

SMS and GOTV:  
Analyzing the Impact of Text Messaging  
on Voter Participation

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### **Abstract**

Since the early days of SMS technology, the consensus of academics has shifted to coalesce around the idea that despite their impersonal nature of communication, text messaging can have a significant impact on turnout in get-out-the-vote (GOTV) efforts. This study seeks to take this idea further and examine the second order effects as to whether and how the makeup of voting populations changes due to these interventions, particularly with respect to groups with prior high and low propensity for participation in elections. While the literature is still emerging on this ever-developing topic, the initial trajectory of effects seem to demonstrate a diminishing participation gap over time, with SMS first enlarging this gap and reversing over time to now most effectively reach voters with low prior propensity to vote. Due to the interconnected nature of modern information and communications technologies (ICTs), valuable theories and lessons derived from the literature surrounding SMS efforts should also be taken into consideration when discussing various other platforms and intents in messaging.

## Introduction

The phones of two strangers buzz with the receipt of an incoming text. The message is unprompted and simply a short reminder sent out automatically to remind the individuals of the upcoming election tomorrow. While this may seem to be a relatively mundane part of modern life, the reception to the message by each person may vary wildly in its effect and its potential effects on democracy in a digital age. If the first individual is relatively involved in political life and has a history of active participation in elections, this message could have no effect as they already intend to vote or it could be a needed reminder in the chaos of modern life to make a plan to get to the polls for this particular event. Now, the second person may instead be someone who has registered to vote along the way, but does not actively participate on election day. The question here becomes whether or not this outreach in messaging prompts the individual to finally become involved and further inquire into how to get to the polls or rather it simply goes ignored in favor of continuing to sit out of participatory democracy.

SMS text messaging has existed with widespread adoption for over a decade. However, experts and practitioners still do not understand the full implications of the technology on political systems, particularly those of democracies. Organizations with a vested interest in the results of elections, such as non-partisan GOTV groups, individual campaigns, and political parties, have all taken to text messaging as a way to potentially form a different and cost-effective connection with constituents and attempt to increase voter mobilization and participation rates come election day. The existing literature on the topic of SMS messaging on GOTV efforts has thus far given priority to understanding the important aspect of measuring the magnitude of effect on voter turnout overall of text message interventions. However, alongside

this effort, secondary impacts as to how these instruments affect the makeup of the resulting voter population must also be a priority to understand for society at-large. While the current literature is relatively sparse at this point, the historical trajectory of effects through field experiments seems to demonstrate a shrinking participation gap over time between individuals with a prior high propensity to vote and those who are already less likely to be involved in political processes.

### **Methodology**

The primary question of consideration throughout this study considers to what extent do nonpartisan GOTV text messaging efforts change the makeup of an individual electorate in terms of the balance of high- and low-propensity voters. This understanding of a representation gap further fueled by individual technologies is critical to the functioning of modern democracy in practice. Essentially the three possible hypotheses put forward in existing research are that text messaging has no significant effect on the participation gap due to its impersonal nature, it most encourages the voting tendencies of individuals already likely to vote, or the adoption rates of texting has the largest effect on voters with low propensity due to the general demographic makeup of that segment.

### **Limitations**

In an effort to strengthen the conclusion drawn from available research, this project benefits from imposing restrictions to narrow the universe of situations under consideration. First, only studies examining text message interventions utilizing non-partisan messaging from independent groups are considered. This limitation of non-partisan messaging seeks to level the

playing field and isolate any effects due to particular ideological messages within individual studies that may not be applicable to wider situations.

Additionally, only relatively recent elections in which SMS has been an established and widely adopted technology are included. Rather than seeking to understand the effects of SMS in elections during the time period in which it was a new and emerging technology, this project looks only to understand the more recent current effects of the platform in electoral situations. The time frame for elections covered by this examination spans from November 2006 through November 2016.

## **Literature**

The fundamental nature of this topic requires elections and technological interventions to generate primary research. As a result, in addition to the limitation of this project's scope, the findings presented throughout this study derive from analysis of previously-conducted experiments and analyses throughout the literature. While academic research on the topic of SMS effects on GOTV efforts is still emerging, various scholars have put forward results that demonstrate difference in turnout effects across geographical, temporal, and political environments. These common findings, as well as the reconciliation of dissenting results, leads to nuanced lessons for both SMS interventions and generalized digital GOTV efforts.

The cases covered in the literature span a variety of nationalities, political systems, and levels of analysis. This study reviews literature covering elections in the United States, Norway, and Denmark. Due to the relatively small universe of literature meeting the imposed restrictions, further limiting cases to particular levels of analysis was not possible. To this end, this study features analysis of municipal, regional, and national elections data.

## **Voter Propensity**

A central concept to this study is the idea of voter propensity. This idea seeks to capture the aggregated likelihood of any individual participating in an election under consideration. Factors including, but not limited to, income, education, race, family status, and location can all play an important role in the calculation as to whether an individual participates in an election. The role and magnitude each individual factor plays on the overall propensity also varies depending on the localization and timing of elections, though most of these are generally consistent at least in the direction of effect.

This study deals with a variety of elections across years, countries, and scales. While individual socio-economic factors leading to voter propensity, particularly age or race, may be notable in any singular electoral instance, voting history stands as a de facto metric for examining outcomes with respect to participation gaps. In practice, this essentially boils down to analyzing the difference in outcomes between individuals who historically have participated in elections compared to those who are novice voters and generally disengaged from the political process.

## **Theoretical Frameworks**

### **Noticeable Reminder Theory**

Traditionally, researchers have understood impersonal interactions lacking a social component to be less effective in mobilizing voters than the alternative due to the absence of a social connection between the individual and the political process.<sup>1</sup> However, Dale and Strauss suggest in their bedrock work that impersonal messaging, such as through SMS, can effectively

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<sup>1</sup> Dale and Strauss, "Don't Forget to Vote," p. 787.

lead to increased mobilization.<sup>2</sup> The previous leading explanation of effective voter mobilization, dubbed Social Occasion theory (SOT) centered around the idea of social connectedness, “the extent to which a voter feels this sense of belonging at the polls.”<sup>3</sup> Through experimentation, they conclude that their own framework of Noticeable Reminder theory (NRT) coexists with SOT and provides a way of understanding how impersonal messaging can reinforce the activity of individuals already engaged in the political process. They put forth the idea that individual voters have already paid the upfront cost of being involved in the process by registering to vote. Thus, they have effectively signaled an intent to vote, and text messaging serves as an appropriate reminder to do so.<sup>4</sup>

This explanation seems to suggest that text messages may effectively reinforce biases to increase follow-through of voters with a relatively high propensity to participate, rather than reaching new and unengaged voters. Dale and Strauss’ NRT has effectively made its way to become a foundation of subsequent research on the topic of SMS messaging and appears throughout the literature other scholars have built upon. Malhotra et al. largely reproduce the findings of Dale and Strauss, though slightly changing the experiment to isolate text messages without further social contact.<sup>5</sup> The result of these tests emphasize the effects of text reminders on habitual voters and the relative low impact on casual voters.

### **Spillover Effects**

In addition to the direct effects examined by other scholars, Bhatti et al. also put forth the notion that GOTV text messages can have second-order effects.<sup>6</sup> They consider these spillover

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<sup>2</sup> Ibid., pp. 801–02.

<sup>3</sup> Ibid., p. 788.

<sup>4</sup> Ibid., pp. 791–92; 802.

<sup>5</sup> Malhotra et al., “Text Messages as Mobilization Tools,” p. 676.

<sup>6</sup> Bhatti et al., “How Voter Mobilization,” p. 46–48.

effects to be the phenomena where members within household networks receiving SMS interventions then encourage other members to vote as well with them. These effects can absolutely have a role on turnout rates between different segments of the population beyond the initial intent of mobilizing the initial individual. In particular, Bhatti et al. examine the bilateral dynamics between multi-generational homes, as well as behavioral differences in voters newly-engaged to the political process which may contribute to differences of interest.<sup>7</sup>

### **Electoral Case Studies**

As SMS technology has become an ever-growing force in electoral situations, various academics have conducted research into the magnitude and effects of these tactics. In different situations, the results have sometimes seemed to present contradictory results which require further examination to explain.

#### **United States (2006)**

In their work introducing the framework of NRT, Dale and Strauss conducted an experiment alongside various voter registration and advocacy groups which studied 8,053 registered voters leading up to the 2006 United States election.<sup>8</sup> The day before the election subjects received various messaging treatments, such as appealing to civic duty, promoting the possibility of close elections, and providing information to a voter information hotline.

Overall, Dale and Strauss found “that text messaging is a powerful tool for mobilizing voters” with an intent-to-treat effect of 3.0 percentage points.<sup>9</sup> Interestingly, this study found a large gap in effects in young voters where 18- and 19-year olds fail to find a meaningful effect,

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<sup>7</sup> Ibid.

<sup>8</sup> Dale and Strauss, “Don’t Forget to Vote,” pp. 794–796.

<sup>9</sup> Ibid., p. 796.



but voters aged 20 to 21 have a statistically significant effect of 8.1%.<sup>10</sup> Dale and Strauss also found voters who have reregistered to vote to have a significant effect of 4.5% compared to newly-registered voters with an insignificant 2.3%.<sup>11</sup> However, voters who have reregistered and previously voted in an election were found to only have an effect of 4.0%, which was deemed statistically insignificant at the 95% confidence level. Overall, Dale and Strauss' research seems to indicate habitual participants, compared to novice voters previously disengaged from the process, have the largest impact from these treatments. This both supports the authors' idea of NRT as well as the primary concern in this analysis that text messaging leads to a widened participation gap to the benefit of high-propensity voters.

### **San Mateo County, CA (2009)**

Malhorta et al. sought to reproduce and expand upon the work presented by Dale and Strauss by conducting field experiments in San Mateo County, California.<sup>12</sup> Rather than the relatively high-profile national midterm elections, this analysis was primarily conducted with 14,060 registered voters during 2009 local off-cycle elections. The day before the election, individuals received the exact same text message which evoked the largest treatment effect found by Dale and Strauss.

Of particular relevance to this analysis, the authors examined heterogeneity in effect of SMS based on previous voting history in four previous elections.<sup>13</sup> The result of this analysis found a particularly large treatment effect amongst habitual voters receiving a cold text of 16.2% with significance at the 0.01 level, whereas none of their comparison subgroups manage to reach

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<sup>10</sup> Ibid., pp. 797–798

<sup>11</sup> Ibid., pp. 798–799.

<sup>12</sup> Malhotra et al., “Text Messages as Mobilization Tools,” pp. 665–66; 669–70.

<sup>13</sup> Ibid., p. 675.

any level of significance.<sup>14</sup> This further supports the idea that text message reminders exacerbate the participation gap between high- and low-propensity voters in elections.

### **Denmark (2013, 2014)**

Also building on the work of Dale and Strauss, Bhatti et al. tested the potential effects of SMS voting reminders in a non-American context by conducting experiments in Denmark during 2013 municipal and 2014 European Parliament elections.<sup>15</sup> While these were not national elections, the authors particularly note the cultural importance of elections and the high interest received by even these off-cycle elections. The authors partnered with reputable organizations to study tens of thousands of subjects, with particular attention paid to the topics of timing, targeting non-western immigrants, and young voters.<sup>16</sup> While they are inconclusive on the impact of the effect, the Bhatti et al. speculate that their focus on youth in particular may have had an effect on the size of the impact.<sup>17</sup> They cannot be certain in attributing the results to a higher effect due to avoiding a ceiling on the effect with older voters or if it may have been higher had more older individuals been included as a text message to a population who generally receives fewer would have been more noticeable.

Overall, the authors found the general impact of receiving a text message to have a positive effect on the point estimate likelihood of voting, though not always with statistical significance.<sup>18</sup> With regards to the implications of their findings, the authors succinctly summarize:

The similarity of the effects between the US and Denmark are somewhat remarkable for two reasons. First, as the turnout rate in Denmark is substantially higher there are simply

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<sup>14</sup> Malhotra et al., “Text Messages as Mobilization Tools,” p. 675.

<sup>15</sup> Bhatti et al., “Moving the Campaign,” pp. 291; 297.

<sup>16</sup> Ibid., p. 299–301.

<sup>17</sup> Ibid., pp. 306–307.

<sup>18</sup> Ibid., p. 302.

fewer voters to mobilize. Second, Danish voters do not need to register and we treat all voters and not just those who already demonstrated some interest in voting through registering.<sup>19</sup>

Voters in Denmark are automatically registered and mailed a polling card prior to the election.<sup>20</sup>

Thus, they do not pay the same upfront cost of voting by needing to go through bureaucratic hurdles of registering to vote in their home district which NRT expects. While the results ultimately support the outcome of NRT, this failing of a core tenet of the theory raises problems for its explanation of behavior of having paid upfront costs to vote.

### **Norway (2015)**

Bergh, Christensen, and Matland also studied the effects of SMS interventions in Norwegian elections in 2015.<sup>21</sup> Like the Danish elections in Bhatti et al., the authors highlight cultural differences between American and Norwegian elections, including higher interest, limited role of individual candidates compared to parties, and the relative infrequency of elections. In total, the authors were able to study the effects of SMS reminders sent over the week leading up to the election to over half a million Norwegian voters.<sup>22</sup>

As with the other studies thus far, the authors found that text messages effectively mobilize voters in their analysis.<sup>23</sup> However, this study explicitly contradicts the findings of the American experiments in that messages brought in voters with lower propensity to vote at the highest rates, including immigrants and younger voters. While the previous Danish study was unable to directly attribute its effects on any particular subset of voters, its focus on immigrants

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<sup>19</sup> Ibid., p. 306.

<sup>20</sup> Ibid., p. 297.

<sup>21</sup> Bergh, Christensen, and Matland, “When Is a Reminder Enough?”, p. 6.

<sup>22</sup> Ibid., pp. 9–10.

<sup>23</sup> Ibid., pp. 19–20.

and youth may also support these findings in its magnitude for a European or Nordic context compared to the American results.

### **United States (2016)**

Leading up to the 2016 United States presidential election, Vote.org studied the SMS outreach response of 324,935 voters who had submitted contact information (including cell phone number) to their website<sup>24</sup>. Voters were assigned one of three messaging types leading up to election day, stratified upon socio-economic factors.

Like other studies, this experiment confirmed that text message intervention compared to a control has statistically significant effects.<sup>25</sup> This study is important in the context of the portfolio of cases so far because it stands as the first case where an American experiment points to evidence of younger and lower-propensity voters being more responsive to SMS interventions than other groups.<sup>26</sup> While some of the effects did not meet thresholds of statistical significance, the effect of SMS with socially pressuring messages did meet this criteria and demonstrates evidence for being a particularly useful tool for low-propensity voter mobilization.

### **Analysis & Discussion**

While SMS has been an established technology for years now, it seems to be the case that its place within society as a critically important ICT is still shifting. Prior to Dale and Strauss, practitioners saw SMS as an ineffective and impersonal tool for voter mobilization.<sup>27</sup> Since publishing their foundational work, NRT has allowed for an explanation as to how SMS can mobilize high-propensity voters who have paid a sunk cost towards casting a vote. However,

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<sup>24</sup> Bontha et al., “Vote.Org SMS and Email GOTV Test Results,” pp. 1; 4.

<sup>25</sup> Ibid., p. 7.

<sup>26</sup> Ibid., pp. 10–11.

<sup>27</sup> Dale and Strauss, “Don’t Forget to Vote,” p. 787–88.

2013 and 2014 Danish elections, the 2015 Norwegian election, and the 2016 American election all provide various levels of evidence for a change in tide in more recent times. While the implications of this shift seem to apply on a more global scale, the discussion here will constrain itself to an American point of view in order to present a more narrow perspective.

### **Demographics of Cell Phone Reliance**

Between 2013 and 2016, the number of Hispanic U.S. adults who are dependent on a smartphone for internet access increased from 16% to 23% and continues to climb.<sup>28</sup> At the same point in 2016, this number was 15% for black adults and 9% for white adults. While this does not show that a higher absolute number of people in each segment own and use a cell phone compared to the previous period, it does support the idea that cell phones are growing in importance to members of these groups. While it may be the case that more individuals now use cell phones than previously, it also may be the case that individuals are moving from other devices for internet access and instead relying on smartphones more deeply but at a similar adoption rate to previously. Regardless, the fact of the matter is for a growing share of the population, cell phones are becoming a primary method of communication, thus increasing their standing in ability to reach people directly and theoretically mobilize voters.

What's more striking about these numbers is how they inversely mirror voter participation rates in the United States: 64% of non-Hispanic white, 56% of black, and 32.5% of Hispanic populations voted in the November 2016 election.<sup>29</sup> While less extreme, phone reliance also negatively correlated to age and thus also negatively with voter turnout.<sup>30</sup> At least in the

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<sup>28</sup> Pew Research Center, "Demographics of Mobile Device Ownership."

<sup>29</sup> US Census Bureau, "Voting and Registration," Table 4b.

<sup>30</sup> Pew Research Center, "Demographics of Mobile Device Ownership;" US Census Bureau, "Voting and Registration," Table 2.

American context, the evidence seems to point to the shrinking of a participation gap in the context of SMS GOTV interventions due to the changing relationship populations with historically lower propensity for voting have with cell phones. More and more, the segments of the population who are generally the most absent from the political population are now reachable via this communication technology. It seems that adoption has reached a critical inflection point where NRT can no longer be the definitive explanation for the highest benefit going to politically engaged individuals without further analysis.

Bhatti's framework of spillover effects may also be especially pertinent as the impact of SMS engagement with traditionally politically disengaged individuals grows stronger. According to the US Census Bureau, several variables which correlate negatively with voter participation and seem to correlate positively with cell phone reliance also correlate positively with higher numbers of adults per household.<sup>31</sup> For example, the average Hispanic household has 2.26 adults over the age of 18, compared to 1.89 for non-Hispanic white and 1.80 for non-Hispanic black. Younger households and lower education levels also seem to follow similar patterns. If Bhatti's framework that penetrating a household via a text message reminding an individual about an upcoming election can create a ripple effect increasing the turnout by more than just the one initial person, this definitionally has more potential to occur in larger households.<sup>32</sup>

### **Partisan Communication**

While the discussion thus far has limited itself to nonpartisan messaging, it would be a disservice to ignore the real-world implications of these lessons to political messaging. While the previous status quo of most effectively reaching politically engaged individuals could have been

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<sup>31</sup> US Census Bureau, "America's Families and Living Arrangements," Table AVG1.

<sup>32</sup> Bhatti et al., "How Voter Mobilization."

considered a toss up as to political benefit in the United States, the evidence for future potential seems to point to a benefit of this methodology towards the Democratic Party over the Republican Party. While lower levels of education are relatively split between the parties, other factors including age and race overwhelmingly benefit Democrats in this trend in reaching politically marginalized groups via increases in cell phone reliance.

The major caveat in this assertion of benefits is that conducting an analysis using neutral language does not in and of itself tell the whole story. If one party is able to craft language which more effectively appeals to its own base, it may be able to overcome the difference in effects which SMS methods themselves may provide as a baseline.

### **Application to Other ICTs**

No aspect of political messaging exists in a vacuum. Lessons learned through this examination of text messaging absolutely apply to other forms of modern communication used by voter advocacy and other groups to mobilize voters to the polls.

**Social Media.** Temporary profile pictures or posts of “I Voted!” within social media feeds seem to be in an interesting theoretical space between Noticeable Reminder and Social Occasion theory. They provide connections who see the posts both a reminder about the upcoming election and an invitation to join in the act of voting. While these posts do not necessitate that a user who sees one has previously paid the upfront cost of voting by previously registering, many prompt the user to instead obtain information about registering to vote. It does not require previously overcoming a barrier to entry, but may instead serve as a way to lower it by bringing the process to the user. Additionally, by already being in a social connection with a user who posts one of these message types, it extends a social invitation to participate in

democratic institutions. However, this does lack a deeply personal version of SOT as previously presented in the literature. While neither SOT nor NRT directly apply to social media posts regarding reminders to vote, they do seem to apply benefits of both theories to form a hybrid in the space between them.

**Email.** Throughout the literature, email and SMS are treated completely separately as different interventions. While this may at first seem unnecessary, the two ICTs often have contradictory results in their significance of similarly-implemented interventions. For example, in the Vote.org 2016 study, SMS messaging increased voter turnout while email outreach programs did not have an effect.<sup>33</sup> Despite their similar nature of sending text over a digital platform, the realities of both do make them different enough to warrant this distinction. For most individuals, text messaging is simply a much lower throughput than email. Getting spam email from countless marketing platforms is not something most people would struggle to imagine. However, spam SMS becomes much more of a nuisance for the functioning of the technology in practice. Email has filters in place to be able to categorize and potentially flag unwanted or unsolicited messages from getting through directly to the user. SMS on the other hand often acts as a direct line and requires the user to manually sift through a smaller amount of messages. If a reminder regarding an election is sent to both, there is a much higher chance that the individual will interact with the SMS message rather than the email. To use NRT as a framework, the SMS has a better chance of being a *noticeable* reminder than its email counterpart.

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<sup>33</sup> Bontha et al., “Vote.Org SMS and Email GOTV Test Results,” p. 1.



## **Further Research**

In order to further substantiate claims on this topic, further research is absolutely necessary. The primary hurdles to research regarding this topic are the resources required and the precise timing of study. While an initial view of a trend towards a smaller participation gap between high- and low-propensity groups seems to be plausible and supported by the cases presented throughout this work, additional field experiments would allow for further exploration into causes and actual magnitudes of effect. An ideal scenario would be for a relatively large study occurring with the same parameters and interventions over a number of elections to see how this effect continues to change over time. By narrowing this field experiment to a single electoral district, it would allow for isolating confounding variables at play within various cases examined during this analysis, such as differing electoral systems and norms, as well as demographic and socio-economic factors to some degree. A study of this caliber would require a rather large commitment both in terms of time and resources in order to conduct the interventions required.

## **Conclusion**

While Dale and Strauss' bedrock Noticeable Reminder theory is nowhere near debunked, the recent developments in measuring effects of SMS messaging within electoral systems seem to contrast with the initial reasoning of outcome behind the theory. Recent elections seem to be trending towards a situation where the politically novice are benefiting more from SMS outreach tactics compared to their habitually-voting peers. This trend seems to stand in stark contrast to the original evidence of the 2000s where text messages simply served as a reminder for those already planning to participate in elections. The implications of this shift are important for practitioners and academics to understand more fully. In the American political landscape, this

has the potential to continue to snowball and close the participation gap between high- and low-propensity voters even further, offer a methodology for more directly accessing one party's core base of supporters by demographics, and influence the wider landscape of political ICT utilization.

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