election day age (in years) | 0.000 |  | 0.000 |  | 0.000 |  | 0.000 | -0.001 | 0.001 | -0.002 | -0.001 |
|  | [0.001] |  | [0.001] |  | [0.001] |  | [0.001] | [0.002] | [0.001] | [0.002] | [0.003] |
| MO-Gender=Male (1=yes) | 0.040 |  | 0.040 |  | 0.040 |  | 0.048* | 0.008 | 0.094*** | -0.052 | 0.018 |
|  | [0.026] |  | [0.026] |  | [0.026] |  | [0.028] | [0.045] | [0.035] | [0.064] | [0.061] |
| MO-Gender=Unknown (1=yes) | 0.004 |  | 0.004 |  | 0.005 |  | 0.012 | 0.033 | 0.050 | -0.065 | 0.096 |
|  | [0.085] |  | [0.085] |  | [0.085] |  | [0.104] | [0.196] | [0.123] | [0.041] | [0.123] |
| MO-Race=Black (Yes = 1) | 0.000 |  | 0.000 |  | 0.000 |  | 0.005 | -0.021 | 0.010 | -0.058 | 0.091 |
|  | [0.046] |  | [0.046] |  | [0.046] |  | [0.049] | [0.096] | [0.057] | [0.042] | [0.102] |
| MO-Race=Latino (Yes = 1) | -0.239* |  | -0.239* |  | -0.239* |  | -0.275* | -0.405** | 0.175 | -0.111 |  |
|  | [0.138] |  | [0.138] |  | [0.139] |  | [0.163] | [0.162] | [0.308] | [0.074] |  |
| MO-Race=Unknown (Yes = 1) | -0.098*** |  | -0.098*** |  | -0.095*** |  | -0.114*** |  | -0.104** | -0.063 |  |
|  | [0.025] |  | [0.027] |  | [0.026] |  | [0.037] |  | [0.042] | [0.056] |  |
| MO-Race=Other (Yes = 1) | -0.051 |  | -0.050 |  | -0.050 |  | -0.042 | 0.066 | -0.123*** | -0.062 | 0.083 |
|  | [0.082] |  | [0.082] |  | [0.083] |  | [0.099] | [0.191] | [0.035] | [0.054] | [0.197] |
| MO-Total General Election Votes | 0.061*** |  | 0.061*** |  | 0.061*** |  | 0.061*** | 0.101*** | 0.037 |  | 0.041 |
|  | [0.019] |  | [0.019] |  | [0.019] |  | [0.019] | [0.029] | [0.024] |  | [0.068] |
| MO-Total Primary Election Votes | 0.084*** |  | 0.084*** |  | 0.084*** |  | 0.084*** | 0.086*** |  |  | 0.106*** |
|  | [0.020] |  | [0.020] |  | [0.020] |  | [0.020] | [0.021] |  |  | [0.035] |
| MO-Total Special Election Votes | 0.042** |  | 0.042** |  | 0.042** |  | 0.042** | 0.017 | 0.114*** |  | 0.010 |
|  | [0.018] |  | [0.018] |  | [0.018] |  | [0.018] | [0.021] | [0.039] |  | [0.029] |
| TN-Years Since Registration Date | -0.001 |  |  | -0.001 | -0.001 | -0.001 | -0.001 | -0.003** | 0.002 | 0.001 | -0.003** |
|  | [0.001] |  |  | [0.001] | [0.001] | [0.002] | [0.001] | [0.001] | [0.002] | [0.001] | [0.001] |
| TN-Election day age (in years) | -0.001 |  |  | -0.001 | -0.001 | -0.003** | -0.001 | -0.002 | -0.002 | -0.001 | 0.001 |
|  | [0.001] |  |  | [0.001] | [0.001] | [0.001] | [0.001] | [0.002] | [0.001] | [0.001] | [0.002] |
| TN-Gender=Male (1=yes) | 0.001 |  |  | 0.001 | -0.027 | 0.058 | -0.002 | -0.045 | 0.038 | 0.060 | -0.033 |
|  | [0.023] |  |  | [0.023] | [0.028] | [0.040] | [0.024] | [0.036] | [0.033] | [0.052] | [0.037] |
| TN-Race=Black (Yes = 1) | -0.049 |  |  | -0.049 | -0.061 | -0.054 | -0.051 | -0.030 | -0.060 | -0.036 | -0.086 |
|  | [0.032] |  |  | [0.032] | [0.044] | [0.045] | [0.034] | [0.066] | [0.037] | [0.027] | [0.070] |
| TN-Race=Latino (Yes = 1) | 0.028 |  |  | 0.029 | 0.159 | -0.165** | 0.046 |  | 0.089 | 0.022 | -0.045 |
|  | [0.161] |  |  | [0.161] | [0.226] | [0.069] | [0.197] |  | [0.213] | [0.044] | [0.053] |
| TN-Race=Unknown (Yes = 1) | -0.137*** |  |  | -0.137*** | -0.104** |  | -0.192*** |  | -0.165*** | -0.078 | -0.238 |
|  | [0.038] |  |  | [0.038] | [0.043] |  | [0.033] |  | [0.038] | [0.058] | [0.187] |
| TN-Race=Other (Yes = 1) | -0.050 |  |  | -0.050 | 0.035 | -0.198 | -0.052 | -0.334*** | 0.097 | -0.058 |  |
|  | [0.138] |  |  | [0.138] | [0.186] | [0.123] | [0.159] | [0.102] | [0.237] | [0.042] |  |
| TN-Total General Election Votes | 0.078*** |  |  | 0.078*** | 0.067** | 0.091*** | 0.079*** | 0.113*** | 0.042 |  | 0.082 |
|  | [0.022] |  |  | [0.022] | [0.028] | [0.033] | [0.022] | [0.035] | [0.027] |  | [0.065] |
| TN-Total Primary Election Votes | 0.120*** |  |  | 0.120*** | 0.117*** | 0.124*** | 0.120*** | 0.126*** |  |  | 0.091*** |
|  | [0.015] |  |  | [0.015] | [0.019] | [0.023] | [0.015] | [0.015] |  |  | [0.023] |
| TN-Total Special Election Votes | 0.022 |  |  | 0.022 | 0.010 | 0.029 | 0.023 | 0.011 | 0.051 |  | 0.019 |
|  | [0.022] |  |  | [0.022] | [0.036] | [0.026] | [0.022] | [0.023] | [0.068] |  | [0.024] |
| Constant | 0.015 | 0.015 | 0.057 | 0.130*** | -0.045 | 0.012 | -0.035 | -0.374*** | 0.008 | 0.085 | -0.706** |
|  | [0.044] | [0.044] | [0.055] | [0.050] | [0.070] | [0.041] | [0.043] | [0.129] | [0.042] | [0.062] | [0.276] |
| Observations | 4007 | 1833 | 1047 | 1127 | 2349 | 1658 | 3670 | 1524 | 2146 | 337 | 718 |
| R-squared | 0.395 | 0.377 | 0.323 | 0.438 | 0.376 | 0.420 | 0.379 | 0.242 | 0.079 | 0.165 | 0.299 |

Note: OLS regression coefficients with robust standard errors in brackets. Dependent variable is voted in 2014 primary election (1=yes, 0=no). All models include state x voter history x district competitiveness fixed effects. Weighted analysis. *** p<0.01, ** p<0.05, * p<0.1

# Table S6. Full Regression Results for Table S4, Panel B

| VARIABLES | (1) Entire Sample | (2) State=Michigan | (3) State= Missouri | (4) State= Tennessee | (5) No Competitive House Primary | (6) Either House Primary Competitive | (7) Ever Voters | (8) Have Voted in Primary | (9) Have Voted, but Never in Primary | (10) No Prior History of Voting | (11) Predicted Turnout > 70% |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Voter treatment versus Voting treatment (1=Voter, 0=Voting) | -0.015 | -0.004 | -0.038 | -0.009 | -0.025 | 0.000 | -0.015 | -0.015 | -0.011 | -0.014 | 0.010 |
| | [0.014] | [0.020] | [0.029] | [0.026] | [0.019] | [0.021] | [0.015] | [0.026] | [0.018] | [0.031] | [0.033] |
| MI-Years Since Registration Date | 0.000 | 0.000 | | | 0.001 | -0.001 | 0.000 | 0.000 | 0.000 | -0.002 | 0.001 |
| | [0.001] | [0.001] | | | [0.002] | [0.001] | [0.001] | [0.002] | [0.001] | [0.002] | [0.002] |
| MI-Years Since Registration Date Missing | 0.219** | 0.219** | | | | 0.224** | 0.311** | 0.248*** | 0.381 | 0.000 | 0.329*** |
| | [0.109] | [0.109] | | | | [0.124] | [0.108] | [0.067] | [0.326] | [0.040] | [0.108] |
| MI-Election day age (in years) | 0.000 | 0.000 | | | 0.002 | 0.000 | 0.001 | 0.003 | 0.000 | -0.001 | 0.006* |
| | [0.001] | [0.001] | | | [0.001] | [0.001] | [0.001] | [0.002] | [0.001] | [0.001] | [0.003] |
| MI-Gender=Male (1=yes) | 0.013 | 0.013 | | | 0.018 | 0.010 | 0.007 | -0.018 | 0.021 | 0.085* | 0.062 |
| | [0.020] | [0.020] | | | [0.039] | [0.024] | [0.022] | [0.045] | [0.024] | [0.044] | [0.070] |
| MI-Race=Black (Yes = 1) | 0.026 | 0.026 | | | -0.011 | 0.038 | 0.044 | 0.049 | 0.039 | -0.049 | 0.061 |
| | [0.042] | [0.042] | | | [0.110] | [0.044] | [0.048] | [0.095] | [0.055] | [0.030] | [0.181] |
| MI-Race=Latino (Yes = 1) | -0.002 | -0.002 | | | -0.045 | 0.031 | 0.003 | 0.174** | -0.009 | -0.037 | 0.201** |
| | [0.077] | [0.077] | | | [0.045] | [0.137] | [0.084] | [0.070] | [0.086] | [0.043] | [0.094] |
| MI-Race=Unknown (Yes = 1) | -0.008 | -0.002 | | | | -0.002 | -0.007 | | -0.003 | | |
| | [0.020] | [0.021] | | | | [0.024] | [0.021] | | [0.022] | | |
| MI-Race=Other (Yes = 1) | -0.127*** | -0.127*** | | | -0.151** | -0.117** | -0.144*** | -0.318 | -0.114*** | -0.087* | -0.808*** |
| | [0.038] | [0.038] | | | [0.062] | [0.045] | [0.043] | [0.242] | [0.021] | [0.052] | [0.103] |
| MI-Total General Election Votes | 0.050*** | 0.051*** | | | 0.040 | 0.055** | 0.050*** | 0.048 | 0.053** | | 0.111* |
| | [0.018] | [0.018] | | | [0.033] | [0.022] | [0.018] | [0.035] | [0.021] | | [0.064] |
| MI-Total Primary Election Votes | 0.108*** | 0.108*** | | | 0.119*** | 0.101*** | 0.107*** | 0.105*** | | | 0.129*** |
| | [0.018] | [0.018] | | | [0.035] | [0.021] | [0.018] | [0.020] | | | [0.046] |
| MI-Total Special Election Votes | 0.050*** | 0.050*** | | | 0.062** | 0.045** | 0.050*** | 0.044** | 0.061* | | 0.061*** |
| | [0.017] | [0.017] | | | [0.029] | [0.021] | [0.017] | [0.020] | [0.034] | | [0.023] |
| MO-Years Since Registration Date | -0.001 | | -0.001 | | -0.001 | | -0.001 | -0.001 | -0.002 | 0.000 | -0.001 |
| | [0.001] | | [0.001] | | [0.001] | | [0.001] | [0.002] | [0.002] | [0.002] | [0.003] |
| MO-Years Since Registration Date Missing | -0.122 | | -0.119 | | -0.121 | | -0.141 | -0.128 | -0.185*** | -0.030 | |
| | [0.116] | | [0.116] | | [0.116] | | [0.136] | [0.201] | [0.063] | [0.030] | |
| MO-Election day age (in years) | 0.001 | | 0.001 | | 0.001 | | 0.001 | 0.001 | 0.001 | 0.001 | 0.002 |
| | [0.001] | | [0.001] | | [0.001] | | [0.001] | [0.002] | [0.001] | [0.001] | [0.003] |
| MO-Gender=Male (1=yes) | 0.069** | | 0.070** | | 0.070** | | 0.071** | 0.041 | 0.110** | 0.036 | 0.037 |
| | [0.031] | | [0.031] | | [0.031] | | [0.033] | [0.052] | [0.055] | [0.055] | [0.068] |
| MO-Gender=Unknown (1=yes) | 0.043 | | 0.045 | | 0.043 | | 0.051 | 0.285** | 0.052 | -0.013 | 0.192 |
| | [0.087] | | [0.087] | | [0.088] | | [0.108] | [0.120] | [0.124] | [0.013] | [0.168] |
| MO-Race=Black (Yes = 1) | -0.017 | | -0.019 | | -0.018 | | -0.014 | -0.062 | -0.003 | -0.068 | 0.034 |
| | [0.054] | | [0.054] | | [0.054] | | [0.057] | [0.106] | [0.068] | [0.066] | [0.148] |
| MO-Race=Latino (Yes = 1) | -0.197 | | -0.198 | | -0.197 | | -0.197 | -0.343* | 0.374 | -0.261 | |
| | [0.200] | | [0.200] | | [0.201] | | [0.208] | [0.200] | [0.379] | [0.218] | |
| MO-Race=Unknown (Yes = 1) | -0.098** | | -0.086* | | -0.092** | | -0.146*** | | -0.132** | 0.000 | |
| | [0.045] | | [0.047] | | [0.046] | | [0.046] | | [0.052] | [0.050] | |
| MO-Race=Other (Yes = 1) | -0.153** | | -0.148** | | -0.151** | | -0.202** | -0.229 | -0.124*** | -0.010 | -0.216 |
| | [0.072] | | [0.072] | | [0.072] | | [0.094] | [0.210] | [0.046] | [0.052] | [0.216] |
| MO-Total General Election Votes | 0.070*** | | 0.071*** | | 0.071*** | | 0.070*** | 0.110*** | 0.047* | | 0.115 |
| | [0.022] | | [0.023] | | [0.023] | | [0.022] | [0.035] | [0.028] | | [0.088] |
| MO-Total Primary Election Votes | 0.073*** | | 0.072*** | | 0.073*** | | 0.073*** | 0.074*** | | | 0.081* |
| | [0.023] | | [0.023] | | [0.023] | | [0.023] | [0.024] | | | [0.043] |
| MO-Total Special Election Votes | 0.038* | | 0.038* | | 0.038* | | 0.038* | 0.011 | 0.125*** | | 0.012 |
| | [0.021] | | [0.021] | | [0.021] | | [0.021] | [0.024] | [0.044] | | [0.033] |
| TN-Years Since Registration Date | 0.000 | | | 0.000 | 0.001 | -0.001 | 0.000 | -0.001 | 0.002 | 0.002 | -0.001 |
| | [0.001] | | | [0.001] | [0.001] | [0.002] | [0.001] | [0.002] | [0.002] | [0.002] | [0.001] |
| TN-Election day age (in years) | -0.001 | | | -0.001 | -0.001 | -0.003* | -0.001 | -0.002 | -0.001 | -0.001 | 0.003 |
| | [0.001] | | | [0.001] | [0.001] | [0.002] | [0.001] | [0.002] | [0.001] | [0.002] | [0.002] |
| TN-Gender=Male (1=yes) | 0.000 | | | 0.000 | -0.039 | 0.091* | -0.007 | -0.075* | 0.052 | 0.097 | -0.034 |
| | [0.027] | | | [0.028] | [0.033] | [0.047] | [0.029] | [0.043] | [0.040] | [0.072] | [0.044] |
| TN-Race=Black (Yes = 1) | -0.045 | | | -0.045 | -0.058 | -0.050 | -0.046 | -0.007 | -0.066 | -0.063 | -0.031 |
| | [0.037] | | | [0.037] | [0.052] | [0.053] | [0.039] | [0.080] | [0.043] | [0.044] | [0.087] |
| TN-Race=Latino (Yes = 1) | 0.090 | | | 0.091 | 0.333 | -0.148** | 0.126 | | 0.169 | 0.027 | 0.053 |
| | [0.215] | | | [0.216] | [0.323] | [0.071] | [0.279] | | [0.296] | [0.060] | [0.055] |
| TN-Race=Unknown (Yes = 1) | -0.121*** | | | -0.121*** | -0.084* | -0.179*** | -0.158*** | -0.125 | -0.407 |
| | [0.043] | | | [0.043] | [0.051] | | [0.044] | | [0.051] | [0.090] | [0.262] |
| TN-Race=Other (Yes = 1) | -0.044 | | | -0.044 | 0.064 | -0.238 | -0.044 | -0.294** | 0.099 | | |
| | [0.164] | | | [0.164] | [0.224] | [0.168] | [0.164] | [0.125] | [0.241] | | |
| TN-Total General Election Votes | 0.105*** | | | 0.105*** | 0.095*** | 0.110*** | 0.105*** | 0.167*** | 0.038 | | 0.075 |
| | [0.025] | | | [0.025] | [0.031] | [0.039] | [0.025] | [0.040] | [0.029] | | [0.069] |
| TN-Total Primary Election Votes | 0.120*** | | | 0.120*** | 0.122*** | 0.110*** | 0.121*** | 0.124*** | | | 0.077*** |
| | [0.017] | | | [0.017] | [0.022] | [0.028] | [0.017] | [0.018] | | | [0.026] |
| TN-Total Special Election Votes | 0.033 | | | 0.033 | 0.007 | 0.055* | 0.033 | 0.025 | -0.011 | | 0.030 |
| | [0.023] | | | [0.023] | [0.038] | [0.030] | [0.023] | [0.025] | [0.071] | | [0.023] |
| Constant | 0.039 | 0.034 | -0.023 | 0.128* | -0.036 | 0.036 | -0.027 | -0.331** | 0.004 | 0.148 | -0.695* |
| | [0.059] | [0.059] | [0.061] | [0.067] | [0.088] | [0.058] | [0.055] | [0.146] | [0.056] | [0.102] | [0.385] |
| | | | | | | | | | | | |
| Observations | 2827 | 1282 | 786 | 759 | 1666 | 1161 | 2610 | 1105 | 1505 | 217 | 510 |
| R-squared | 0.393 | 0.367 | 0.320 | 0.469 | 0.383 | 0.410 | 0.379 | 0.244 | 0.079 | 0.236 | 0.321 |

Note: OLS regression coefficients with robust standard errors in brackets. Dependent variable is voted in 2014 primary election (1=yes, 0=no). All models include state x voter history x district competitiveness fixed effects. Weighted analysis. *** p<0.01, ** p<0.05, * p<0.1

| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
|---|---|---|---|---|---|---|---|---|---|---|
| VARIABLES | Entire Sample | State=Michigan | State= Missouri | No Competitive House Primary | Either House Primary Competitive | Ever Voters | Have Voted in Primary | Have Voted, but Never in Primary | No Prior History of Voting | Predicted Turnout > 70% |
| Voter treatment versus Voting treatment (1=Voter, 0=Voting) | 0.002 | 0.009 | -0.012 | -0.010 | 0.013 | 0.004 | 0.014 | 0.000 | -0.041 | 0.065 |
| | [0.025] | [0.029] | [0.047] | [0.037] | [0.034] | [0.027] | [0.055] | [0.028] | [0.034] | [0.088] |
| MI-Years Since Registration Date | -0.001 | -0.001 | | -0.001 | -0.002 | -0.001 | -0.005 | 0.001 | -0.001 | -0.004 |
| | [0.001] | [0.001] | | [0.003] | [0.002] | [0.002] | [0.003] | [0.002] | [0.002] | [0.004] |
| MI-Years Since Registration Date Missing | 0.112 | 0.113 | | | 0.122 | 0.153 | 0.191 | -0.112 | 0.090 | 0.351* |
| | [0.091] | [0.091] | | | [0.085] | [0.102] | [0.126] | [0.076] | [0.084] | [0.190] |
| MI-Election day age (in years) | 0.001 | 0.001 | | 0.003 | 0.001 | 0.001 | 0.003 | 0.000 | -0.002 | 0.002 |
| | [0.001] | [0.001] | | [0.002] | [0.001] | [0.001] | [0.003] | [0.001] | [0.002] | [0.006] |
| MI-Gender=Male (1=yes) | -0.048 | -0.047 | | -0.056 | -0.035 | -0.056* | -0.141** | -0.010 | 0.052 | 0.012 |
| | [0.030] | [0.030] | | [0.060] | [0.034] | [0.032] | [0.067] | [0.034] | [0.052] | [0.124] |
| MI-Race=Black (Yes = 1) | 0.040 | 0.041 | | 0.185 | 0.009 | 0.054 | 0.092 | 0.037 | -0.028 | 0.179* |
| | [0.052] | [0.051] | | [0.193] | [0.048] | [0.058] | [0.093] | [0.072] | [0.036] | [0.103] |
| MI-Race=Latino (Yes = 1) | 0.080 | 0.082 | | -0.141** | 0.140 | 0.107 | | 0.103 | -0.027 | |
| | [0.142] | [0.142] | | [0.060] | [0.181] | [0.162] | | [0.154] | [0.033] | |
| MI-Race=Other (Yes = 1) | -0.055** | -0.055** | | -0.081 | -0.054* | -0.068** | | -0.078*** | -0.058 | |
| | [0.026] | [0.026] | | [0.059] | [0.032] | [0.029] | | [0.026] | [0.070] | |
| MI-Total General Election Votes | 0.008 | 0.009 | | -0.060 | 0.031 | 0.008 | 0.005 | 0.014 | | 0.152 |
| | [0.030] | [0.030] | | [0.058] | [0.036] | [0.030] | [0.059] | [0.034] | | [0.103] |
| MI-Total Primary Election Votes | 0.106*** | 0.106*** | | 0.088* | 0.111*** | 0.105*** | 0.103*** | | | 0.142** |
| | [0.026] | [0.026] | | [0.051] | [0.031] | [0.026] | [0.028] | | | [0.067] |
| MI-Total Special Election Votes | 0.048* | 0.048* | | 0.120** | 0.024 | 0.048* | 0.065** | 0.014 | | 0.060 |
| | [0.025] | [0.025] | | [0.052] | [0.028] | [0.025] | [0.030] | [0.045] | | [0.042] |
| MO-Years Since Registration Date | 0.001 | | 0.001 | 0.001 | | 0.001 | -0.001 | 0.002 | 0.004 | 0.000 |
| | [0.002] | | [0.002] | [0.002] | | [0.002] | [0.003] | [0.003] | [0.005] | [0.005] |
| MO-Years Since Registration Date Missing | -0.485*** | | -0.483*** | -0.483*** | | -0.491*** | -0.686*** | -0.203** | | |
| | [0.121] | | [0.124] | [0.124] | | [0.121] | [0.108] | [0.082] | | |
| MO-Election day age (in years) | 0.003* | | 0.003* | 0.003* | | 0.003* | 0.005 | 0.002 | 0.000 | 0.003 |
| | [0.001] | | [0.001] | [0.001] | | [0.002] | [0.004] | [0.002] | [0.001] | [0.007] |
| MO-Gender=Male (1=yes) | 0.104** | | 0.106** | 0.105** | | 0.104** | 0.105 | 0.087 | 0.060 | -0.007 |
| | [0.049] | | [0.049] | [0.050] | | [0.051] | [0.093] | [0.063] | [0.069] | [0.154] |
| MO-Gender=Unknown (1=yes) | 0.035 | | 0.030 | 0.031 | | 0.108 | | 0.085 | 0.004 | |
| | [0.066] | | [0.069] | [0.068] | | [0.100] | | [0.117] | [0.031] | |
| MO-Race=Black (Yes = 1) | -0.078 | | -0.080 | -0.080 | | -0.086 | -0.101 | -0.094 | -0.048 | 0.212* |
| | [0.077] | | [0.078] | [0.078] | | [0.086] | [0.169] | [0.095] | [0.056] | [0.127] |
| MO-Race=Latino (Yes = 1) | 0.371 | | 0.368 | 0.369 | | 0.410 | 0.489*** | 0.405 | -0.023 | |
| | [0.237] | | [0.238] | [0.239] | | [0.252] | [0.116] | [0.403] | [0.034] | |
| MO-Race=Unknown (Yes = 1) | -0.073 | | -0.066 | -0.067 | | -0.135** | | -0.090 | -0.019 | |
| | [0.056] | | [0.061] | [0.059] | | [0.064] | | [0.074] | [0.042] | |
| MO-Race=Other (Yes = 1) | -0.016 | | -0.015 | -0.015 | | | | | -0.045 | |
| | [0.057] | | [0.058] | [0.058] | | | | | [0.058] | |
| MO-Total General Election Votes | 0.057 | | 0.057 | 0.057 | | 0.057 | 0.053 | 0.053 | | 0.028 |
| | [0.038] | | [0.039] | [0.039] | | [0.038] | [0.071] | [0.044] | | [0.191] |
| MO-Total Primary Election Votes | 0.035 | | 0.034 | 0.034 | | 0.035 | 0.041 | | | 0.110 |
| | [0.038] | | [0.038] | [0.038] | | [0.038] | [0.041] | | | [0.076] |
| MO-Total Special Election Votes | 0.012 | | 0.012 | 0.012 | | 0.012 | -0.002 | 0.066 | | 0.021 |
| | [0.034] | | [0.035] | [0.035] | | [0.034] | [0.042] | [0.074] | | [0.064] |
| Constant | 0.038 | 0.035 | -0.151* | -0.057 | 0.003 | 0.018 | -0.060 | 0.019 | 0.171 | -0.456 |
| | [0.084] | [0.084] | [0.087] | [0.145] | [0.070] | [0.079] | [0.258] | [0.083] | [0.173] | [0.670] |
| Observations | 885 | 585 | 300 | 468 | 417 | 813 | 308 | 505 | 72 | 110 |
| R-squared | 0.391 | 0.421 | 0.333 | 0.383 | 0.409 | 0.379 | 0.202 | 0.085 | 0.126 | 0.188 |

Note: OLS regression coefficients with robust standard errors in brackets. Dependent variable is voted in 2014 primary election (1=yes, 0=no). All models include state x voter history x district competitiveness fixed effects. Weighted analysis. *** p<0.01, ** p<0.05, * p<0.1

**Table S8. Full Regression Results for Figure 1**

| VARIABLES | (1) |
|---|---|
| Treat=GOTV Message | 0.021** |
| | [0.009] |
| Treat=Voter (Noun) | 0.009 |
| | [0.009] |
| Treat=Voting (Verb) | 0.013 |
| | [0.009] |
| MI-Years Since Registration Date | 0.000 |
| | [0.000] |
| MI-Years Since Registration Date Missing | 0.067 |
| | [0.052] |
| MI-Election day age (in years) | 0.000 |
| | [0.000] |
| MI-Gender=Male (1=yes) | 0.013 |
| | [0.010] |
| MI-Gender=Unknown (1=yes) | -0.132*** |
| | [0.035] |
| MI-Race=Black (Yes = 1) | 0.015 |
| | [0.017] |
| MI-Race=Latino (Yes = 1) | -0.026 |
| | [0.031] |
| MI-Race=Unknown (Yes = 1) | -0.072*** |
| | [0.018] |
| MI-Race=Other (Yes = 1) | -0.028 |
| | [0.023] |
| MI-Total General Election Votes | 0.061*** |
| | [0.009] |
| MI-Total Primary Election Votes | 0.123*** |
| | [0.009] |
| MI-Total Special Election Votes | 0.056*** |
| | [0.009] |
| MO-Years Since Registration Date | -0.001 |
| | [0.001] |
| MO-Years Since Registration Date Missing | -0.115* |
| | [0.063] |
| MO-Election day age (in years) | -0.001 |
| | [0.001] |
| MO-Gender=Male (1=yes) | 0.039** |
| | [0.016] |
| MO-Gender=Unknown (1=yes) | 0.005 |
| | [0.055] |
| MO-Race=Black (Yes = 1) | -0.042 |
| | [0.028] |
| MO-Race=Latino (Yes = 1) | -0.187*** |
| | [0.070] |
| MO-Race=Unknown (Yes = 1) | -0.119*** |
| | [0.024] |
| MO-Race=Other (Yes = 1) | -0.019 |
| | [0.058] |
| MO-Total General Election Votes | 0.083*** |
| | [0.012] |
| MO-Total Primary Election Votes | 0.083*** |
| | [0.012] |
| MO-Total Special Election Votes | 0.031*** |
| | [0.011] |
| TN-Years Since Registration Date | 0.000 |
| | [0.001] |
| TN-Election day age (in years) | -0.002*** |
| | [0.001] |
| TN-Gender=Male (1=yes) | 0.017 |
| | [0.014] |
| TN-Gender=Unknown (1=yes) | -0.053* |
| | [0.028] |
| TN-Race=Black (Yes = 1) | -0.080*** |
| | [0.020] |
| TN-Race=Latino (Yes = 1) | 0.141 |
| | [0.123] |
| TN-Race=Unknown (Yes = 1) | -0.179*** |
| | [0.026] |
| TN-Race=Other (Yes = 1) | -0.037 |
| | [0.081] |
| TN-Total General Election Votes | 0.077*** |
| | [0.013] |
| TN-Total Primary Election Votes | 0.106*** |
| | [0.009] |
| TN-Total Special Election Votes | 0.043*** |
| | [0.014] |
| Constant | -0.002 |
| | [0.024] |
| | |
| Observations | 11099 |
| R-squared | 0.405 |

Note: OLS regression coefficients with robust standard errors in brackets. Dependent variable is voted in 2014 primary election (1=yes, 0=no).Model includes state x voter history x district competitiveness fixed effects. Weighted analysis. *** p<0.01, ** p<0.05, * p<0.1