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## **Wired for Influence: A Series of Experiments Evaluating the Ability of Peer Interaction through Social Network Sites to Influence Political Knowledge, Attitudes, and Behavior**

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WIRED FOR INFLUENCE: A SERIES OF EXPERIMENTS EVALUATING THE  
ABILITY OF PEER INTERACTION THROUGH SOCIAL MEDIA TO INFLUENCE  
POLITICAL KNOWLEDGE, ATTITUDES, AND BEHAVIOR

by

HOLLY TERESI

Under the Direction of Dr. Jason Reifler

ABSTRACT

This study examines the impact of political information conveyed through social media. Using a popular social networking website, Facebook, I create randomized field, quasi-lab, and survey experiments involving undergraduate students that explore the extent to which peer-to-peer communication via social media can increase political knowledge, change political attitudes, and mobilize people to vote.

INDEX WORDS: Social networking sites, Social Media, Facebook, Experiments,  
Political, Turnout

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HOLLY TERESI

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctorate of Philosophy

in the College of Arts and Sciences

Georgia State University

2012

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May 2012

**DEDICATION**

*For all those who flunk out their first semester.*

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## 1 INSPIRATION & RATIONALE

Why do people vote? It is a question that hundreds, maybe thousands, of political scientist have tried to answer. Generally, scholarship in this area frames the discussion in terms of extrinsic motivation and/or intrinsic motivation. Few scholars make arguments that rely exclusively on either intrinsic or extrinsic motivation. Instead, we try to untangle the complicated relationship between the stimuli people are exposed to, how they think about these stimuli, and the actions they take as a result. Often discussions of voting behavior start with the sources of political information as scholars attempt to understand what information people are exposed to and who exposes them to it. Scholarship has focused on several difference sources – family members, peers, or the mass media.

Many early political socialization theorists developed the direct transmission model to describe how people establish their political beliefs. The model suggests that parents expose their children to their political attitudes and behaviors and their children emulate them (Hess & Torney, 1967). Eventually, this simplistic approach was replaced by a more nuanced understanding of how attitudes and behaviors are learned. Scholars began looking more closely at the psychological and social functions that impact how children accept and internalize the information they received from their parents (see McDevitt and Chaffee 2002).

While transmission within families has been studied for several decades, it is only more recently that peer networks have received similar attention. Scholars analyzing peer networks engage in debates similar to those studying family units. According to McClurg (2003) social networks create “opportunities for individuals to gather information about politics that allows them to live beyond personal resource constraints, thereby supporting [their] political activity” (449). McClurg (2003) and others argue that social network characteristics such as size, frequency of discussion, and diversity can increase the amount of information people are exposed to and therefore alter their political attitudes and behavior. These scholars often suggest that large, diverse networks expose their members to more political information making them more knowledgeable about politics and more likely to vote (Huckfeldt and Sprague 1995; McClurg 2003). This approach is similar to the direct transmission model discussed by political socialization scholars. However, Mutz (2002) shows that not all network information is equal. If network diversity manifests as disagreement rather than just increased content it could have a demobilizing effect. Mutz (2002) shows that psychological factors interact with information exposure to influence behavioral outcomes.

Much of the mass media literature also assumes a direct transmission model. Several scholars argue that even subtle exposure to information impacts the saliency of that information among the public and alters public opinion (Althaus 2003; Mutz 1998;

Wanta 1997; Zaller 1992). Iyengar and Kinder (1987) argue that as the gatekeepers of information, the mass media are able to shape the national agenda by deciding which information to present to the public; thus, influencing which issues are most important to voters. While the mass media certainly try to persuade how voters think about certain issues (Fridkin et al. 2008), their ability to control what voters think about ultimately has the greatest impact on public discourse according to Althaus (2003). That said, other scholars have argued that the effect of the mass media is more indirect. For instance, Shah et al. (2005) find that behavioral outcomes (i.e. voting) are shaped by interpersonal discourse sparked by mass media rather than by the mass media directly.

Looking across previous work shows an unmistakable common element—our understanding of turnout and voting behavior begins with the assumption that people are exposed to information, become aware of that information, and it impacts how they think or behave. This dissertation build on this previous research by considering how social media affect politics. Interestingly, exposure to a Facebook post from a high school friend is what gave me the idea to pursue the research in the following chapters. It was the fall of 2008; the presidential general election was underway and for the first time in almost a decade I wasn't actively working on a political campaign. I volunteered a few days a week at the local campaign office, but I used Facebook to offset my nostalgia for political organizing. Most of my posts encouraged readers to register to vote, find their polling place, or volunteer for and/or donate to the candidate I was

supporting. Occasionally, I'd post commentary regarding a news story, but I generally appealed to my "friends" for their time, money, and vote.

As Election Day neared, I received a private Facebook message from a high school friend, Sarah.<sup>1</sup> While I had kept up with Sarah's major life events via Facebook, we hadn't actually talked in eight years. My memory of the 18 year-old version of Sarah was a pretty and outgoing girl, who, like most of my peers, was politically apathetic. Nothing in Sarah's Facebook activity indicated her political interest or involvement had changed since high school. Yet, in mid-October 2008 I received a message titled, "Hey." In the text, Sarah tells me she's seen my posts about the campaign and decided to volunteer. I remember thinking something like, "That's cool," and closing the message without much further thought. Obviously, being a political organizer, I was expecting my post would cause Sarah's reaction or else I wouldn't have posted the appeals. It wasn't until I became an academic that I realized the significance of the exchange.

Early in my political career I worked as a field organizer for political campaigns and eventually as the National Communications Director for Youth Vote Coalition, the nonprofit youth civic organization associated with Gerber and Green's (2001) work evaluating door-to-door canvassing among young people and Nickerson's (2007b) experiment testing the effectiveness of emailed mobilization messages. As a political field organizer I relied on my instincts to win campaigns, but publicizing the work done

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<sup>1</sup> Name has been changed to protect the person's identity.

by Gerber, Green, and Nickerson showed me the value of testing what my instincts told me to do. Graduate school forced me to remember this lesson, and I began to reconsider Sarah's message. I quickly decided that it was time to scientifically evaluate my assumptions about being able to mobilize my friends using Facebook.

While social media is becoming an increasingly popular form of peer-to-peer communication, most scholarship evaluating the use of these sites in politics assumes it is a channel of unidirectional mass communication exploited by political elites to manipulate the public agenda (see Williams and Gulati 2007; Utz 2009; Johnson and Perlmutter 2010; Robertson, Vatrapu, and Medina 2010; Towner and Dulio 2011). Research on email, blogging, and online mobilization offer some assessment of computer-mediated, peer-to-peer political communication; however, this research still focuses on how citizens use technology to communicate with opinion leaders and other users who are not members of their traditional, offline social network (Bimber 1998; Connors 2005; Juris 2005; Klotz 2004; Krueger 2006; Nickerson 2007b). Even research that examines the relationship between online communication and offline behavior focuses almost exclusively on how users convert online communication into offline activism through boycotts, buycotts, rallies, and petitions (Connors 2005; Juris 2005; Loader 2008). Ultimately, there is little research that examines the role of interpersonal computer-mediated communication that parallels the existing offline interpersonal communication with regards to winning elections.

Social network sites allow users to communicate with a large group of people, just like the mass media, while preserving (and some argue building) the connectedness afforded by interpersonal communication methods. Instead of contacting each person individually to facilitate interpersonal communication, SNSs allow users to connect with their family, friends, neighbors, co-workers, and even acquaintances by publicly posting information that they would otherwise share through traditional interpersonal channels with just a few people.

Additionally, SNSs provide opportunities for active and passive information exchanges. Users are able to actively engage each other in direct conversations while everyone in their individual networks passively observe. According to Brandtzæga, Lüdersa, Skjetne (2010) social surveillance, the semi-public exchange of information, allows users to form bonds with each other by providing opportunities for actively engaging each other in discussion. Brandtzæga, Lüdersa, Skjetne (2010) find that the passive observation of self-disclosed information serves to enhance the social bonds of non-discussants. Just by being able to observe each other's information and behavior, SNSs allow users to feel more connected to each other (Cummings, Butler, and Kraut 2002; Ellison, Steinfield, and Lampe 2007; Golder, Wilkinson, and Huberman 2007; Subramani and Rajagopalan 2003).

Information sharing is the key component to creating and sustaining successful computer-mediated relationships (Merkle and Richardson 2000); however, before SNSs,

mass information sharing was difficult to organize within a social network and often viewed as inappropriate for computer-mediated communication channels. While email has the capacity to facilitate such mass communication within an entire social network, it is guided by social norms that make it as ineffective as face-to-face and telephone communication for mass information sharing. Unlike information sharing that occurs by the mass media, discussants who engage in information sharing through face-to-face, telephone, or email are involved in a social transaction and expect that the information being conveyed to them is somehow personally relevant (Walther 1995).

Social networking sites have reduced this relevancy condition by relying on mass information sharing to facilitate social interactions. For example, most people do not visit, call, or email everyone they know to tell them that they are undecided about whom to vote for because they might think that the people they know would not be interested in such information. However, disclosing such information on a SNS provides users a non-invasive way to interact with their network; thus, increasing the frequency of their interactions and sustaining their social bond. Instead of taking the time to call each person in their network individually, users are able to share their thoughts with their entire network and learn what their entire network is thinking about just by logging into a SNS.

The most widely used SNS platform currently is facebook.com (Facebook). Although their mission has evolved, Facebook formerly stated that it, “helps you

connect and share with the people in your life” (Facebook 2009). As a result, Facebook explicitly focused on developing policies and social norms that encouraged users to construct their offline social networks virtually. A further benefit of SNSs is their ability to enhance weak-ties (Ellison, Steinfield, and Lampe 2007). Returning to the hypothetical example of a user who is undecided about which candidate to vote for, perhaps one of the user’s acquaintances knows something about the candidates that could help the user decide, or maybe the user’s acquaintance supports a particular candidate and wants to attempt to persuade the user; thus, an exchange of information occurs. Such information sharing is unlikely to occur by traditional communication channels among casual acquaintances, but the relaxed social norms and information sharing expectations allow SNS users to interact more informally (Fogg 2008), providing more opportunities for information transfers to occur (Fogg and Eckles 2007).

Moreover, computer-mediated communication has been shown to facilitate trust-building between users. Frohlich and Oppenheimer (1998) conduct an experiment in which participants playing prisoner dilemma games are assigned to communicate via email, face-to-face, or not at all. Those communicating via email exhibited greater levels of cooperation and trust than those communicating face-to-face or not at all. This finding indicates that social media may allow users to establish trust in relationships faster than offline communication.

Druckman (2001) find that trust is critical in shaping political attitudes.

Druckman (2001) argues that people are better able to accept and retain information from trusted sources. Social network scholars have shown that people in large, diverse networks have greater political knowledge vote at higher rates than people with smaller, insular networks that are less knowledgeable (Huckfeldt and Sprague 1987, 1995; Kenny 1992).

Given that the purpose of SNSs is to provide a more efficient way for users to build trust relationships and exchange information, I expect SNSs could be an invaluable tool for political organizers. Users are able to manage larger social networks and interact with them more often; providing opportunities for greater exposure to information and increased trust between weak ties. I posit that whether from information exposure, increased trust, or a combination of these factors, SNSs have the potential to be an effective tool for political organizing that can increase political knowledge, change political attitudes, and activate civic behavior.

Virtually no academic research measures how SNSs can be leveraged as a political organizing tool. Instead much of the politically focused research addressing SNSs focuses on privacy (Boyd and Ellison 2007), self-disclosure and personal presentation (Boyd and Ellison 2007; Ellison, Steinfield, and Lampe 2007; Gaines and Mondak 2009), patterns of use (see Vitak et al. 2011) and the impact they have on social capital (Boyd and Ellison 2007; Ellison, Steinfield, and Lampe 2007; Pasek, More, and

Romer 2009). As peer-to-peer communication extends beyond face-to-face and telephone conversations to include SNSs, it is imperative to test how these supplemental social interactions can influence civic engagement.

Since the literature regarding SNSs as a political organizing tool is so limited, I have chosen to base the theoretical arguments for this essay in the literatures applicable to offline learning, opinion formation, and behavioral changes. Specifically, I review literature that highlights activities capitalizing on peer-to-peer communication such as door-to-door canvassing (Gerber and Green 2000, 2001, 2005; Green, Gerber, and Nickerson 2003; Nickerson 2006b; Nickerson, Friedrichs, and King 2006; Sinclair, McConnell, and Michelson 2007) and phone banking (Gerber and Green 2001, Nickerson 2006a, 2007a; Nickerson Friedrichs, and King 2006) since these are the most effective offline mobilization methods for increasing civic participation.

## 2 2009 POLITICAL LEARNING QUASI-LAB EXPERIMENT

To begin an evaluation of social network sites (SNSs) as a channel for political communication I must first assess the extent to which political information can be learned through these types of sites. The majority of studies evaluating how effective the SNSs are for facilitating learning are quite limited and bleak. Boyd (2008) argues that SNS aid disinterested voters in further disengaging from politics by allowing them to define a small, homogenous network that limits exposure to diverse information. Baumgartner and Morris (2010), build on this by attempting to connect SNS use with limited political knowledge. The authors assess how well people who indicate that they get their news from SNS can identify which 2008 presidential primary candidate fit a “description that had been widely discussed in the media” (33). Their results indicate that, “there is little evidence to suggest that individuals who get their news about politics on SN Web sites are well informed” (34).

Scholars who study the Internet as a social medium consistently argue that the medium allows users to insulate themselves from others who might have different opinions and interest than them (Kraut et al. 1998; Nie 2001). These scholars argue that users engage in selection bias by only building relationships with those who are most like them. However, given that the leading SNS, Facebook, reports that the average user has 130 “friends” (Facebook 2012), it is increasingly difficult to blame network homogeneity for low levels of political knowledge. Moreover, the limited SNS studies

evaluating the political knowledge of SNS users fail to test whether this is due to a lack of content or a function of the medium.

Why is this distinction important? Simply put, one has more obvious policy implications than the other. If SNSs are failing to increase political knowledge because users' networks are too small and homogenous to produce valuable content, there is little that can be done to encourage people to develop more diverse online social networks. However, if the problem is not network size, but rather limited exposure, it is possible to encourage SNSs to do a better job of providing users with more diverse information from their online social network.

## *2.1 WHAT IS LEARNING*

There are three main theories of learning: behaviorism, cognitivism, and constructivism. Each of these theories identifies exposure to some stimulus as the initial catalyst for learning to occur. Behaviorism asserts that learning is the acquisition of new behavior through conditioning—or repeated exposure (B.F. Skinner 1974). Cognitivism, including information processing theories, suggests that learning is the act of storing away the things that one is exposed to until they are needed (Bode 1929). And, constructivism proposes that learning is based on putting something one has been exposed to into context immediately (Piaget 1952).

The three main learning theories apply to all types of knowledge, including the declarative knowledge—hard facts—needed to participate in democracy. Therefore, the

basic thesis, that being exposed to information should increase one's awareness of that information is a minimum requirement for being able to measure whether political information can be learned from SNSs. However, behaviorism, cognitivism, and constructivism all assert that being aware of information is only part the first part of learning.

In addition to being aware of information, each of the theories outlined above state that one must be able to recall the information for it to be considered successful learning. Therefore, all of these theories assume the most basic definition of learning as the ability to recall information after exposure. A common approach scholars use to quantify learning is to measure awareness in terms of saliency and label any observed increases in saliency as "learning" when it occurs after exposure (Miller and Mackuen 1979; Zukin and Snyder 1984; Chaffee and Frank 1996; Barabas 2008).

## *2.2 BENEFITS OF SOCIAL NETWORK SITES FOR INFORMATION EXPOSURE*

Since at least the mid-twentieth century, scholars have argued that social networks play a vital role in political life (Berelson, Lazarsfeld, and McPhee 1954). The political networks literature indicates that engaging with one's social network increases political knowledge (Eveland and Hively 2009), the probability of voting (McClurg 2003; Fowler 2005; Nickerson 2008), and the probability of voting correctly (Sokhey and McClurg 2008; Richey 2008). While the political networks literature attempts to focus on how engaging in discussion facilitates learning, I contend that this literature is built on

the foundation of the exposure thesis. For example, McClurg (2003) writes that social interactions are a significant source of political information because they provide “opportunities for individuals to gather information about politics that allows them to live beyond personal resource constraints, thereby supporting [their] political activity” (449).

Although the political networks literature presents itself as a relying on social or relationship-based theories for why social network discussion should be a predictor of greater political knowledge, analysis largely fails to include measures that speak to the specific mechanism that promote learning. Relevance, credibility, and other network features may matter a great deal; however, an even simpler explanation may be simply that exposure to information increases knowledge, regardless of any source effects. Therefore, regardless of any tie-strength component, social networks are, at a minimum, an information resource that increases exposure to information. Hence, I posit that simply based on their ability to expose users to a greater quantity of content, SNSs are exceptionally well-equipped to facilitate learning generally, which would include political learning.

At a minimum, SNSs have empowered users to increase the number of people with whom they communicate with and receive information from on a daily basis. Instead of contacting a handful of members from their social network individually, SNSs allow users to connect with everyone—their family, friends, coworkers, and even

minor acquaintances—by publicly posting information that they might otherwise share with only a few of these people through traditional interpersonal communication channels. As of January 2012, the SNS, Facebook, claimed that its average user had approximately 130 “friends,” or individuals they could communicate with by simply typing a message and clicking the “Share” button (Facebook 2012). It is important to note that 80 percent of Facebook’s users live outside the United States; therefore, the average Facebook user, by definition, is not American.

Based on its user statistics, Facebook claims that as of December 2011 approximately 161 million of its monthly users live within the United States (Constine 2012). When combined with the most recent U.S. census, conducted in 2010, approximately three out of every five Americans eligible to have a Facebook account are using the site at least monthly.<sup>2</sup> This means that although the average Facebook user has 130 friends, the average American user probably has many more “friends” since so many of us are active on the site each month.

As noted earlier, the typical political networks study argues that network size is a predictor of political knowledge. These scholars find that larger discussion networks expose respondents to more information and make them more knowledgeable about politics. However, name generator data, which generally allows a respondent to disclose only up to four people with whom they discuss politics, is used for this

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<sup>2</sup> See Table 2 at <http://www.census.gov/prod/cen2010/briefs/c2010br-03.pdf> for specific census counts by age.

analysis. Scholars rely on the fact that respondents find it difficult to identify four people with whom they discuss politics to provide the variation necessary for this type of analysis. Therefore, the largest networks identified by name generator methods contain just four people with whom the respondent discusses politics when using name generator data. Note that name generator analysis does not distinguish between the respondent being exposed to information and the respondent exposing others to information. Therefore, some respondents are considered knowledgeable, not because they have more instances of exposure to information as the political networks literature outlined earlier argues, but rather because they expose a large number of others to information. That said, if we ignore that some respondents evaluated by name generator studies are considered knowledgeable because they share the information they already have and apply the argument as it is made by political network scholars, it is illogical to think that a SNS user, with a network of at least 130 people would not exhibit at least some political learning.

### *2.3 POTENTIAL LIMITS OF SOCIAL NETWORK SITES*

Although SNSs allow users to receive information from more people within their networks, it is possible that such exposure has either no effect or maybe even a negative effect. Having such large networks inevitably means that the information users are exposed to is much more diverse than what they receive from just their smaller offline interpersonal networks. A recent study released from Facebook states, “Even though a

person is more likely to share a single piece of information from one of their close contacts, it turns out that weak ties, as defined by Grannovetter (1973), are collectively responsible for the majority of information spread" (Bakshy 2012). Facebook indicates that this is a positive development; however, the content they refer to is not specifically politically motivated. Work by Huckfeldt and Sprague (1987) and Nyhan and Reifler (2010) provide various instances in which exposure to information that is inconsistent with one's current preferences can have harmful consequences.

However, even if SNSs are not actively contributing to the misinformation of their users it is possible that the sheer amount of information they are exposed to is too overwhelming to facilitate successful learning. Zhou et al. (2009) state that "when the number of weak ties is too large, individuals are likely to experience information overload: They may be unable to sort through the voluminous, discordant information. Too many divergent perspectives may be cognitively taxing to the point of confusion" (1545).

Facebook's study of diversity among their users' networks finds that there is "increased flow of information across strong ties," meaning that users are more interested in being exposed to and sharing information from their strongest ties (Bakshy

2012).<sup>3</sup> Moreover, SNSs such as Facebook have used this information to justify their use of algorithms that discreetly engage in such selection bias on behalf of the user, presenting them with information that they believe is most relevant to the user. Pariser (2011) calls this “the filter bubble.”

Instead of editorial gatekeepers as described by Iyengar and Kinder (1987), Pariser (2011) details how algorithms now serve as information gatekeepers. They filter which information users are exposed to based on which information they have been most responsive to in the past. However, unlike traditional gatekeepers, algorithms cannot judge the importance of information. Therefore, SNSs using algorithmic filters to evaluate users’ past behavior in an effort to expose them to the most relevant information in the future may not actually expose users to any more information than they would receive from their traditional, offline social network. Although it is important to realize that algorithms are effecting users’ experiences, the question remains whether SNSs are able to facilitate political learning despite these challenges.

#### 2.4 DESIGN

To evaluate the effectiveness of SNS for transferring political knowledge, I designed an experiment with two conditions that delivers three categories of information through a SNS and evaluates participants’ knowledge about that

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<sup>3</sup> Facebook measures tie strength between two individuals as “the number of comments a person received from their friend on Facebook. Other measurements of tie strength, like the number of messages, co-appearances in photos, and discussion on posts.” Their complete methodology can be found at <https://www.facebook.com/notes/facebook-data-team/rethinking-information-diversity-in-networks/10150503499618859>

information through a subsequent survey. I recruited students from eight sections of an introductory political science course. Potential participants received instructions for enrolling in the experiment that randomly assigned them to friend either “Tiffany Roper” or “Courtney Harris” on Facebook.<sup>4</sup> Participants were told that the profile they were assigned to “friend” belonged to an actual female, Caucasian, Georgia State University sophomore who volunteered for my project. Indicating that the personas attend the same university and had a desire to participate in the experiment provided the stimulus necessary to initiate the bonding process between participants and their assigned persona. The use for two profiles was explained to students as an effort to keep from overwhelming either of my “volunteers.” Students were told that I sought to observe how social media networks grow and interact. Nothing communicated to students during the recruitment process indicated my interest in their political knowledge, nor were participants told about the subsequent survey at the time of recruitment or enrollment.

Ensuring participants are actually exposed to stimuli is difficult through the Facebook platform. At the time of the experiment, exposure to specific “Status Updates”

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<sup>4</sup> Two profiles were necessary, because at the time of the experiment a user could not filter which of their “friends” had access to specific “Status Updates;” therefore, a single profile could not administer treatments and withhold them from the control condition. The feature that provides the functionality was introduced in December 2009. See “Adding Controls for Each Post” at <https://blog.facebook.com/blog.php?post=196629387130> for further information about this function. In addition, participants were not allowed to “friend” both profiles. When participants attempted to friend both profiles at the time of enrollment I randomly selected which request to accept and ignored the other request. When participants attempted to friend the second profile after their friend request to the first profile had been accepted their second request was ignored.

via their News Feed was dependent on the user's number of "friends" and personal settings.<sup>5</sup> This means that some participants may need to seek out their assigned persona's profile page in order to be exposed to the stimuli. Additionally, users may "hide" or opt-out of being presented with information from a specific "friend;" however, just four percent of my sample reported taking this action. While the inability to strictly control exposure to stimuli is undesirable for an experiment, those being sheltered from or opting-out of receiving information should be randomized across the treatment conditions preventing any systemic selection bias. Furthermore, such limits to exposure make it more difficult to detect any treatment effects.

Nevertheless, I discouraged participants from sheltering themselves from the stimuli by posting two extra credit exam questions during the semester through the experiment profiles.<sup>6</sup> While this incentive slightly increases the burden on participants by asking them to monitor their assigned persona's profile page, such a behavior is consistent with typical Facebook usage. Students unable or unwilling to "friend" me through Facebook could send me an email to receive these two questions.

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<sup>5</sup> Users can control the information presented to them by: setting a cap on the number of friends included in their News Feed or "hiding" specific friends to prevent all stories from that particular user/friend from appearing in their News Feed. Additionally, the News Feed is populated by an "algorithm [that decides which information to present to the user] based on a few factors: how many friends are commenting on a certain piece of content, who posted the content, and what type of content it is (e.g. photo, video, or Status Update)." These were the guidelines governing information presentation when the experiment was administered. For the most recent guidelines see <http://www.facebook.com/help/?faq=16162>.

<sup>6</sup> Students not wanting to participate in the study were able to request that the questions be emailed to them.

For external validity purposes, participants were provided with as authentic a Facebook experience as possible. The public aspects of each persona's Facebook profile were personalized with a unique name and profile picture; however, all of the other characteristics of each profile such as the girls' general physical appearance, personal information, and additional photos remained constant. Additionally, I invited people from my personal Facebook network who had no existing relationship with the participants to "friend" each persona in an effort to make them appear more authentic. To further facilitate a peer relationship between participants and their assigned persona, I exposed both conditions to identical self-disclosure stimuli, no more than once per day, during the duration of the experiment. These stimuli provided information unrelated to the treatments and encouraged conversation. In addition, acting as their assigned persona, I posted comments and utilized the "like" function<sup>7</sup> to facilitate social bonding with participants. While researcher-initiated contact was identical across the conditions, participant comments and my responses to those comments were unique to each condition and were not equivalent in content or quantity across the conditions. Ultimately, none of the participants gave any indication that they doubted the validity of either persona.

In addition to the self-disclosure stimuli, Tiffany Roper posted one political stimulus regarding the November 3, 2009 Atlanta mayoral race per day, and Courtney

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<sup>7</sup> The "like" function on Facebook offers users an automated way to indicate their support or agreement with another user's message without writing a personalized comment to that user.

Harris posted one placebo stimulus regarding entertainment or sports news per day. Additionally, both Tiffany and Courtney occasionally posted a supplemental stimulus; an identical entertainment or sports story distinct from anything posted to the placebo treatment condition. The point of the supplemental stimuli was to increase the validity of the political treatment persona since most people post a variety of information and not just political information. Each condition received one unique stimulus (either political or placebo) and no more than two identical stimuli (either self-disclosure and/or supplemental) each day for the seven days of the experiment (see Table 1). All of the political and placebo stimuli were chosen to be timely and obtained from the headlines of major news outlet websites including The Atlanta Journal Constitution, Yahoo! News, ESPN, and TMZ. Additionally, the day and order in which I posted information were randomized. However, randomization was sometimes constrained by the topic of the stimulus. For example, a stimulus informing participants about the outcome of a sporting event could not be administered before the game was played. Therefore, these posts were randomized based on the possible days they could appear.

Table 1. Knowledge Experiment Stimuli Protocol

	Political Treatment	Entertainment Treatment
<b>Day 1 – October 28, 2009</b>		
is trying to decide what to be for Halloween. Any suggestions?	Conversational	Conversational
Golf as an Olympic sport in 2016? Seriously? Maybe I'll be a Golf Olympian for Halloween :) <a href="http://www.google.com/hostednews/afp/article/ALeqM5joBrBs5y2U-RSVx-GkuhArYhQWNQ">http://www.google.com/hostednews/afp/article/ALeqM5joBrBs5y2U-RSVx-GkuhArYhQWNQ</a>	Supplemental	Supplemental
Undecided Men Could Swing Atlanta Mayoral Election? <a href="http://www.11alive.com/news/local/story.aspx?storyid=136007&amp;catid=3">http://www.11alive.com/news/local/story.aspx?storyid=136007&amp;catid=3</a>	Political	--
Rapper T.I. Arrested in Atlanta... I totally forgot about this! <a href="http://www.tmz.com/2007/10/13/rapper-t-i-arrested-in-atlanta/">http://www.tmz.com/2007/10/13/rapper-t-i-arrested-in-atlanta/</a>	--	Entertainment
<b>Day 2 – October 29, 2009</b>		
had a really strange dream last night about being locked in Aderhold! Really, are there any worse places to be locked in!?!	Conversational	Conversational
The League of Women Voters of Georgia has put together a Voter Guide. Use it to get info about elections in your area! <a href="http://www.thevoterguide.org/a-ajc09/">http://www.thevoterguide.org/a-ajc09/</a>	Political	--
Jay-Z to perform before game two of the World Series tonight between the Phillies and Yankees! <a href="http://backporch.fanhouse.com/2009/10/29/jay-z-to-perform-before-yankees-game-is-bigger-than-new-york/">http://backporch.fanhouse.com/2009/10/29/jay-z-to-perform-before-yankees-game-is-bigger-than-new-york/</a>	--	Entertainment
I heard Ryan Seacrest talking about Ellen DeGeneres, the new American Idol judge, while I was volunteering at the Atlanta Ronald McDonald House – here's the footage to prove it! <a href="http://blogs.ajc.com/american-idol-blog/2009/10/25/ryan-seacrest-interview-at-ronald-mcdonald-house-in-atlanta/">http://blogs.ajc.com/american-idol-blog/2009/10/25/ryan-seacrest-interview-at-ronald-mcdonald-house-in-atlanta/</a>	Supplemental	Supplemental
<b>Day 3 – October 30, 2009</b>		
Does anyone know why there would be a run-off for Atlanta mayor unless one candidate gets at least 50% of the vote? Why doesn't the person who gets the most votes win, geesh!	Political	--
is predicting UGA will get crushed by the Florida Gators tomorrow... sorry Bulldog fans.	--	Entertainment
<b>Day 4 – October 31, 2009</b>		
Happy Halloween! Candy coma here I come!	Conversational	Conversational

Professors from Clark Atlanta University wrote a memo saying blacks need to “band together today to elect a black mayor” in Atlanta. Do you think it was ok for them to get involved? <a href="http://features.csmonitor.com/politics/2009/09/01/was-atlantas-black-mayor-first-memo-racist-or-just-blunt/">http://features.csmonitor.com/politics/2009/09/01/was-atlantas-black-mayor-first-memo-racist-or-just-blunt/</a>	Political	--
Every time I see a commercial for “Survivor Samoa” I think of the Girl Scout cookie! What’s your favorite Girl Scout cookie?	--	Entertainment
<b>Day 5 – November 1, 2009</b>		
Either give Michael Vick the QB job or don't, but letting the former Atlanta Falcon ride the bench in Philly to help him save a few of his endorsement deals isn't actually letting him back into the NFL. <a href="http://www.philly.com/inquirer/sports20091024_Eagles_using_Vick_sparingly.html">http://www.philly.com/inquirer/sports20091024_Eagles_using_Vick_sparingly.html</a>	Supplemental	Supplemental
Mayoral Hopefuls Lisa Borders, Mary Norwood, and Kasim Reed All Try Using Facebook to Persuade and Organize Voters! <a href="http://www.ajc.com/news/atlanta/mayoral-hopefuls-try-social-168753.html">http://www.ajc.com/news/atlanta/mayoral-hopefuls-try-social-168753.html</a>	Political	--
Heidi Klum’s been married for 4 years and she’s just changing her name, at this point why bother!?!?	--	Entertainment
<b>Day 6 – November 2, 2009</b>		
says the Atlanta mayoral election is tomorrow... make sure you vote! Find your polling place at <a href="http://www.vote411.org/pollfinder.php">http://www.vote411.org/pollfinder.php</a>	Political	--
Florida is still ranked #1 in the BCS rankings... big freakin surprise	--	Entertainment
While trying to study today I realize I have horrible handwriting... does anyone like their handwriting?	Conversational	Conversational
Falcons lose to the Saints... finally (I thought that game would never end)!	Supplemental	Supplemental
<b>Day 7 – November 3, 2009</b>		
The polls are open form 7AM - 7PM today. Go Vote!	Political	--
Louie Vito (the snowboarder) was eliminated from Dancing with the Stars last Tuesday. Who do you think will go home tonight?	--	Entertainment
If you could have a \$10,000 shopping spree to one store, which store would it be and how long would it take you to spend the \$10,000?	Conversational	Conversational

Within six days of exposure to the final stimulus participants were given class time to complete a survey (see Appendix A) that evaluated how much of the stimuli provided they could recall. Assessments of their platform usage, an evaluation of the bond formed with their assigned persona, their level of interest in politics, voting behavior, political preferences, political socialization, and local media consumption were also collected, in addition to their full name and basic demographic information.

Completed surveys were crosschecked against a list of participants enrolled in each condition using the respondent's full name. After matching a respondent to a condition (political or placebo) the responses were aggregated within their condition for analysis.

## 2.5 HYPOTHESES

Subjects who are exposed to information should correctly answer more questions about that information than those who are not exposed to that information. Therefore:

*H<sub>1</sub>* Subjects exposed to the political stimuli should correctly answer more questions referencing the political stimuli than subjects not exposed to the political stimuli.

*H<sub>2</sub>* Subjects exposed to the placebo stimuli should correctly answer more questions referencing the placebo stimuli than subjects not exposed to the placebo stimuli.

## 2.6 DATA & ANALYSIS

A total of 735 students were enrolled in the classes that comprise my sample, but just 170 of them chose to participate in the experiment by "friending" their assigned

persona on Facebook, and just 115 of these participants completed the subsequent survey (45 political, 70 placebo; see Table 2 for randomization check). All participants must report having access to the Internet, have an active Facebook account, and be at least 18 years old to be evaluated in this analysis. While Facebook users are not representative of the public at-large, 92 percent of my survey respondents reported having a Facebook account. Using a relatively homogeneous sample of university students who all have similar access and familiarity to Facebook minimizes the demographic variance in the sample and ensures that participants have relatively similar SNS usage behavior. By randomly assigning participants to treatment and control conditions, any participation selection bias, demographic skews, or other systematic errors associated with studying a convenience sample of college students are minimized.

Table 2. Knowledge Experiment Randomization Check

	Political Treatment	Placebo Treatment
<b>Facebook Statistics</b>		
Percent Having a Profile	100%	100%
Average Number of Facebook Friends ( <i>mean category chosen by user</i> )	251-300	251-300
Mean Usage Per Week (days)	5.84	5.65
Mean Number of Times Logged-In Per Day	4.07	4.64
Mean Usage Per Week (hours)	8.89	10.0
Mean Number of Days a Post of Any Kind was Recalled*	2.17	1.05
Mean Political Interest of Facebook Network	Somewhat Interested	Somewhat Interested
<b>Demographics</b>		
Percent Male	12%	15%
Percent White	39%	38%
Mean Age*	21.55	19.38
Percent Democrat	63%	46%
Percent Resident of Atlanta	66%	73%
<b>Political Interest</b>		
Average Interest in the Atlanta Mayoral Election ( <i>mean category chosen by user</i> )	Slightly Interested	Slightly Interested
Average Interest in Politics ( <i>mean category chosen by user</i> )	Somewhat Interested	Somewhat Interested
Average Political Socialization ( <i>mean category chosen by user</i> )	Occasionally Talked About Politics	Occasionally Talked About Politics
Mean Number of Days of Political Discussion	2.82	2.86
Mean Number of Days of Local Media Consumption	2.28	2.65
<b>Relationship</b>		
Mean Relationship Rating	0.95	0.62
Mean Attractiveness of the Political Treatment Personal	6.89	6.47
mean attractiveness of the entertainment treatment personal	6.50	6.94

\*  $p < 0.05$ ; two-tailed test.

**Measurement:** The survey asked 18 questions that tested participants' ability to recall information provided by the 18 non-self-disclosure stimuli (see Table 1 for stimulus protocol). I created a political knowledge index by giving participants one point for each question they answered correctly that corresponded to the political stimuli. I used the same aggregation process to create indexes that assessed participants' knowledge of the placebo and supplemental information.

**Analysis:** I run separate bivariate ordered logit regression models for the dependent variables "Political Knowledge Index" and "Placebo Knowledge Index." The only independent variable included in each of these models is *Exposure to Information* (either political or placebo depending on condition assignment). Respondents exposed to the information included in the index are coded one and zero for all others. Therefore, placebo condition serves as the reference group in the "Political Knowledge Index" model and the political condition serves as the reference group in the "Placebo Knowledge Index" model.

## 2.7 RESULTS

The bivariate ordered logit regression models presented in Table 3 show the effects of exposure to stimuli on the knowledge of that information. The first model confirms hypothesis one: exposure to political stimuli through a SNS causes users to be significantly more knowledgeable about the political information presented. However, second model shows that exposure to the placebo stimuli through a SNS does not

predict greater knowledge of that information. The “Placebo Knowledge Index” model in Table 3 indicates that users exposed to the placebo stimuli are no more knowledgeable about the information presented than those not exposed to that stimuli. Therefore, the null cannot be rejected for hypothesis two. Given that political information (especially about a mayoral election) is generally less salient than entertainment information it is unclear if these results indicate that SNS are particularly effective at transmitting political information or just any type of low saliency information.

Table 3. Bivariate Ordered Logit: Knowledge Assessments

	Political Knowledge Index	Placebo Knowledge Index
Exposure to Information [see column header for variable]	0.68* (0.35)	0.18 (0.36)
N	115	115
X <sup>2</sup>	X <sup>2</sup> (1) = 3.82	X <sup>2</sup> (1) = 0.26
<i>p</i> -value	<i>p</i> = 0.0505	<i>p</i> = 0.6084

\**p*<0.05; standard errors in parentheses. Two-tailed test.

Table 4 presents the cumulative treatment effects for each knowledge category. When evaluating the “Political Knowledge Index” model presented in Table 3, I discover an average treatment effect of 6.4 percentage points. This means that the percentage of participants answering each question threshold correctly increases by an average of 6.4 percentage points when participants are exposed to the political stimuli. However, an average treatment effect is not particularly informative since the number

of people answering each question is skewed towards those being able to answer one question correctly instead of no questions correctly. Instead, it is more useful to look at specific thresholds. For example, more than two-thirds of participants exposed to the political stimuli (68.6%) correctly answer at least one of the six questions that comprise the political knowledge index compared to just over half of participants exposed to the placebo stimuli (52.7%) – this is a treatment effect of 16 percentage points (see Table 4). Moreover, significant treatment effects are detected among participants at the most knowledgeable levels as well. The percentage of participants answering three and four questions correctly is significantly more for those exposed to the political stimuli than the placebo stimuli. If the most knowledgeable people were unaffected by exposure to the political treatment, the percentage of participants answering three and four questions correctly would be similar. Instead, I find that the percentage of participants exposed to the political stimuli answering three and four questions correctly is significantly greater than those exposed to the placebo stimuli. Participants exposed to the political stimuli are nearly twice as likely as their placebo counterparts to answer at least four questions correctly.

Table 4. Knowledge Experiment Treatment Effects

Number of Political Knowledge Questions Correctly Answered	% Placebo	% Political	Treatment Effect
At least 1	52.7	68.6	16.0%*
At least 2	25.4	40.0	14.7%
At least 3	14.9	25.6	10.7%*
At least 4	3.9	7.3	3.5%*
At least 5	0.0	0.0	0.0%
At least 6	0.0	0.0	0.0%
N=115			Avg. 6.4%

\* $p < 0.1$ 

## 2.8 DISCUSSION

Participants in this study report logging into their social networking account three times as many days per week as they watch a local news program, and twice as many days per week as they discuss politics with friends or family. Given the greater usage of SNSs over traditional media and interpersonal communication by participants in this study, it is encouraging to find that SNSs can facilitate at least some political learning. The results from this study indicate that political information can be significantly increased through SNSs; however, participants were exposed to relatively few stimuli over a short period, from a “person” with whom they had no offline relationship. Given the literature regarding how users cope with information overload on SNSs, any of these factors individually could be used to explain null findings and the fact that this particular experiment suffered from all of these limitations and still detected significant results makes it reasonable to theorize that increasing any of these

factors might produce even greater effects. That said, further investigation is needed to understand how the treatment effects observed in this study compare to other methods of communication.

Moreover, the stimuli provided in this experiment were nonpartisan and generally noncontroversial. It is possible that a participant disagreed or did not believe the information I presented; however, given the utilitarian nature of most of the stimuli presented to participants, it is unlikely they had any existing perceptions that exposure to my stimuli might have challenged. That said, further investigation is necessary to understand how users react with the information they receive that is inconsistent with their own beliefs.

### 3 2010 MOBILIZATION FIELD EXPERIMENT

Academic research to date regarding mobilization efforts has arrived at two key findings—(1) traditional campaign activities that capitalize on interpersonal exchanges, such as door-to-door canvassing and phone banking, are extremely effective but time consuming and costly; and (2) computer-mediated campaign activities that are more impersonal, such as e-mail and candidate websites, increase the quantity of contacts and are less expensive but are mostly ineffective (Bimber and Davis 2003; Green and Gerber 2000; Nickerson 2006b, 2008). The prior chapter highlights how difficult it is to change people’s opinions via SNSs, especially if they are already even mildly interested in politics. Therefore, it may not be feasible to implement a persuasion campaign via SNSs, but this doesn’t mean that SNS users are completely resistant to all the political content they are exposed to on SNSs. In fact, the data from the political knowledge chapter of this essay indicate that users are receptive to nonpartisan, noncontroversial political content. Perhaps SNS users will be receptive to traditional mobilization messages.

#### 3.1 *TURNOUT*

For at least the past 90 years, scholars have been attempting to understand what motivates people to vote. Research of this question has focused on traditional campaign efforts such as canvassing (Gosnell 1927) and advertising (Holbrook and McClurg 2005), social networks (Berelson, Lazarsfeld, and Gaudet 1948; Berelson, Lazarsfeld, and McPhee 1954; Niemi 1974; Kenny 1992), intrinsic motivation (Downs 1957), cognitive

factors (Campbell et. al 1960; Kuklinski and Quirk 2000), demographic factors (Verba and Nie 1972; Wolfinger and Rosenstone 1980), and many more. While early research showed that interpersonal efforts were effective for driving participation, it was not until the end of the twentieth century that scholars attempted to unpack the relationship between interpersonal contact and traditional mobilization efforts.

In 1993, Rosenstone and Hansen theorize that, “Working through social networks, candidates, parties, interest groups, and social movements exploit friendship and social obligations” to achieve electoral success (210). A deeper examination of interpersonal mobilization efforts followed (see Sinclair, McConnell, and Michelson 2007). From this work we know that the importance of interpersonal interaction is unlikely to be overstated when discussing effective mobilization tactics. Several studies look at the effect of impersonal mobilization efforts such as email and text messages, but all of these find marginal effects much smaller than face-to-face contact (Nickerson 2007b; Dale and Strauss 2009). Therefore, Dale and Strauss (2009) are correct when they declare that, “connectedness is not a necessary condition for a successful mobilization campaign” (787); however, there is overwhelming evidence that campaigns that incorporate even the most superficial connectedness (i.e. stranger-to-stranger contact) are more effective than campaigns that avoid interpersonal exchanges (Gerber and Green 2000; Green, Gerber and Nickerson 2003; Sinclair, McConnell, and Michelson

2007; Nickerson 2007a). Therefore, there must be some component of personal contact, beyond information exposure, that effects mobilization.

### *3.2 CHALLENGING THE TIE STRENGTH ASSUMPTION IN THE MOBILIZATION LITERATURE*

In 2000, Gerber and Green define a baseline marginal effect for face-to-face stranger interaction of 2.43 percentage points, unadjusted and approximately 8.7 percentage points when adjusted for the rate of contact. Similar to Dale and Strauss (2009), Gerber and Green (2000) highlight that deep, genuine social bonds are not required for mobilization efforts to be effective. The authors detect significant turnout effects from social interactions when the person delivering the mobilization message (i.e. the canvasser) and the person receiving the message (i.e. the target) are strangers.

Sinclair, McConnell, and Michelson (2007) build on the work of Gerber and Green (2000), McClurg (2003; 2004), and Lassen (2005) in an attempt to show that personal relationships have an additive effect on mobilization messages that make them more effective than just contact from a stranger. Sinclair, McConnell, and Michelson (2007) hypothesize that, "Invitations to vote from neighbors should be more effective than invitations to vote from strangers because canvassers from the neighborhood are recognized and therefore more trusted" (4). Sinclair et al.'s (2007) theory does not require that canvassers and targets have the type of social bond alluded to by Rosenstone and Hansen (1993). Instead, the authors argue that being able to recognize

someone as a member of your community, your ingroup “increase[s] the unspoken level of interpersonal trust between canvasser and voter” (Sinclair, McConnell, and Michelson 2007, p. 9). The authors go on to claim that this increased trust is, “an important component of social capital that...make[s] mobilization messages more effective” (Sinclair, McConnell, and Michelson 2007, p. 9). In their experiment Sinclair, McConnell, and Michelson (2007) use ZIP codes to define communities; however, how, if at all, does their theory apply as communities move online?

### *3.3 CONNECTEDNESS, TRUST, AND TURNOUT*

My critique of the social ties argument often made in the interpersonal mobilization literature is inspired by contact theory. Contact theory provides the basic framework for understanding how behavior modification can result from interpersonal interactions without relying on tie strength (Allport 1954). Although it is framed in the context of resolving conflict between two opposing groups, Rothbart and John (1985) identify three criteria to determine when interpersonal interaction will be most effective for producing behavioral modifications: (1) the outgroup members are perceived as typical of their cultural group, (2) but the outgroup members’ behavior is not consistent with their stereotype, and (3) contact between group members occurs often and in a variety of social contexts. While Rothbart and John’s (1985) model is designed to explain how to overcome racial stereotypes, I interpret it more abstractly as steps to establishing

the necessary trust that facilitates behavior modification. It answers the question: how does one come to be perceived as a member of the ingroup?

Given the design of studies by Gerber and Green (2000) and Sinclair, McConnell, and Michelson (2007), tie strength cannot be identified as the cause of increased mobilization effectiveness; however, their varying results indicate that there is clearly an interpersonal component that makes mobilization efforts more effective as messengers become less like professional canvassers and more like our immediate social networks. I posit that trust, not tie strength, drives these findings.

Michelson (2003) shows that “canvassing can have...a substantively large effect on voter turnout when the canvasser and the targeted voter share ethnicity and political partisanship,” although neither was explicitly confirmed for targets (258). Therefore, Gerber and Green’s (2000) experiment is an example of a weak trust design since canvassers are explicitly encouraged to behave as stereotypical canvassers. It is likely that the canvassers are viewed as credible to the targets, but fail to establish further trust.

Conversely, Sinclair, McConnell, and Michelson (2007) provides examples of how canvassers who establish themselves as members of the target’s ingroup are more effective. In the Sinclair, McConnell, and Michelson (2007) study, canvassers did not rely on existing personal relationships but rather ties to the community to build trust with the targets. This action did not necessarily allow canvassers to build personal

relationships with the targets, but according to Rothbart and John, if the targets recognize the canvassers, they should be perceived as more trustworthy and therefore, the target should be been more receptive to the canvassers' message.

Although mobilization studies rely on building trust, the research designs consistently fail to include Rothbart and John's (1985) third criteria, frequent and contextually diverse contact. The existing mobilization studies all provide just one face-to-face intervention. It is with this in mind that I structure my evaluation of Facebook, a social network site (SNS), to deliver mobilization messages.

### *3.4 BUILDING TRUST ONLINE*

For various reasons, researchers have attempted to understand if contact via the Internet produces attitudinal and behavioral changes similar to those observed from offline contact. In 2006, Amichai-Hamburger and McKenna declare, "contact schemes over the Internet may prove exceptionally effective tools in the pursuit of improved interpersonal and intergroup relations" (842). By 2010, Kobayashi discovers evidence that Amichai-Hamburger and McKenna's expectation is true. Observing social tolerance among a self-organized group of heterogeneous online gamers, Kobayashi (2010) finds that, "enhanced social tolerance toward online community members is generalized to offline settings" (546). Kobayashi (2010) attributes repeated contact that the Internet, and specifically SNSs, allows users to be contacted more frequently than offline contact.

### *3.5 MOBILIZATION THROUGH SOCIAL NETWORK SITES*

Given the limited body of politically focused SNS research and the methodological challenges of studying established networks (both online and offline), I intentionally rely on the premise of frequent exposure for testing the ability for SNS communication to mobilize voters. Although the message delivery system is a “social network” site, it is important to note that the hypothesis of this essay is not dependent on the formation or strength of social bonds between the canvasser and the target. Instead, I evaluate how SNS contact compares to the previously described face-to-face mobilization efforts.

There are several reasons why SNS contact should prove at least as effective as face-to-face contact. First, unlike the canvassers in Gerber and Green (2000), SNS canvassers are not strangers to the target when they are canvassed. The targets have “friended” the canvasser which means they have exchanged some amount of personal information (i.e. their name or email address) to establish their online relationship, or they have accepted a request from the canvasser. In addition to not being strangers, the target has to interact with the canvasser in an active manner to establish their online connection prior to receiving any messages. Second, unlike the canvassers in for Sinclair, McConnell, and Michelson (2007) study, SNS canvassers are not dependent on the target’s memory of passing them on the street or seeing them at the grocery store. Social network sites remind the target that they “know” the canvasser. Third,

Kobayashi (2010) shows that users conceptualize people they accept in their online network as members of their ingroup even if they would not be conceptualized that way offline. Moreover, all of the messages users are presented with appear to the user with identical importance. Social network sites do not indicate which messages appearing in a user's "News Feed" come from strong ties and which come from weak ties. I suspect this helps neutralize tie strength effects and may even facilitate greater trust between the canvasser and target since their content is presented next to content from people with whom the users have the strongest identity. Fourth, SNSs allow for repeated contact. In addition to receiving multiple contacts about voting, the targets are exposed to a variety of other content that help build trust and establish the canvasser as a member of the target's ingroup. According to Michelson (2003), mobilization messages that are delivered by an ingroup member are effective for increasing voter turnout.

### *3.6 HYPOTHESIS*

Exposure to information makes information more salient and people are more receptive to information they receive from people they perceive as members of their ingroup. Therefore:

*H<sub>1</sub>* Subjects exposed to the political mobilization messages should vote in the 2010 general election at a greater rate than subjects not exposed to these messages.

### 3.7 DESIGN

Understanding how people are receiving political information from their social networks online is incredibly difficult. SNSs log all of the actions their users take on their site and all of the interactions that occur between their users. These data could produce significant learning about how users inform and influence each other; however, social network companies are largely unwilling to allow scholars to analyze these data. Therefore, researchers have been forced to rely on users' self-report of their behavior and interactions. As with all self-reported data, respondents are likely to be affected by limited recall capacity and social desirability bias; however poor question wording also handicaps online social network behavior and interaction reports even further. For example, survey questions regarding political discussion typically fail to address online communication specifically. Instead, a survey may ask respondents how often they *discussed* politics with someone in their social network. Given that users are not yet socialized to include their online social network communication in response to such a question, online discussions often go unreported. Moreover, respondents can have a difficult time remembering if their discussions took place online or offline. In addition to these data collection challenges, the political environment also affects users in non-random ways. The campaigns, candidates, and media are all engaging with users, both offline and online. Therefore, even with access to every Facebook interaction and/or perfect self-reporting it is impossible to isolate a specific online action that *caused*

real-world voting behavior changes through observational data alone. Only through random condition assignment and researcher administered treatments can causality be determined.

Therefore, to isolate the effect of nonpartisan mobilization information delivered by a peer through a SNS, I invited students enrolled in each of the introductory American government classes and introductory international relations classes at Georgia State University to “friend” me on Facebook. For this study, participants were recruited by me in-person. Upon being introduced by the instructor, I told students that I was a fellow student, working on a research project for a class in which I needed to observe how people were using Facebook to talk about politics. Students were instructed to send a “friend request” to my actual Facebook account, but were given no indication that I would be attempting to passively influence their voting behavior by administering political treatments to a randomly selected subset of them.

To participate in the project, participants had to be enrolled in one of the political science classes articulated earlier, have an active Facebook account at the time of enrollment, send me a “friend request” before the deadline that included their name and full birth date, and be at least 18 years of age on Election Day 2010. Using a relatively homogeneous sample of university students who all have similar access and familiarity to Facebook minimizes the demographic variance in the sample and ensures that participants have relatively similar SNS usage behavior. By randomly assigning

participants to treatment and control conditions, any participation selection bias, demographic skews, or other systematic errors associated with studying a convenience sample of college students are minimized.

Ensuring participants are actually exposed to stimuli is difficult through Facebook. At the time of the experiment, exposure to specific “Status Updates” via their News Feed was dependent on the user’s number of “friends” and personal settings.<sup>8</sup> This means that some participants may need to navigate to my profile page in order to be exposed to the stimuli. Additionally, users may “hide” or opt-out of being presented with content from a specific “friend.” While the inability to strictly control exposure to stimuli is undesirable for an experiment, those being sheltered from or opting-out of receiving the stimuli should be randomized across conditions preventing any systemic selection bias. Furthermore, such limits to exposure make it more difficult to detect any treatment effects. Nevertheless, I discouraged participants from sheltering themselves from the stimuli by posting two extra credit exam questions during the semester. Students unable or unwilling to “friend” me on Facebook could request that the questions be sent to them via email. While this incentive slightly increases the burden

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<sup>8</sup> Users can control the information presented to them by: setting a cap on the number of friends included in their News Feed or “hiding” specific friends to prevent all stories from that particular user/friend from appearing in their News Feed. Additionally, the News Feed is populated by an “algorithm [that decides which information to present to the user] based on a few factors: how many friends are commenting on a certain piece of content, who posted the content, and what type of content it is (e.g. photo, video, or Status Update).” These were the guidelines governing information presentation when the experiment was administered. For the most recent guidelines see <http://www.facebook.com/help/?faq=16162>.

on participants by asking them to monitor my profile page, such a behavior is consistent with typical Facebook usage.



Before accepting any friend requests, I generated a randomized list of 1000 identification numbers and randomly assigned these identification numbers to an experimental condition in groups of 50. Therefore, every group of 50 identification numbers included 25 treatment assignments and 25 control assignments. This method allowed me to blindly assign participants to one of the experimental conditions before I ever made contact with them. To ensure the confidentiality of participants, I randomly assigned participants an identification number as their requests were received. This ensured that the first person to send me a friend request was not the first person listed in my dataset. For example, the first participant to send me a friend request might be randomly assigned identification number 123, which happened to be randomly assigned to the control condition before I ever made contact with the participant. The eighth person to send me a friend request might be randomly assigned identification number 124, which happened to also be randomly assigned to the control condition.



To control which participants were exposed to specific pieces of content, I used the "Friends List" feature on Facebook. The "Friends List" feature provides users with a way to categorize their friends into subsets or lists. The feature was intended to allow users to segment their "friends" with the intention of being able to tailor which pieces of content a person assigned to a specific category has access to. For example, a user's



close friends may be interested in seeing pictures of her weekend road trip, but she may wish to hide this information from her boss. When posting the photos, the user could choose to exclude people labeled as “Boss” or “Coworker” from accessing this content specifically while still allowing individuals in the excluded category to view all of the other content the user posted. In October 2010, during this study, Facebook revealed that just five percent of users were taking advantage of this feature (O’Brien 2010).

Instead of creating lists called “Family” or “Coworkers,” I created “Treatment” and “Control” and categorized each participant according to the condition their identification number had been randomly assigned. Having two mutually exclusive lists of participants on Facebook allowed me to manipulate the audience of a specific “Status Update” while ensuring that all of the other content available from my profile was identical between conditions. No participants had access to my political affiliation, relationship status, or work history via Facebook. Participants received several “Updates” from me during October 2010 and into November 2010 (see Table 5 for stimulus protocol). All participants received three stimuli from me the first week, four stimuli the second week, seven stimuli the third, and fourth weeks, and two stimuli the fifth week (these were the day before Election Day and Election Day). Each condition received their stimuli on the same day and at approximately the same time.

Table 5. Mobilization Experiment Stimulus Protocol

	Political Treatment	Conversational Treatment
Week 1 – October 4-10, 2010		
10/5 - To get you into the Halloween spirit :)		
	X	X
<a href="http://www.youtube.com/watch?v=v4IC7qaNr7I">KXVO "Pumpkin Dance"</a> < <a href="http://www.youtube.com/watch?v=v4IC7qaNr7I">http://www.youtube.com/watch?v=v4IC7qaNr7I</a> >		
10/8 - it is easier to be wise for others than for ourselves	X	X
10/10 - in case you missed the debate...		
	X	--
<a href="http://link.brightcove.com/services/player/bcpid101546288001?bclid=102155556001&amp;bctid=624203912001">Gubernatorial Debate: Informing the Student Vote</a> < <a href="http://link.brightcove.com/services/player/bcpid101546288001?bclid=102155556001&amp;bctid=624203912001">http://link.brightcove.com/services/player/bcpid101546288001?bclid=102155556001&amp;bctid=624203912001</a> >		
10/10 - such a sad ending :(		
<a href="http://www.wsbtv.com/video/25349415/index.html">Crowds Turn Out To Support Braves</a> < <a href="http://www.wsbtv.com/video/25349415/index.html">http://www.wsbtv.com/video/25349415/index.html</a> >	--	X
Week 2 – October 11-17, 2010		
10/11 - is spending some time trying to figure out who to vote for on Nov. 2nd	X	
10/11 - whoa, Cox and Arquette separated!		X
10/13 - It is said, "Man invented language to satisfy his deep need to complain." If that's true then man invented Facebook to ensure he had an audience ;)	X	X
10/14 - Holly likes <i>Jim's Pancakes</i> (Website).	X	X
10/17 - Make all the ads stop... be sure to vote the 1st time!		
<a href="http://www.times-herald.com/opinion/Could-bruising-Georgia-governors-race-be-headed-for-a-runoff-1339862">Could bruising Georgia governor's race be headed for a runoff?</a> < <a href="http://www.times-herald.com/opinion/Could-bruising-Georgia-governors-race-be-headed-for-a-runoff-1339862">http://www.times-herald.com/opinion/Could-bruising-Georgia-governors-race-be-headed-for-a-runoff-1339862</a> >	X	--
10/17 - A little study break :)		
<a href="http://www.usatoday.com/life/people/2010-10-14-pop-quiz_N.htm">Think you know celebrity and entertainment news?</a> < <a href="http://www.usatoday.com/life/people/2010-10-14-pop-quiz_N.htm">http://www.usatoday.com/life/people/2010-10-14-pop-quiz_N.htm</a> >	--	X

Week 3 – October 18-24, 2010		
10/18 - Procrastinate now, don't put it off.	X	X
10/19 - Just two weeks until Election Day! Do you know who you're voting for yet?	X	--
10/19 - Just under two weeks until Halloween! Do you know what you are going to be yet?	--	X
10/20 - Is there truth in all the negative ads? You decide... <a href="#">Analysis: Barnes-Deal political ads get uglier   The Augusta Chronicle</a> < <a href="http://chronicle.augusta.com/news/government/elections/georgia-elections/2010-10-16/analysis-barnes-deal-political-ads-get-uglier?utm_source=feedburner&amp;utm_medium=feed&amp;utm_campaign=Feed%3A+AugustaChronicle.comLatestNews+%28AugustaChronicle.com%3A+Latest+News+%26+Blogs%29">http://chronicle.augusta.com/news/government/elections/georgia-elections/2010-10-16/analysis-barnes-deal-political-ads-get-uglier?utm_source=feedburner&amp;utm_medium=feed&amp;utm_campaign=Feed%3A+AugustaChronicle.comLatestNews+%28AugustaChronicle.com%3A+Latest+News+%26+Blogs%29</a> >	X	--
10/20 - So how is the GSU football team doing??? <a href="#">College   Analysis of the opening of football season at Georgia State University</a> < <a href="http://www.dragonparadox.com/online-education/online-degree-online-education-online-college-online-school/college-analysis-of-the-opening-of-football-season-at-georgia-state-university/">http://www.dragonparadox.com/online-education/online-degree-online-education-online-college-online-school/college-analysis-of-the-opening-of-football-season-at-georgia-state-university/</a> >	--	X
10/21 - The ultimate inspiration is the deadline.	X	X
10/22 - Hours of fun :) 	X	--
<a href="#">FIND OUT THE FACTS!</a> < <a href="http://politifact.com/georgia/statements/?page=1">http://politifact.com/georgia/statements/?page=1</a> >		
10/22 - Hours of fun :) 	--	X
<a href="#">MAD MEN YOURSELF!</a> < <a href="http://www.amctv.com/originals/madmen/madmenyourself/">http://www.amctv.com/originals/madmen/madmenyourself/</a> >		
10/23 - Bad politicians are sent to Washington by good people who don't vote.	X	--
10/23 - Wit is educated insolence.	--	X
10/24 - I'm use to using Mad Men for a little Sunday evening study break... I suppose the end of their season means I'll get more work done :(	X	X

Week 4 – October 25-31, 2010		
10/25 - "Like" this if you plan to vote Nov. 2!	X	--
10/25 - "Like" this if you are ready for some trick-or-treating!!	--	X
10/26 - Let's do the time warp again!	X	X
10/27 - It's getting down to the wire. Time to decide who you'll be voting for on Tuesday!	X	--
10/27 - It's getting down to the wire. Time to decide what you're going to be for Halloween!	--	X
10/28 - Time to find your polling place! <a href="#">Google Maps</a> < <a href="http://maps.google.com/maps/mpl?moduleurl=http%3A%2F%2Fmaps.google.com%2Fmapfiles%2Fmapplets%2Felections%2Fvoter-info%2Fvoter-info.xml">http://maps.google.com/maps/mpl?moduleurl=http%3A%2F%2Fmaps.google.com%2Fmapfiles%2Fmapplets%2Felections%2Fvoter-info%2Fvoter-info.xml</a> >	X	--
10/28 - Time to carve some pumpkins! 	--	X
<a href="#">10 tips for a great jack o' lantern</a> < <a href="http://green.yahoo.com/blog/greenpicks/291/10-tips-for-a-great-jack-o-lantern.html">http://green.yahoo.com/blog/greenpicks/291/10-tips-for-a-great-jack-o-lantern.html</a> >		
10/29 - Polls are open Tuesday, November 2nd from 7 AM - 7 PM. If you will be away from home on Tuesday be sure to vote early! In GA, registered voters can vote in person at their registrar's office. <a href="#">Find Your Registrar's Office</a> < <a href="http://www.sos.georgia.gov/elections/elections/voter_information/2000_voter_info.asp">http://www.sos.georgia.gov/elections/elections/voter_information/2000_voter_info.asp</a> >	X	--
10/29 - We suffer primarily not from our vices or our weaknesses, but from our illusions. We are haunted, not by reality, but by those images we have put in their place. <a href="#">Top 10 Haunted Hotels</a> < <a href="http://travel.yahoo.com/p-interests-36436907">http://travel.yahoo.com/p-interests-36436907</a> >	--	X
10/30 - Not bad for somebody still in high school. Ready! Set! Vote!!! 	X	--
<a href="#">GO VOTE on November 2, 2010!</a> < <a href="http://www.youtube.com/watch?v=OjnCDtwrNDk&amp;feature=share">http://www.youtube.com/watch?v=OjnCDtwrNDk&amp;feature=share</a> >		

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10/30 - Not bad for an 80 year old cartoon. Ready! Set! Boo!  
[Disney's \(1929\) The Skeleton Dance](http://www.youtube.com/watch?v=NnTj8aMOxfE&feature=share) -- X

10/31 - 311 + Halloween costumes = awesome fun X X

---

Week 5 – November 1-2, 2010

11/1 - 5 Simple Steps for How to Be a Good Citizen  
 Tomorrow:

- 1) Wake up before 7PM tomorrow (or just don't go to bed tonight),
- 2) Make sure you know where your polling place is and how to get there, X --
- 3) Find your ID and keys,
- 4) Drive to your polling place, (make sure you are in line to vote by 7PM; and finally
- 5) Pull the levers or touch the screen!

11/1 - 5 Simple Steps for Recovering from a Candy Coma:

- 1) Wake up at some point, -- X
- 2) Skip the coffee,
- 3) Plan on having a healthy lunch like a salad,
- 4) Combat the 3PM candy craving; and finally
- 5) Drink some water and head to bed early!

11/2 - "Like" this if you are a good citizen and voted today (voting early counts too)! X --

11/2 - "Like" this if you are a good friend and called your BFF today! -- X

11/2 - EVERYONE VIA FACEBOOK DEFAULT:

The screenshot shows a Facebook interface in Mozilla Firefox. The main content area displays a 'Today is Election Day' announcement with a 'VOTE' button and a counter of 00146774 people on Facebook who have voted. Below this, a news feed entry shows 'Emma Baughman has voted.' The page also includes a sidebar with navigation options like News Feed, Messages, Events, and Friends, and a sponsored section for 'Waiting For Superman'.

- Showed users which of their friends reported that they voted.
-

During the course of the experiment, stimuli were administered to each condition on 23 different occasions. On nine of these occasions, both conditions received the same non-political stimuli. For the remaining 14 occasions, the control condition continued to receive non-political stimuli; while, the treatment condition received messages that encouraged them to think about the election and provided logistical information (such as the date of the election or poll times) for voting in the November 2010 election. The days on which political stimuli were administered were randomized weekly, excluding Election Day. On Election Day, the treatment condition was explicitly reminded to vote.

After the election, I attempted to match people who “friended” me as part of the experiment to the publicly available voter file for the state of Georgia using data available from their Facebook profile and the birth date they provided when enrolling in the study. There are two major deficiencies in how participants were matched to the voter file. First, due to the cost of obtaining a national voter file, I had to restrict analysis to just those participants who could be matched to the state of Georgia’s voter file. Therefore, participants who were registered in another state are coded as not registered in this dataset. Second, the birth date field for people born after 1989 had not yet been updated when I was matching participants to the voter file. Instead of listing the voter’s full birth date the voter file showed 01/01/1990, 01/01/1991, or 01/01/1992. Therefore, for anyone born in 1989 or earlier, a match was considered positive if a voter file search

resulted in a single record in which the name available on Facebook (or a name in which the name on Facebook is an obvious derivative) and the entire birth date were identical. For anyone born in 1990 or later, a match was considered positive if a voter file search resulted in a single record in which the name available on Facebook (or a name in which the name on Facebook is an obvious derivative) and the birth year were identical. Regardless of birth year, if multiple records were returned, I used data available on the participants' Facebook profile to match them to the proper record if it existed. This included any email addresses they listed, their current city, the address of people they identified as family members, or the town where their high school is located (see Appendix D for examples of matched and unmatched records).

After identifying the voter file record for each participant if it existed, I compare the turnout rate of the registered participants who were assigned to the treatment condition to the turnout rate of the registered participants who were assigned to the control condition. I hypothesize that users exposed to the political treatments as a result of their condition assignment should exhibit greater rates of voting than users assigned to the control condition.

### *3.8 DATA & ANALYSIS*

Approximately 2800 students were invited to participate in the study and 604 students enrolled in the experiment by friending me on Facebook. Among these participants, 304 were assigned to the treatment condition and 300 were assigned to the

control condition. Approximately 59 percent of the participants assigned to the control condition were registered to vote compared to 55 percent of the treatment condition. This difference is not statically significant at the 0.05 level in a two-tailed test. This means that those assigned to the treatment condition were no more likely to be registered to vote and/or matched to the voter file in the state of Georgia than the control condition. A total of 344 participants could be positively matched to the Georgia voter file. Approximately, 51 percent of these participants were assigned to the control condition and the remaining 49 percent were assigned to the treatment condition. Again, this difference is not statistically significant at the 0.05 level in a two-tailed test.

For the remainder of the analysis I will focus on the 344 participants who could be positively matched to the state of Georgia voter file. Table 6 shows the voter turnout rates of each condition in 2008 (*Voted 2008 General Election*) and their registration rates as of 2010 (*Registered by 2010*). The table also includes the average age (*Age*), gender (*Male*) and ethnic (*Black*) composition of each condition. In addition to the average number of total friends participants had upon completing the study (*Number of Facebook Friends*), I collected information regarding how many of their Facebook friends were also enrolled in the experiment (*Number of Mutual Friends*), how many of these mutual friends were assigned to the treatment condition (*Number of Mutual Friends Assigned to Treatment Condition*), how many of these mutual friends I was able to match to the Georgia state voter file (*Number of Mutual Friends Registered to Vote in GA*), how many of these mutual

friends actually voted in the 2010 general election according to the Georgia state voter file (*Number of Mutual Friends Who Voted in 2010*), and the percent of participants who made at least one political post to their profile during the experiment (*Made Political Post*) for each condition. Data for the variables *Gender*, *Black*, *Number of Friends*, *Number of Mutual Friends*, and *Made Political Post* are collected from the Facebook profile pages of the participants. To collect these data, I took screenshots of all the participants "Info" pages and any stories that appeared on their wall that contained the keywords: "Democrat," "Election," "Government," "Obama," "President," "Republican," and/or "Vote," I conduct a difference of means test for each variable. None of the differences are significant at the 0.05 level in a two-tailed test with two exceptions: *Number of Facebook Friends* and *Number of Mutual Friends Who Voted in 2010*.

Table 6. Mobilization Experiment Randomization Check

	Treatment	Control
<b>Demographics</b>		
Percentage Who Voted in 2008 General Election	33%	28%
Percentage Registered by 2010	100%	100%
Mean Age	21.65	21.27
Percentage Male	29%	32%
Percentage Black	40%	40%
<b>Facebook Statistics</b>		
Mean Number of Facebook Friends*	505.82	600.13
Mean Number of Mutual Friends	3.64	4.46
Mean Number of Mutual Friends Assigned to Treatment Condition	1.71	1.96
Mean Number of Mutual Friends Registered to Vote in GA	2.10	2.53
Mean Number of Mutual Friends Who Voted in 2010*	0.44	0.67
Mean Number of Participants Who Made Political Post	0.30	0.27
<b>N</b>	168	176

\* p&lt;0.05; two-tailed test.

Given the excessively large number of friends attributed to both conditions, I do not believe the difference between conditions has any practical implication to the study, nor do I have any reason to believe the difference is the result of a systematic randomization error. Moreover, there were ten individuals whose network size was abnormal when compared with the rest of the sample. Six of these participants had networks much smaller than the rest of the sample. All six of these participants were randomly assigned to the treatment condition. The remaining four participants had networks much larger than the rest of the sample and three of these participants were randomly assigned to the control condition. When I exclude these ten cases, the average number of Facebook friends for someone assigned to the treatment condition is 516 and the average number of Facebook friends for someone assigned to the control condition is 572. This difference is not statically significant at the 0.05 level in a two-tailed test.

**Measurement:** The dependent variable, *Voted in 2010*, is coded one if the participant's vote history indicated that he or she voted in the 2010 general election and zero for all others. The independent variable, *Exposed to Political Treatment*, is coded one if participant was assigned to see political stimuli posted by me via Facebook and zero for all others. Like *Voted in 2010*, *Voted in 2008* is coded one if the participant's vote history indicated that he or she voted in the 2008 general election and zero for all others. *Registered by 2010* is coded one if the participant could be positively matched to the voter file following the 2010 general election and zero for all others. *Age* is coded based

on the birth date participants provided when enrolling in the study and is calculated as of Election Day 2010. *Male* is coded one if the participant's Facebook profile information, photo, or name indicated his gender is male and zero for all others. *Black* is coded one if the participant's photo clearly indicated his or her ethnicity is black and zero for all others. The ethnicity variable was coded based on researcher interpretation. If the ethnicity of a participant was not obvious, the ethnicity of that participant was not coded. While this potentially introduces systematic bias in the ethnicity variable, there is no reason to believe that this error is skewed toward either condition. *Number of Facebook Friends* is a ratio variable that indicates the total number of Facebook friends the participant had at the end of the experiment. *Number of Mutual Friends* is also a ratio variable that indicates the number of Facebook friends the participant had who were also enrolled in the experiment. *Number of Mutual Friends Assigned to Treatment Condition* is a ratio variable that indicates how many of the respondent's enrolled friends were assigned to the treatment condition. *Number of Mutual Registered to Vote in GA* and *Number of Mutual Friends Who Voted in 2010* are both ratio variables collected from the voter file. *Made Political Post* is coded one if the participant made any posts that contained the keywords: "Election," "Democrat," "Government," "Obama," "President," "Republican," and/or "Vote" and zero for all others. Because many of the participants were recruited from a course called "American Government," stories

clearly using the term “government” to refer to their course were coded as zero, not one.

### 3.9 RESULTS

Approximately, 31 percent of participants assigned to the treatment condition voted on November 2, 2010 compared to 23 percent of participants assigned to the control condition. A t-test indicates that this difference is statically significant at the 0.05 level in a one-tailed test. The treatment effect is 8.2 percentage points (see Figure 1). This unadjusted treatment effect is similar to the adjusted treatment effects discovered by Gerber and Green (2000) when they tested door-to-door canvassing during local elections in 1998.

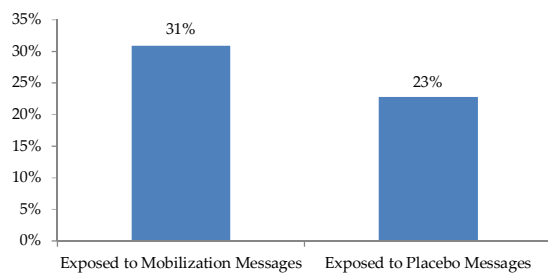


Figure 1. Voted in GA in 2010 General Election

My results are underscored by a logistical regression analysis, which is presented in

Table 7. Mobilization Experiment: Logit Coefficients: with and without Covariates

. The first model in Table 7 shows the effects of exposure to political stimuli on turnout with no covariates. The second model includes covariates that might predict voter turnout. Given the limited information that could be collected from participants, it is likely this model is underspecified; however, it includes many of the same variables that are widely used in observational turnout analysis.

Table 7. Mobilization Experiment: Logit Coefficients: with and without Covariates

	Logit Estimates	Standard Errors
<b>Model Without Covariates (N=344)</b>		
Exposed to Political Treatment	0.42*	0.25
_cons	-1.22*	0.18
<b>Model With Covariates (N=330)</b>		
Exposed to Political Treatment	0.43*	0.26
Voted in 2008	0.93**	0.30
Age	0.09**	0.03
Male	0.44	0.28
Black	0.37	0.27
_cons	-3.71**	0.75

\* $p < 0.05$ ; \*\*  $p < 0.005$ ; one-tailed test.

### 3.10 DISCUSSION

The goal of this experiment is simply to establish if a mobilization effect from SNS communication exists; therefore, multiple, strong messages were delivered over a relatively lengthy period. Manipulations regarding the number of posts, type of posts (links, status, direct appeals, informational), and timing of posts should all be evaluated

more closely. For example, it is plausible that just reminding people to vote on Election Day is enough to produce the effect observed here. Alternatively, it is possible that a more conversational approach over a long period is necessary to garner larger effects.

In addition to the messages and their delivery, researchers studying social media, including myself, need to explore more creative ways to measure the effects of tie strength. Experimental research in this field thus far has been forced to rely on relatively weak ties. Finding ways to predictably alter tie-strength should be among the highest priorities for researchers studying social media if we are to understand the political potential for this medium.

## 4 2010 SOCIAL ENDORSEMENT SURVEY EXPERIMENT

In the previous chapters, social network site (SNS) users are shown to be able to retain at least some of the political information presented to them through a SNS and take action as a result of exposure to such information. However, the utility of nonpartisan, noncontroversial information is limited in the context of a political campaign. Therefore, it is necessary to determine if users can actually influence each other's opinions via SNSs in addition to just receiving information. With a simple click of the "Share" button a candidate's supporters have the potential to connect with hundreds (sometimes thousands) of people. Supporters can now relay a campaign's message to their entire social network regardless of how interested their "friends" are in such information. But, how valuable is such an endorsement?

### 4.1 WHAT IS A SOCIAL ENDORSEMENT

In April 2010, Facebook replaced a feature called "Become a fan" with their traditional "Like" button (Siegler 2010). Both features allow users to share their support of a celebrity, company, brand, item, news story, etc. with their "friends." The button allows users to endorse content that they enjoy and share their endorsement with their network.

Early in its development Facebook made a strategic decision not to allow advertising to populate the content users receive from their network. Instead, the site encourages users to endorse content and produces advertisements that are designed to

be as unobtrusive as possible. The prohibition of slick banners and flash animation seems as though it would make advertising on Facebook unappealing, but by allowing users to broadcast their endorsement of content, Facebook capitalizes on the principles of word of mouth (WOM) advertising. Moreover, given that each user is connected with hundreds (sometimes thousands) of other users, Facebook drastically increases the number of individuals exposed to a user's endorsements. However, are endorsements posted on SNSs effective?

Facebook provides two ways for users to express their endorsement of content. First, users can "Like" content and that endorsement can be made public by the owner of the content. For example, if a user "Likes" a candidate, when the candidate buys advertising on Facebook, the user's network will see that the user "Liked" that candidate. Second, the user can post information about the candidate in their own words to their network. The second method is an example of more traditional WOM advertising.

#### *4.2 INFORMATION EXPOSURE AND SOURCES*

The political science literature shows Americans are woefully uninformed about politics (Converse 1975; Kinder and Sears 1985; Delli Carpini and Keeter 1996); however, voters are generally able to make correct voting choices (Lau and Redlawsk 1997, 2001). The information exposure literature indicates that being exposed to information makes people more knowledgeable about the information they were

exposed to, but people often evaluate the information source rather than just the information when they making decisions. Sniderman, Brody, and Tetlock (1991) argue that by evaluating information sources rather than the information itself, “people can be knowledgeable in their reasoning about political choices without necessarily possessing a large body of knowledge about politics” (19).

The political psychology literature focuses largely on the cognitive processes that aid citizens in developing policy preferences and determining their vote choice. Much of this literature examines cue-taking (Kuklinski and Hurley 1994; Kuklinski and Quirk 2000) and heuristics (Brady and Sniderman 1985; Sniderman, Brody, and Tetlock 1991; Zaller 1992; Lupia 1994; Lupia and McCubbins 1998). In 1992, Zaller claimed that people use the reputations of message deliverers as contextual information to evaluate the messages being relayed. In talking about elites as cue providers, Zaller (1992) argues that if the messenger is reputable the message must be reliable. But, what makes a messenger reputable?

Some authors, such as Neustadt (1960), argue that a title or office make the messenger reputable. For example, Neustadt (1960) says that the power of the president to persuade lies with the position, professional reputation, and public prestige of the president. Other authors, such as Brady and Sniderman (1985), approach find that people use “affect calculus” when presented with two options to determine which option best represents their beliefs. “Affect calculus” is consistent with Neustadt’s

(1960) argument that if people like the president they will support his policies. Brady and Sniderman (1985) define “affect calculus” as requiring a person know his or her feelings about a group in order to adopt the policy preferences about that group. Lupia (1994) provides an example of affect calculus by evaluating voters’ preferences towards a series of automobile insurance reform propositions in California. Lupia finds that respondents familiar with the insurance industry’s position were better able to determine how to vote consistent with their preference on the propositions than those who were unfamiliar with the industry’s position. Presumably, voters could identify if they agreed or disagreed with the insurance industry without needing to fully understand the text of the proposition. However, this work assumes one has a preference and can correctly identify those who share their preferences.

Lupia and McCubbins (1998) expand the work of elite cue-taking to define persuasion more broadly. The authors define persuasion as, “one person's successful attempt to change the beliefs of another” (Lupia and McCubbins 1998, p. 40). Yet, the work in this area does little to show that beliefs are changed. Instead, Lupia and McCubbins (1998) describe a principle-agent relationship; the principle (message receiver) must perceive that the agent (messenger) has interests in common with them and that messenger is knowledgeable about the information they are providing. Therefore, it is possible that the message receiver has no preference. In fact, Lupia and McCubbins (1994) argue that, “People often substitute the advice of others for the

information they lack" (2). And, that, "This substitution can give people the capacity for reasoned choice" (Lupia and McCubbins 1994, p. 2).

However, which sources are used for substitution is questionable. In some cases, people may exhibit bandwagon effects. In this case, the message receiver is not connected to a particular individual from whom they are receiving information, but rather seeing that others are behaving a certain way causes them to behave similarly. For example, Skalaban (1988) shows that positive public opinion polls encourage those without firmly established opinions to assimilate a positive opinion of the leading candidate. Other scholars, including Lupia and McCubbins (1998) argue that a key component of successful cue taking is that the messenger shares "common interests" with the message receiver.

However, "common interest" can be broadly defined. For example, Neustadt (1960) might argue that national policy agenda is of common interest to all Americans. Neustadt argues that the prestige associated with messenger's title (i.e. President of the United States) is inherently reputable. Other scholars argue that cultural identity can be used as a heuristic for assuming common interest (McDermott 2009). In this case, the ethnicity of the messenger is used to validate the reputation of the messenger. Still, others argue that social connections which are traditionally organized around common interests can be exceptional sources of political persuasion (Rosenstone and Hansen 1993). In explaining how networks persuade each other to vote, Rosenstone and Hansen

(1993) write that networks, " create solidarity rewards and bestow them, selectively, on those who act in the common interest" (23). While promise of reward or threat of retribution may not be necessary to persuasion, these tools socialize people to be responsive to those in their networks.

#### *4.3 SOCIAL NETWORK SITES AND POLITICAL PERSUASION*

While Americans still use traditional communication methods to maintain their social networks, they are increasingly incorporating the use of SNSs. However, SNSs lower the threshold for connecting, so users are able to easily expand the size of their networks. Unlike traditional social networks that are often formed around common interests, SNSs are not necessarily held to that same standard. Sites such as Facebook allow users to "collect" up to 5000 "friends" through a personal profile account.

As of January 2012, the SNS, Facebook, claimed that its average user had approximately 130 "friends;" however Facebook also claims that 80 percent of its users live outside the United States. Therefore, 20 percent of its users are concentrated in a single country. Given that it is unlikely other countries experience similar penetration rates, it is reasonable to assume that the average American Facebook user has a network much larger than 130 "friends."

Given that users can establish so many social connections so quickly and easily, it is unclear how users evaluate the information they receive through SNSs. Because it is easier to drastically expand the size of one's network users may deal with evaluating

information source reputations in several ways. First, users may devalue all of the information they receive through SNSs regardless of the messenger. Second, users may be able to value some messengers over others the same way they do in offline networks. Third, users may simply give everyone they have “friended” the benefit of the doubt and treat all messengers equally.

#### *4.4 DESIGN*

To isolate the effect of political endorsements delivered by a peer (rather than an elite) through a SNS, I invited students enrolled in several of the introductory American government classes from a large, diverse southern university to first “friend” me on Facebook for approximately one month and second take a survey in which they were presented one of three SNS endorsement manipulations. The survey in which the manipulations were presented was a department-wide omnibus survey. Students had two independent opportunities for extra credit. I posted two extra credit exam questions during the semester through Facebook. Students unable or unwilling to “friend” me through Facebook could send me an email to receive these two questions. In addition, respondents who completed the survey received extra course credit for their participation. Students were not required to “friend” me to complete the survey and an alternative extra credit project of equal value was available to students unwilling to complete the survey.

For this study, I recruited participants in-person and used my actual Facebook profile to communicate with participants. Upon being introduced by the instructor, I told students that I was a fellow student, working on a project for class in which I needed to observe how people were using Facebook to talk about politics.

To participate in the experiment, participants had to have access to the Internet, have an active Facebook account at the time of enrollment, provide their name and birthday, and be at least 18 years old as of November 2, 2010. Using a relatively homogeneous sample of university students who all have similar access and familiarity to Facebook minimizes the demographic variance in the sample and ensures that participants have relatively similar SNS usage behavior. By randomly assigning participants to treatment and control conditions, any participation selection bias, demographic skews, or other systematic errors associated with studying a convenience sample of college students are minimized.

In order to build a relationship with participants I posted several "Status Updates" during October 2010 and into November 2010. During the course of the study, messages were administered to Facebook participants on 23 different occasions. All participants received three messages from me the first week, four messages the second week, seven messages the third and fourth weeks, and two messages (Monday and Election Day) the fifth week. In the execution of a separate study, 14 of the 23 messages administered to a randomly selected subset of the Facebook participants were

nonpartisan, noncontroversial mobilization messages. These messages included mostly logistical information such as reminding users what times the polls would be open on Election Day and providing a link to help them find their polling place.

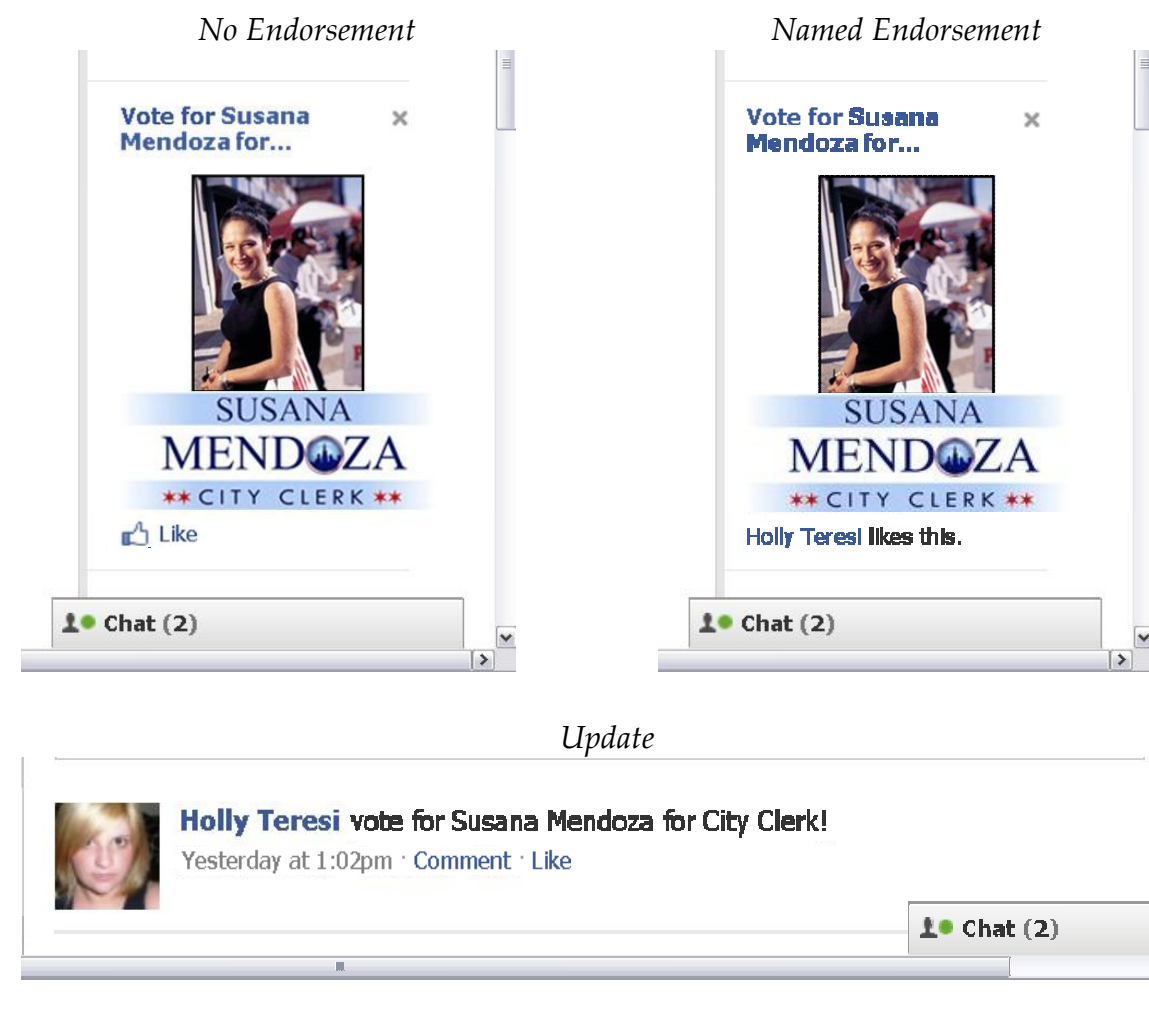
Ensuring participants view the content I post on Facebook is difficult. At the time of the experiment, exposure to specific “Status Updates” via their News Feed was dependent on the user’s number of “friends” and personal settings.<sup>5</sup> This means that some participants may need to navigate to my profile page in order to be exposed to the stimuli. Additionally, users may “hide” or opt-out of being presented with content from a specific “friend.” However, those being sheltered from or opting-out of being exposed to the content I posted should be randomized across participants and prevent any systemic selection bias. Furthermore, such limits to exposure should make it more difficult to detect any treatment effects. Nevertheless, I discouraged participants from sheltering themselves from the stimuli by posting two extra credit exam questions during the semester. Students unable or unwilling to “friend” me through Facebook could send me an email to receive these two questions. While this incentive slightly increases the burden on participants by asking them to monitor my profile page, such a behavior is consistent with typical Facebook usage.

Approximately one month after the last message was administered to participants through Facebook, the online omnibus survey was available to all of the students who were originally invited to “friend” me through Facebook (see Appendix

C). The survey was not limited to only those students who actually “friended” me. The survey included three SNS endorsement manipulations—screenshots that were fabricated to appear as though they were taken from Facebook. My endorsement of a candidate was altered in each of the images (see Table 8). Respondents were randomly assigned to be exposed to one of these treatments and then asked questions about their favorability toward the endorsed candidate, the trustworthiness of the endorsed candidate, and their likelihood to vote for the endorsed candidate.

The first treatment, *No Endorsement*, was a traditional Facebook column advertisement with no named endorsement. The second treatment, *Named Endorsement*, was the same advertisement; however, it identified me as someone who “Liked” the candidate along with six other unspecified “friends.” This type of endorsement is the result of a user clicking the “Like” button on the advertisement or from becoming a “Fan” of/clicking the “Like” button on the candidate’s profile page. The third treatment, *Update*, was a screenshot of a “Status Update” from me asking people to vote for the candidate. This treatment was presented as if it were part of the respondent’s “News Feed.”

Table 8. Social Endorsement Experiment Treatments



The candidate being evaluated for this experiment was Susana A. Mendoza who was running for (and won) the city clerk position in Chicago, Illinois. This candidate was chosen because of the local nature of her election, her willingness to participate, and her physical distance from the respondents. Additionally, subjects were exposed to the treatments after the election. So, even in the unlikely event that a Chicago voter participated in the experiment, their ballot would have already been counted.

#### 4.5 HYPOTHESES

Word of mouth advertising and cue taking rely on networks of individuals sharing information and being responsive to that information. However, unlike pure information sharing, word of mouth advertising is a statement of judgment. The endorser shares his or her opinion and tries to persuade others to use him or her as cue for how they should think or behave. Unlike educators, endorsers ask others to share their opinion rather than just be aware of the information being presented.

The hypotheses outlined below attempt to understand if SNS endorsements, in the form of an endorsed Facebook advertisement or Status Update message, can cause people to adopt the feelings conveyed by the endorsement. Moreover, I attempt to distinguish between bandwagon effects—seeing that others have endorsed the content makes it more appealing—verses a social effect, in which the observer reacts based on his or her familiarity with the endorser. Therefore, I expect:

- H<sub>1</sub>*: Respondents exposed to the *Named Endorsement* treatment should report more positive ratings of the candidate on measures of favorability, trustworthiness, and likelihood to support than those exposed to the *No Endorsement* treatment.
- H<sub>2</sub>*: Respondents exposed to the *Update* treatment should report more positive ratings of the candidate on measures of favorability, trustworthiness, and likelihood to support than those exposed to the *No Endorsement* treatment.

*H*<sub>3</sub>: Respondents who remember friending me should report more positive ratings of the candidate on measures of favorability, trustworthiness, and likelihood to support when exposed to the *Named Endorsement* or *Update* treatments than respondents who do not remember friending me.

#### 4.6 DATA & ANALYSIS

**Sample:** Survey data were collected from 651 respondents and included 104 people who also friended me through Facebook. However, five survey respondents did not recall friending me and 50 survey respondents thought they friended me even though they did not (see Table 9 for randomization check).

Table 9. Social Endorsement Experiment Randomization Check

	No Endorsement	Named Endorsement	Update
<b>Demographics</b>			
Percentage Male	37%	28%*	34%
Percentage Hispanic	17%	12%	13%
Mean Age	21.46	21.60	21.44
Average Interest in Politics (mean category chosen by respondent)	Somewhat Interested	Somewhat Interested	Somewhat Interested
<b>Facebook Statistics</b>			
Average Number of Facebook Friends (mean category chosen by user)	101-200	101-200	101-200
Mean Usage Per Week (days)	4.68	4.94	4.84
Percentage actually friended through FB	16%	20%	16%
Percentage assigned to receive mobilization messages through FB	8%	11%	9%
Mean Relationship Rating	1.84	2.32	2.19

\*  $p < 0.05$ ; two-tailed test.

**Measurement:** There are three dependent variables for this study; *Favorability*, *Trustworthiness*, and *Likelihood to Support* the endorsed candidate. *Favorability* and *Trustworthiness* are both interval measures ranging from zero to ten where zero indicates “Not at all favorable/trustworthy” and ten indicates “Extremely favorable/trustworthy.” *Likelihood to Support* is a five-point measure asking respondents how likely they would be to vote for the endorsed candidate. Responses for *Likelihood to Support* range from “Not at all likely” to “Extremely likely” with a midpoint of “Somewhat likely.”

The hypotheses of this paper break endorsements into two parts: being exposed to an endorsement and familiarity with the endorser. Therefore, there are two types of independent variables. First, I evaluate the treatments themselves: *No Endorsement*, *Named Endorsement*, and *Update*. Second, I interact each of the three treatments and the respondent’s relationship with me. I use several measures to define the respondent’s relationship to me. Each of these measures are interacted with each of the treatments and tested in separate models. . The relationship variable *Actual Who Recall* is a dichotomous variable in which respondents who actually friended me through Facebook and also reported being “friends” with me when taking the survey are coded as one and all other respondents are coded as zero. This measure excludes eight people who friended me through Facebook because they did not report friending me when taking the survey. Because there were some survey respondents who thought that they

friendened me even though they did not, I include the relationship variable *Perceived*. *Perceived* is a dichotomous variable in which all the respondents included in *Actual Who Recall* are coded one, as are 50 additional survey respondents who reported being “friends” with me through Facebook even though they were not. All other respondents are coded as zero. Like *Actual Who Recall*, this measure excludes eight people who friendened me through Facebook because they did not report friending me when taking the survey.

However, it is possible that those who do not recall friending me are still positively affected by my endorsement since they went through the act of friending me. Therefore, I test another relationship variable *Primed* in which all respondents who friendened me on Facebook are coded as one regardless of whether or not they remember doing so and all other respondents are coded as zero. Unlike *Actual Who Recall* or *Perceived*, this measure includes the eight people who friendened me through Facebook but did not report doing so when taking the survey. Finally, I include a comprehensive variable, *Primed & Perceived*, in which respondents who actually friendened me through Facebook or thought that they friendened me through Facebook are all coded as one and those who affirm that they did not friend me through Facebook and actually did not friend me through Facebook are coded as zero. This variable is meant to capture any possible relationship effects.

Because the treatments were not identical (the candidate's picture and campaign logo were used in two of the three treatments) and the candidate's name is overtly ethnic, I present two models. The first models in each set of tables show just the experimental effects absent any control variables. The second model in each set of tables includes control measures for gender, ethnicity. *Male* is a dichotomous variable in which males are coded one and females are coded zero. *Hispanic* is a dichotomous variable in which "Hispanic" is coded one and all other responses are coded zero. I also include an age variable in the models addressing likelihood to vote for the candidate since age is such a significant predictor of voting behavior. *Age* is a ratio variable indicating the respondent's age when they took the survey.

Additionally, some of the participants who friended me were exposed to five weeks of political mobilization messages through Facebook for the mobilization study presented in a previous chapter. Survey respondents who friended me on Facebook were randomly assigned to receive these messages or not. None of the people who friended me on Facebook were specifically incentivized to participate in the survey associated with this study; however, it is possible that there could be correlation between being exposed to voter mobilization messages and participatory behavior beyond voting. Therefore, it is possible survey respondents who were exposed to the voter mobilization messages through Facebook experienced a spillover effect that caused them to feel more participatory and be willing to take the survey. If this is true,

people who friended me and were exposed to voter mobilization messages could have felt compelled to participate in the survey in a way that was systematically different than those who friended me and were not exposed to mobilization messages. To control for such bias I include *Received Mobilization Messages*, a dichotomous variable coded one for those who could have been exposed to mobilization message by me through Facebook and zero for all others.

**Analysis:** To test H<sub>1</sub> and H<sub>2</sub> I use an OLS regression model to analyze the independent variables: *No Endorsement*, *Named Endorsement*, and *Update* against the dependent variables, *Favorability*, *Trustworthiness*, and *Likelihood to Support*. *No Endorsement* serves as the reference group in each of these models. I present the models without control variables first (Table 10) then with control variables (Table 11). To test H<sub>3</sub> I use an OLS regression model to analyze the interaction between each of the treatments (*No Endorsement*, *Named Endorsement* and *Update*) and each of the relationship variables discussed earlier against the same dependent variables, *Favorability* (Table 12), *Trustworthiness* (Table 14), and *Likelihood to Support* (Table 16). *No Endorsement* serves as the reference group for these models. I present the models without control variables first and then with the control variables discussed previously for *Favorability* (Table 13), *Trustworthiness* (Table 15), and *Likelihood to Support* (Table 17). In all the models testing H<sub>3</sub>, the effectiveness of the treatment and relationship

interaction is analyzed within a single model, while the differences between relationship definitions are evident when looking between models.

#### 4.7 RESULTS

The OLS regression models presented in Table 10 show the effects of peer endorsements via SNSs on an individual's favorability, trust, and likelihood to support the candidate endorsed. Counter to  $H_1$  and  $H_2$ , the personalized treatments do not make recipients more positive toward the candidate on any of the dependent variables. Moreover, individuals exposed to the strongest treatment, a Status Update asking them to support the candidate, exhibit a backfire effect. Survey respondents actually become less favorable, trusting, and willing to support the endorsed candidate.

The magnitude of difference may seem small, approximately one point on a ten point scale; however, this loss means that people receiving the treatment dip below a neutral position which could have negative electoral or legislative effects for the candidate. This is confirmed when analyzing the *Likelihood to Support* variable. While the numerical magnitude of the change for *Likelihood to Support* is smaller than the other dependent variables, the scale for this variable means that respondents exposed to the *Update* treatment report being "Not very likely" to support the candidate while people exposed to the *No Endorsement and Named Endorsement* advertisements report being "Somewhat Likely" to support the candidate.

Table 10. Social Endorsement Experiment: OLS Regression of Experimental Treatments (without control variables)

	Favorability	Trustworthiness	Likelihood to Support
_cons	5.11** (0.17)	4.95** (0.16)	2.46** (0.06)
Named Endorsement	-0.05 (0.24)	-0.17 (0.24)	-0.00 (0.10)
Update	-1.34** (0.24)	-1.20** (0.24)	-0.34** (0.09)
N	534	534	582
R <sup>2</sup>	0.05	0.05	0.02

\* $p < 0.05$ ; \*\* $p < 0.01$ ; standard errors in parentheses. Two-tailed test.

The results from Table 10 are consistent even after adding in control measures for being exposed to mobilization messages by me through Facebook, gender, ethnicity, and age where appropriate (see Table 11). Given that the candidate's name is of Hispanic origin, it is not surprising that Hispanics are more positive in their *Likelihood to Support* the candidate. This behavior is consistent with the identity politics literature (see McDermott 2009). Although the magnitude of loss for each of the dependent variables for respondents exposed to the *Update* treatment is similar to that in the previously presented models, the outcome for *Likelihood to Support* is unaffected by this loss when control variables are included. This means that when controlling for exposure to mobilization messages, gender, ethnicity, and age respondents all report being "Not very likely" to support the candidate regardless of which treatment they saw.

Table 11. Social Endorsement Experiment: OLS Regression of Experimental Treatments (with control variables)

	<b>Favorability</b>	<b>Trustworthiness</b>	<b>Likelihood to Support</b>
_cons	5.03*** (0.19)	4.90*** (0.19)	2.16*** (0.40)
Named Endorsement	0.01 (0.24)	-0.11 (0.24)	0.06 (0.10)
Update	-1.33*** (0.25)	-1.19*** (0.24)	-0.34*** (0.10)
Received Mobilization Messages	0.04 (0.36)	0.02 (0.34)	0.18 (0.14)
Male	0.04 (0.21)	-0.07 (0.20)	0.09 (0.09)
Hispanic	0.44 (0.35)	0.42 (0.35)	0.37* (0.13)
Age			0.01 (0.02)
N	524	533	518
R <sup>2</sup>	0.07	0.06	0.06

\*  $p < 0.01$ ; \*\*  $p < 0.05$ ; \*\*\*  $p < 0.01$ ; standard errors in parentheses. Two-tailed test.

The OLS regression models presented in

Table 12 through Table 17 evaluate *Favorability*, *Trustworthiness*, or *Likelihood to Support* between those who are familiar with the endorser and those who are unfamiliar with the endorser. Familiarity with the endorser is defined by four different “Friends” variables: *Actual Who Recall*, *Perceived*, *Primed*, and *Primed & Perceived*. The “Friends” variable included in the model is defined based on the column being evaluated.

Table 12 shows that counter to  $H_3$ , respondents exposed to either *Named Endorsement* or *Status Update* who actually friended me through Facebook and

remembered doing so (*Actual and Recall*) are no more favorable towards the candidate being endorsed than those who did not friend me through Facebook or those who believed that they did not friend me. Moreover, there appears to be no priming effect because respondents who friended me regardless of remembering to do so (*Primed*) do not report any significant difference in favorability towards the candidate than those who did not friend me through Facebook.

However, when the definition of “remember friending me” is expanded to include those who say they friended me although they did not (*Perceived*), respondents exposed to the *Update* treatment report being slightly more favorable toward the candidate than those who do not remember friending me. Interestingly, this effect is not noticeable among those exposed to the *Named Endorsement*. H<sub>3</sub> does not expect there to be differences between the *Named Endorsement* and *Update* treatments since both treatments show the respondent who is endorsing the content. However, Status Updates appear to be potentially effective for increasing people’s favorability towards the content an endorsement endorses while Facebook’s traditional advertisements are not.

While these results are encouraging, what is more concerning is that regardless of how “remember friending me” is defined, those with whom I had no relationship exhibit a sizable backfire effect when exposed to the *Update* treatment. Users appear to tolerate endorsed advertisements, perhaps because they are less intrusive than Status

Updates, but they are strongly against seeing News Feed style content from users they do not know. These results are consistent when control variables are included for being exposed to mobilization messages by me through Facebook, gender, and ethnicity (see Table 13).

Table 12. Social Endorsement Experiment: OLS Regression of Candidate Favorability (without control variables)

	Friends (Actual Who Recall)	Friends (Perceived)	Friends (Primed)	Friends (Primed & Perceived)
_cons	5.08*** (0.19)	5.18*** (0.19)	5.08*** (0.19)	5.18*** (0.19)
Friends [see column header for variable]	0.02 (0.40)	-0.29 (0.38)	0.19 (0.40)	-0.29 (0.37)
Named Endorsement	-0.01 (0.27)	-0.05 (0.28)	0.02 (0.27)	-0.01 (0.28)
Named Endorsement X Friends	-0.21 (0.63)	0.08 (0.58)	-0.35 (0.62)	-0.04 (0.57)
Update	-1.37*** (0.26)	-1.60*** (0.28)	-1.37*** (0.27)	-1.60*** (0.28)
Update X Friends	0.27 (0.71)	1.15** (0.60)	0.28 (0.69)	1.14** (0.59)
N	525	522	525	522
R <sup>2</sup>	0.07	0.08	0.07	0.08

\* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ ; standard errors in parentheses. Two-tailed test.

Table 13. Social Endorsement Experiment: OLS Regression of Candidate Favorability (with control variables)

	Friends (Actual Who Recall)	Friends (Perceived)	Friends (Primed)	Friends (Primed & Perceived)
_cons	4.98*** (0.21)	5.10*** (0.21)	4.99*** (0.21)	5.10*** (0.21)
Friends [see column header for variable]	0.43 (0.49)	-0.24 (0.42)	0.39 (0.48)	-0.25 (0.41)
Named Endorsement	0.05 (0.27)	-0.02 (0.28)	0.08 (0.27)	0.02 (0.28)
Named Endorsement X Friends	-0.23 (0.63)	0.15 (0.58)	-0.35 (0.61)	0.04 (0.57)
Update	-1.36*** (0.27)	-1.59*** (0.28)	-1.36*** (0.27)	-1.59*** (0.28)
Update X Friends	0.31 (0.71)	1.16** (0.60)	0.33 (0.69)	1.15** (0.59)
Received Mobilization Messages	-0.40 (0.47)	-0.13 (0.43)	-0.34 (0.49)	-0.10 (0.44)
Male	0.06 (0.21)	0.04 (0.21)	0.06 (0.21)	0.04 (0.21)
Hispanic	0.46 (0.35)	0.45 (0.35)	0.46 (0.35)	0.46 (0.35)
N	524	521	524	521
R <sup>2</sup>	0.08	0.08	0.08	0.08

\* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ ; standard errors in parentheses. Two-tailed test.

The same pattern discovered for *Favorability* exists for *Trustworthy*. When the definition of “Friends” is expanded to include those who believe they friended me through Facebook but did not, those who are exposed to the *Update* and think they friended me (*UpdateXPerceived*) evaluate the candidate as more *Trustworthy* (Table 14) than those exposed to the same treatment who believe they did not friend me through Facebook (*Update*). As with *Favorability* those respondents who believe they did not friend me through Facebook exhibit a backlash effect, reporting that the candidate is less *Trustworthy*. These results are consistent when control variables are included for being exposed to mobilization messages by me through Facebook, gender, and ethnicity (Table 15).

Table 14. Social Endorsement Experiment: OLS Regression of Candidate Trustworthiness (without control variables)

	Friends (Actual Who Recall)	Friends (Perceived)	Friends (Primed)	Friends (Primed & Perceived)
_cons	5.01*** (0.18)	5.06*** (0.19)	5.01*** (0.18)	5.06*** (0.19)
Friends [see column header for variable]	-0.36 (0.39)	-0.45 (0.36)	-0.35 (0.38)	-0.44 (0.36)
Named Endorsement	-0.31 (0.27)	-0.22 (0.28)	-0.31 (0.28)	-0.22 (0.29)
Named Endorsement X Friends	0.78 (0.59)	0.26 (0.55)	0.76 (0.58)	0.26 (0.55)
Update	-1.28*** (0.26)	-1.49*** (0.27)	-1.29*** (0.26)	-1.50*** (0.27)
Update X Friends	0.51 (0.70)	1.24** (0.58)	0.55 (0.68)	1.26** (0.57)
N	534	334	534	531
R <sup>2</sup>	0.05	0.06	0.05	0.06

\* $p < 0.10$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ ; standard errors in parentheses. Two-tailed test.

Table 15. Social Endorsement Experiment: OLS Regression of Candidate Trustworthiness (with control variables)

	Friends (Actual Who Recall)	Friends (Perceived)	Friends (Primed)	Friends (Primed & Perceived)
_cons	4.91*** (0.20)	4.96*** (0.23)	4.91*** (0.20)	4.96*** (0.21)
Friends [see column header for variable]	-0.29 (0.48)	-0.43 (0.41)	-0.25 (0.47)	-0.41 (0.40)
Named Endorsement	-0.24 (0.27)	-0.19 (0.29)	-0.24 (0.27)	-0.19 (0.29)
Named Endorsement X Friends	0.75 (0.59)	0.35 (0.52)	0.75 (0.58)	0.35 (0.54)
Update	-1.27*** (0.26)	-1.47*** (0.52)	-1.28*** (0.26)	-1.48*** (0.27)
Update X Friends	0.53 (0.71)	1.23** (0.00)	0.58 (0.69)	1.26** (0.57)
Received Mobilization Messages	-0.09 (0.46)	-0.02 (0.04)	-0.16 (0.48)	-0.06 (0.42)
Male	0.08 (0.20)	0.07 (0.96)	0.09 (0.20)	0.08 (0.20)
Hispanic	0.43 (0.35)	0.42 (0.73)	0.43 (0.35)	0.42 (0.35)
N	533	530	533	530
R <sup>2</sup>	0.06	0.07	0.06	0.07

\* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ ; standard errors in parentheses. Two-tailed test.

The same pattern discovered for *Favorability* and *Trustworthy* exists for *Likelihood to Support*. When the definition of “Friends” is expanded to include those who believe they friended me through Facebook but did not, those who are exposed to the *Update* and think they friended me (*UpdateXPerceived*) report greater willingness to vote for the endorsed candidate (Table 16) than those exposed to the same treatment who believe they did not friend me through Facebook (*Update*). However, the base level of willingness to support the endorsed candidate among respondents who saw just a Facebook advertisement with no personalized endorsement is “Somewhat likely.” While the magnitude of support among respondents who were exposed to the *Update* and thought they friended me through Facebook (*UpdateXPerceived*) is larger than the constant, this difference does not change the level of support for the endorsed candidate. Respondents who were exposed to the *Update* and thought they friended me through Facebook (*UpdateXPerceived*) are also only “Somewhat likely” to support the endorsed candidate.

As with *Favorability* and *Trustworthy*, those respondents who believe they did not friend me through Facebook exhibit a backlash effect, reporting lower levels on the *Likelihood to Support* scale when exposed to the *Update*. Respondents who were exposed to the *Update* and believed they did not friend me through Facebook (*Update*) report being “Not very likely” to support the endorsed candidate.

These results are generally consistent when control variables are included for being exposed to mobilization messages by me through Facebook, gender, ethnicity, and age (Table 17). Given that the candidate's name is of Hispanic origin, it is not surprising that Hispanics are more positive in their *Likelihood to Support* the candidate. This behavior is consistent with the identity politics literature (see McDermott 2009).

Table 16. Social Endorsement Experiment: OLS Regression of Candidate Likelihood to Support  
(without control variables)

	Friends (Actual Who Recall)	Friends (Perceived)	Friends (Primed)	Friends (Primed & Perceived)
_cons	2.46*** (0.07)	2.48*** (0.07)	2.46*** (0.07)	2.47*** (0.07)
Friends [see column header for variable]	0.02 (0.17)	-0.05 (0.15)	0.04 (0.17)	-0.03 (0.15)
Named Endorsement	-0.07 (0.11)	-0.08 (0.11)	-0.06 (0.11)	-0.08 (0.12)
Named Endorsement X Friends	0.35 (0.25)	0.25 (0.23)	0.28 (0.25)	0.21 (0.22)
Update	-0.37*** (0.10)	-0.44*** (0.10)	-0.38*** (0.10)	-0.44*** (0.10)
Update X Friends	0.25 (0.28)	0.44* (0.24)	0.24 (0.27)	0.44* (0.24)
N	582	579	582	579
R <sup>2</sup>	0.04	0.04	0.04	0.04

\* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ ; standard errors in parentheses. Two-tailed test.

Table 17. Social Endorsement Experiment: OLS Regression of Candidate Likelihood to Support  
(with control variables)

	Friends (Actual Who Recall)	Friends (Perceived)	Friends (Primed)	Friends (Primed & Perceived)
_cons	2.19*** (0.41)	2.18*** (0.41)	2.17*** (0.41)	2.18*** (0.41)
Friends [see column header for variable]	0.10 (0.21)	-0.10 (0.17)	0.13 (0.21)	-0.07 (0.17)
Named Endorsement	0.01 (0.11)	-0.04 (0.12)	0.02 (0.11)	-0.02 (0.12)
Named Endorsement X Friends	0.33 (0.27)	0.35 (0.24)	0.26 (0.27)	0.30 (0.24)
Update Treatment	-0.38*** (0.10)	-0.45*** (0.11)	-0.39*** (0.10)	-0.46*** (0.11)
Update X Friends	0.26 (0.30)	0.48* (0.26)	0.26 (0.29)	0.47* (0.26)
Received Mobilization Messages	-0.06 (0.21)	0.06 (0.18)	-0.10 (0.22)	0.04 (0.18)
Male	0.03 (0.09)	0.02 (0.09)	0.03 (0.09)	0.02 (0.09)
Hispanic	0.37*** (0.13)	0.37*** (0.13)	0.37*** (0.13)	0.37*** (0.13)
Age	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)	0.01 (0.02)
N	518	515	518	515
R <sup>2</sup>	0.07	0.07	0.06	0.07

\* $p < 0.1$ ; \*\* $p < 0.05$ ; \*\*\* $p < 0.01$ ; standard errors in parentheses. Two-tailed test.

#### 4.8 DISCUSSION

While the power of social media endorsements is extremely important to the future of companies such as Facebook to make money, it is unclear to what extent they work. The *Update* treatment shows that there may be potential for users to positively influence each other through direct appeals (via the News Feed); but this method also poses the greatest risk. The one consistent finding throughout this essay is that users develop worse feelings for content when they are exposed to a Status Update endorsement from someone with whom they do not have an existing relationship. These feelings may be the result of user norms and not the content itself since the users experiencing the greatest benefit from the *Update* were those who perceived that they were friends with me through Facebook even though we were not. Social network sites, such as Facebook, do not show users Status Updates from people they have not friended, regardless of if they think they friended them or want to friend them. Therefore, it is impossible for the circumstances in which the positive and backfire effects were produced for this study could occur in the real world. Participants who friended me through Facebook and remembered doing so exhibit tolerance for receiving messages from me, but are unaffected by them.

That said, it is interestingly that participants who could correctly identify that they friended me appear unaffected by my endorsements, even when the endorsements include my name and photograph, but all those who thought they friended me exhibit a

positive reaction. I suspect this is because participants who could correctly identify whether or not they friended me are probably more attentive than participants who thought they friended me but did not. Therefore, participants who could correctly identify whether they friended me were persuaded by the content, but rather they were able to give an appropriate response to seeing a message from a familiar person. Those familiar with me accepted the endorsement, but ignored it, while those unfamiliar with me were averse to seeing something they might equate to “spam.”

Respondents who thought they friended me but did not are more likely to accept SNS cues than their more attentive counterparts. This might mean that less attentive respondents are more persuadable and in need of cues. Interestingly, though, not all SNS cues are created equal. Those who perceived that we were “friends” through Facebook are no more responsive to the *Named Endorsement* than the *No Endorsement*. In fact, the only endorsement appearing to produce any positive gain is a Status Update.

That said, none of the treatments were able to produce a meaningful positive change on the *Likelihood to Support* measure. I suspect that the analysis presented here does not detect a meaningful change in the *Likelihood to Support* measure because unlike *Favorability* and *Trustworthiness*, *Likelihood to Support* forces the participant to assume that they are going to vote and therefore must make a decision. It may be that respondents would not rely on SNS cues to make such a decision, or perhaps exposure to the candidate (even in the *No Endorsement*) is enough to produce an elevated baseline

level of support for the candidate because the question text may imply to some respondents that if they are “Not at all likely” to support the endorsed candidate then they must have someone else in mind. To test this, one would need to evaluate *Likelihood to Support* among those who have had been exposed to no materials regarding the candidate and compare it to the *No Endorsement* treatment.

Based on the data provide by this experiment, it is unclear if social media endorsements are actually useful for campaigns or democracy. Given the size of online social networks it is reasonable to question if users would not still exhibit the backlash effects discovered among people who were unfamiliar with me. Furthermore, research shows that it is possible for SNSs help users create networks that are more diverse as users connect with people they barely know (Lampe, Ellison, and Steinfield 2006). As networks grow larger the policy preferences of one’s Facebook “friends” may not be an accurate proxy for his or her own preferences which might increase the potential for backlash effects. Issues of policy preference cohesion among online social networks needs to be further explored to know if endorsements have no effect or a backlash effect on users. If online social networks are found to be generally homogenous then the preferences endorsed by a strong-tie could potentially provide a useful heuristic to his or her entire network. However, if networks are more heterogeneous, it is important to understand how the information received through an online social network is processed and later accessed for decision-making and how users manage competing

endorsements. Subsequently, these data show that users might just be mostly unaffected by endorsements from their weak-ties. It would not be surprising to discover that users modified their reaction to stimuli (like those presented for this study) based on the closeness of their relationship with the endorser.

## 5 CONCLUSIONS & CAUTIONS

The publication of studies examining social media for civic engagement is a relatively new development in political science. A quick search for the keywords “social network site,” “SNS,” and “Facebook” in the top political science journal, *American Political Science Review*, returns zero results. The term “social media” returns only one item; a “Notes From the Editor” published in 2011. The Note discusses the need for vigorous scholarly debate and simply recognizes the “age of social media” (iii). The term “Internet” produces just 112 articles. That said, niche journals such as the *Journal of Information Technology and Politics* have developed to fill this void, and the discussion of social media as a political phenomenon is now rapidly infiltrating the political science literature. While there is a great deal of interesting work being done around social media more broadly, it has been exclusively observational analysis or lab experiments that focus on SNSs as a communication tool rather than a tool for political organizing (see Boyd and Ellison 2007). Even work implicating social media as a catalyst for the Arab Spring frames social media as a tool for mass communication to circumvent the state controlled media rather than an interpersonal mobilization tool (Attia et al. 2011).

Contrasting the literature’s approach to SNSs as a tool for mass communication and information gathering rather than organizing may appear to some readers as a difference without distinction. However, current SNS research focuses on the people producing content or searching for content as the unit of analysis rather than their

networks. This is largely because SNSs do not easily allow for analysis of observers.

Only through the use of confederates can the effects of information presented on a SNS be evaluated experimentally.

Moreover, there are incredible institutional challenges with studying SNSs. First, the rules that govern these sites change frequently and are not conducive to reliable data collection. In 2009, when I conducted the knowledge experiment that used two profiles I had to get the explicit consent of two people to create profiles with their likeness and administer these accounts during the experiment. The advent of the “Friends List” feature allows researchers to conduct randomized experiments from a single profile now; however, collecting data from Facebook is still incredibly cumbersome. Facebook’s terms of service ask users not to collect users’ content or information using “automated means.” To not violate this policy I had to take individual screen shots of my 2010 mobilization experiment participants’ profile pages and hand enter the data contained on their pages. Moreover, you must explain to participants how their information is being used. For academic researchers this is most easily done through an Institutional Review Board’s Informed Consent document, but non-academic researchers should be aware of Facebook’s policy against passive data collection.

Second, the way SNSs present information to users is constantly changing. These changes are rarely explained to users or even disclosed when they occur. Making sure

the subjects are actually exposed to the information being posted is increasingly difficult. In February 2012, Facebook announced that, “the average News Feed story from a user profile reaches just 12 percent of their friends” (Constine 2012) That said, Facebook revealed that it prioritizes content to make sure that shared links, photos, and Status Updates reach more than just 12 percent of a user’s network; however, it is not clear if or how Facebook prioritizes “priority” the people producing this content.

Although shared links, photos, and Status Updates are more likely to show up in your friend’s News Feed than auto-generated content, it is unclear if some Status Updates are more likely to appear than others. Does Facebook decide whether or not to show an Update based on how many photos you and the poster are tagged in together? Do they use a metric such as how many “Likes” the Update received from other users before presenting it in your News Feed? These types of systematic prioritizing policies make it increasingly difficult for researchers to conduct studies on Facebook. Aside from concerns about participants logging onto the site during the study, the lack of relationship between the researcher and the participants could mean that none of the participants see the content posted by the researcher or worse that the participants being presented with the content are somehow systematically different from other participants. While random condition assignment should preserve the internal validity of studies affected by such problems, being able to generalize findings to the larger Facebook universe would be difficult.

To address issues of exposure I offered participants an incentive that encouraged them to both enroll in the study and access my Facebook profile regularly. The incentive consisted of posting two final exam extra credit questions prior to the exam. During the recruitment process, students were told that the questions would be posted “at some point during the next few weeks,” but a specific date was not provided, nor were students told that the questions would be posted after the election. It is important to note that this incentive did not ensure participants read everything I posted, but it was the most practical solution for the exposure issues.

Third, the rules that govern SNSs and the prioritization of information as well as usage patterns make it difficult to replicate results. Even during the 12 month duration of the work presented in this essay, the design for the experiment was altered to adapt to platform changes. Although experimental methods show causality, it is necessary for frequent and rigorous replication of studies to show generalizability of their findings. Unfortunately, unless experiments occur simultaneously it is impossible to replicate SNS experiments exactly. In addition to the methodological challenges of studying SNSs, there are normative questions about how useful SNSs are for increasing political knowledge, changing political attitudes, and activating civic behavior.

It is important that as we understand more about how users learn from each other via SNSs that the companies offering these services think carefully about how their filtering algorithms effect users in terms of political learning and coping with

information overload, cognitive discontinuity, and misinformation. A detrimental function of the algorithms that determine which content to display to users is that those users least interested in politics are increasingly missing political learning opportunities as the algorithm filters out more and more of the political content that the user's network posts. For example, each member of a political campaign's online social network is linked to hundreds of other users who are waiting to be entertained, educated, and persuaded. The ability for campaigns to get their message out by asking their supporters to post on SNSs is limited by the sites' willingness to ensure that even the most disinterested user is exposed to such appeals. Conversely, it is conceivable that a political campaign might want to mount a misinformation campaign directed at their challenger. As the network diversity report by Facebook shows, such content can spread far and fast because unlike traditional media, social media only censors information based on how relevant it believes that information is to the user, not on the quality of the information being communicated.

Moreover, the stimuli provided in the experiments included in this essay were intended to be nonpartisan and noncontroversial. It is possible that a participant disagreed or did not believe the information I presented; however, given the utilitarian nature of most of the stimuli presented to participants, it is unlikely they had any existing perceptions that exposure to my stimuli might have challenged. That said, further investigation is necessary to understand how posted information affect users'

ability to vote correctly. If online social networks are found to be generally homogenous then the preferences endorsed by one member could provide a useful heuristic to his or her entire network. However, if networks are more heterogeneous, it is important to understand how the information received through online social networks is processed and later accessed for decision-making and how users manage information that is inconsistent with their own beliefs.

It is possible that SNSs could better encourage civic engagement by modifying the content display algorithms to minimize misinformation and/or cognitive discontinuity by exposing users to factually correct and consistent content. I suspect Mark Zuckerberg, founder and CEO of Facebook, would argue that the manipulation of content exposure as I describe would be abhorrent given that users expect SNSs to offer a space for open discourse with minimal censorship. Yet, traditional media engage in this type of censorship via gatekeeping. Moreover, SNSs are already manipulating which content users are exposed to but without regard for the political implications of these decisions. More specifically, the findings presented in this essay indicate that SNSs' failure to consider the implications of their policies on their users' ability to engage in political learning will likely increase the political knowledge gap between those who seek information and those who do not over the long-term.

Regardless of any platform changes that might be beneficial for the utopian ideal of civic engagement, it remains to be seen if or how SNSs could be leveraged for

meaningful electoral gain. While the power of SNSs to produce behavioral changes is extremely important to the future of companies such as Facebook to make money, it is unclear if this word-of-mouth advertising is actually useful for electoral campaigns. A primary benefit of SNSs is that they provide a way to maintain relationships across large geographic distances (Ellison, Steinfield, and Lampe 2007). If this assumption is true, and our online social networks are made up of people who span several cities, congressional districts, and states how useful can such sites really be? Even at the presidential level, any campaign strategist will say that a vote in Vermont or Utah is not the same as a vote in Florida or Ohio. Therefore, even national elections are still heavily restricted by geography. Because of this, it is unlikely that SNSs could ever be leveraged in the same way as traditional canvassing, which can be targeted to rally geographic areas that offer a candidate a tactical electoral advantage. That is not to say SNSs are entirely useless. Research has shown that momentum is a crucial aspect in shaping public opinion and winning elections (Erbring, Goldenberg, and Miller 1980; Bartels 1985). While unlikely to produce enough votes in a specific geographic area to swing an election, SNSs might be able to increase the volume of material circulating about the candidate and build momentum.

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## APPENDICES

### APPENDIX A. KNOWLEDGE EXPERIMENT SURVEY

(RELEVANT QUESTIONS ONLY)

1. Do you have a Facebook profile?

- Yes  
 No

2. About how many Facebook friends do you have at Georgia State University or **elsewhere**?

- None  
 1 – 10  
 11 – 50  
 51 – 100  
 101 – 150  
 151 – 200  
 201 – 250  
 251 – 300  
 301 – 350  
 351 – 400  
 More than 400

3. In the past week, approximately how many **days** have you logged into Facebook? You may circle any number between **0 and 7**.

0    1    2    3    4    5    6    7

4. Approximately, how many **times per day** have you logged into Facebook in the past week? If you have not logged into the site at all please use "0" to indicate that.

\_\_\_\_\_ times per day

5. Thinking about **the people you interact with on Facebook**, on the whole, how would you describe their interest in information about what's going on in government and politics?

- Extremely interested
- Very interested
- Somewhat interested
- Slightly interested
- Not at all interested
- I do not have a Facebook account

6. During a typical week, how many **days** do you talk about politics with family or friends? Please exclude classroom discussions. You may circle any number between **0 and 7**.

0      1      2      3      4      5      6      7

7. Below are several questions that range in difficulty about entertainment and politics. Please write-in your answers on the line provided for each question. If you are unsure about the answer please check the "Not sure" box provided. Please provide an answer to **each** question.

- a. Name one team in the 2009 World Series.

---

Not sure

- b. If no candidate for mayor in Atlanta receives at least 50% plus 1 vote what happens?

---

Not sure

- c. Did the Falcons win their last game?

---

Not sure

- d. Which star was eliminated from the television show "Dancing with the Stars" Tuesday night?

---

Not sure

e. Which college football team is currently ranked number 1?

---

Not sure

f. Professors from which local university became involved in the most recent Atlanta mayoral race?

---

Not sure

g. Please name one organization that creates a nonpartisan voter guide?

---

Not sure

h. Please name one candidate who ran in the most recent Atlanta mayoral election?

---

Not sure

i. Which Atlanta musician was recently arrested?

---

Not sure

8. Below are several more questions that range in difficulty about entertainment and politics. Please write-in your answers on the line provided for each question. If you are unsure about the answer please check the "Not sure" box provided. Please provide an answer to **each** question.

a. During what hours are the polls open in Atlanta on any given Election Day?

\_\_\_\_\_AM - \_\_\_\_\_PM

Not sure

b. Ellen DeGeneres will be a judge on which popular television show?

---

Not sure

c. Which football team did the University of Georgia play this past Saturday?

---

Not sure

d. Which former Atlanta Falcons player is now a quarterback for the Philadelphia Eagles?

---

Not sure

e. After 4 years of marriage what did Heidi Klum do?

---

Not sure

f. Name one sport being added to the Olympics in 2016.

---

Not sure

g. When was the last Atlanta mayoral election held?

Month: \_\_\_\_\_ Day: \_\_\_\_\_ Year: \_\_\_\_\_

Not sure

h. Which demographic group was reportedly likely to swing the most recent Atlanta mayoral election?

---

Not sure

i. Where was the current season of the television show "Survivor" filmed?

---

Not sure

9. During the past week, how many days did you watch a local news program? You may circle any number between **0 and 7**.

0    1    2    3    4    5    6    7

10. How interested were you in the most recent Atlanta mayoral election?

- Extremely interested
- Very interested
- Somewhat interested
- Slightly interested
- Not at all interested

11. Are you...?

- Male
- Female

12. In what year were you born? Please enter your response as a four-digit number (such as 1992).

\_\_\_\_\_

13. Do you consider yourself...?

- White
- Black / African American
- Hispanic
- Asian or Pacific Islander
- Native American or Alaskan Native
- Mixed Race
- Some other race
- Decline to answer

*APPENDIX B. KNOWLEDGE EXPERIMENT QUESTION-BY-QUESTION RAW  
PERCENTAGES OF RESPONDENTS CORRECTLY ANSWERING KNOWLEDGE  
QUESTIONS SHOWN BY CONDITION*

	<b>Political Treatment</b>	<b>Entertainment Treatment</b>	<b>Control</b>
<b>Political Stimuli</b>			
Which demographic group was reportedly likely to swing the most recent Atlanta mayoral election?	0%	0%	0%
Please name one organization that creates a nonpartisan voter guide.	2%	3%	2%
If no candidate for mayor in Atlanta receives at least 50% plus 1 vote what happens?	49%	35%	36%
Professors from which local university became involved in the most recent Atlanta mayoral election?	0%	0%	2%
Please name one candidate who ran in the most recent Atlanta mayoral election.	40%	31%	32%
When was the last Atlanta mayoral election held?	24%	21%	17%
During what hours are the polls open in Atlanta on any given Election Day?	24%	10%	16%
<b>Supplemental Stimuli</b>			
Name one sport being added to the Olympics in 2016.	16%	7%	7%
Ellen DeGeneres will be a judge on which popular television show?	49%	45%	38%
Which former Atlanta Falcons player is now a quarterback for the Philadelphia Eagles?	64%	44%	61%
Did the Falcons win their last game?	44%	38%	51%
<b>Entertainment Stimuli</b>			
Which Atlanta musician was recently arrested?	33%	30%	28%
Name one team in the 2009 World Series.	6%	55%	63%
Which football team did the University of Georgia play this past Saturday?	39%	36%	37%
Where was the current season of the television show "Survivor filmed?	4%	4%	4%
After 4 years of marriage what did Heidi Klum do?	7%	13%	4%
Which college football team is currently ranked number 1?	22%	31%	35%
Which star was eliminated from the television show "Dancing with the Stars" Tuesday night?	0%	0%	0%

APPENDIX C. SOCIAL ENDORSEMENT EXPERIMENT SURVEY INSTRUMENT

(RELEVANT QUESTIONS ONLY)

FACEBOOK DEMOGRAPHICS

1. About how many Facebook friends do you have at GSU or elsewhere?

- None
- 1 – 100
- 101 – 200
- 201 – 300
- 301 – 400
- More than 400

POLITICAL EFFICACY

2. How interested are you in information about what's going on in government and politics?

- Extremely interested
- Very interested
- Somewhat interested
- Not very interested
- Not at all interested

3. Generally speaking, do you usually think of yourself as a Republican, a Democrat, an independent, or what?

- Republican
- Democrat
- Independent
- Something else
- Don't know
- Decline to answer

4. Using a scale from **0 to 10**, where 0 means "strongly dislike" and 10 means "strongly like," how do you feel about the Democratic Party?

0      1      2      3      4      5      6      7      8      9      10

5. Using a scale from **0 to 10**, where 0 means "strongly dislike" and 10 means "strongly like," how do you feel about the Republican Party?

0      1      2      3      4      5      6      7      8      9      10

FACEBOOK EXPERIMENT FOLLOW-UP

6. Did you “friend” Holly Teresi, a Georgia State University graduate student, through Facebook to receive questions for your final exam?

- Yes  
 No

7. **IF YES TO Q6:** Using a scale from **0 to 10**, where 0 means you “know nothing about Holly Teresi” and 10 means you are “good friends with her,” how would you rate your relationship?

0    1    2    3    4    5    6    7    8    9    10

SOCIAL ENDORSEMENT EXPERIMENT

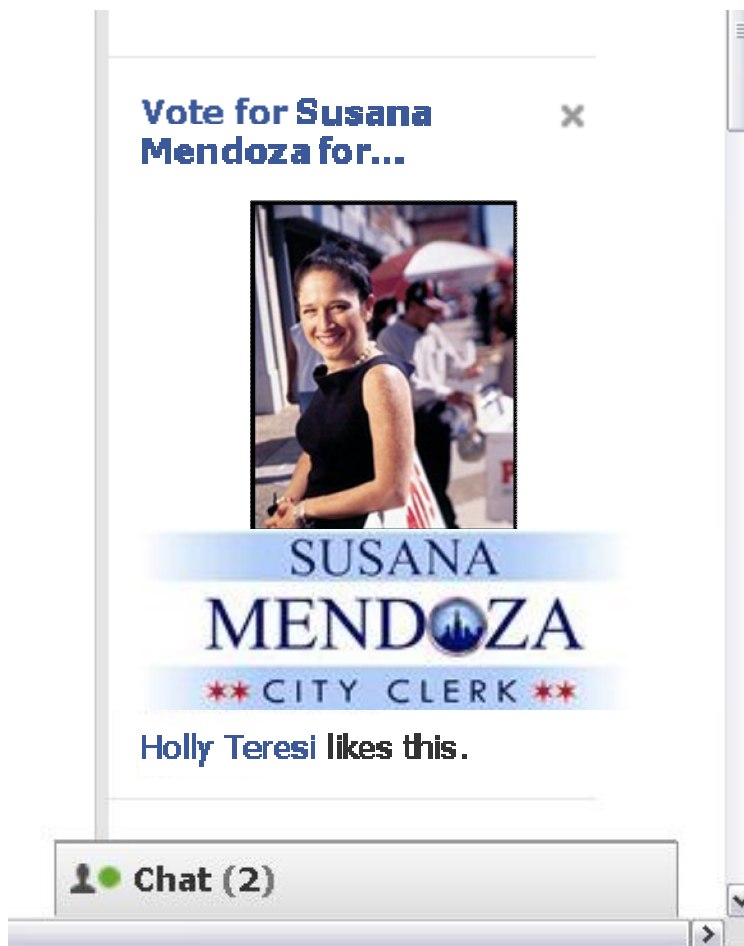
8. **RANDOM ASSIGNMENT: SEPARATE RESPONDENTS INTO THREE CONDITIONS: LIKE, NAME, OR UPDATE.**

9. **IF CONDITION ASSIGNMENT IN Q8 IS LIKE:**

- 10.



11. IF CONDITION ASSIGNMENT IN Q8 IS NAME:



12. IF CONDITION ASSIGNMENT IN Q8 IS UPDATE:



13. **PRESENT ON THE SAME SCREEN AS GRAPHIC:** Please use the graphic above to rate Susana Mendoza, a candidate for city clerk using a scale from **0 to 10**, where 0 means she is "not at all trustworthy" and 10 means she is "extremely trustworthy."

0    1    2    3    4    5    6    7    8    9    10

14. **PRESENT ON THE SAME SCREEN AS GRAPHIC:** Now, using a scale from **0 to 10**, where 0 means you are “not at all favorable” and 10 means you are “extremely favorable,” please rate your overall impression of Susana Mendoza.

0      1      2      3      4      5      6      7      8      9      10

15. **PRESENT ON THE SAME SCREEN AS GRAPHIC:** Finally, if the election were being held today, how likely would you be to vote for Susana Mendoza for city clerk?

- Extremely likely
- Very likely
- Somewhat likely
- Not very likely
- Not at all likely

DEMOGRAPHICS
--------------

16. Are you...?

- Male
- Female

17. In what year were you born? Please enter your response as a four-digit number (such as 1992).

\_\_\_\_\_

18. Do you consider yourself...?

- White
- Black / African American
- Hispanic
- Asian or Pacific Islander
- Native American or Alaskan Native
- Mixed Race
- Some other race
- Decline to answer

## APPENDIX D. MOBILIZATION EXPERIMENT VOTER FILE MATCH EXAMPLES

Facebook Name*	Voter File Record	Number of Records Returned by Search	Considered Positive Match
Name Challenges			
<b>Bob Jones</b> 07/12/1987	<b>Robert Jones</b> 07/12/1987	1	Yes
<b>Jane Smith</b> 02/21/1989	<b>Abigail Jane Smith</b> 02/21/1989	1	Yes
<b>Jacob Miller</b> 07/12/1987	<b>Jacob Miller</b> 07/12/1987	3	Not without further evidence of address
Birth Year Challenges			
<b>Robert Jones</b> 07/12/1991	<b>Robert Jones</b> 01/01/1991	1	Yes
<b>Bob Jones</b> 07/12/1991	<b>Robert Jones</b> 01/01/1991	1	Yes
<b>Jane Smith</b> 02/21/1991	<b>Abigail Jane Smith</b> 01/01/1991	1	Not without further evidence of first name
<b>Jacob Miller</b> 07/12/1991	<b>Jacob Miller</b> 01/01/1991	3	Not without further evidence of address

\*The examples provided are not based on the identity of study participants.

*APPENDIX E. IRB APPROVAL: KNOWLEDGE EXPERIMENT (FRIENDING PHASE)*

Georgia State University  
Department of Political Science  
Informed Consent

Title: Facebook Social Network Experiment  
Principal Investigator: Jason Reifler  
Holly Teresi

I. Purpose: You are invited to take part in a research study. The purpose of this study is to learn how Facebook impacts conversations and knowledge sharing. You are invited to take part because you are enrolled in POLS 2401 and are at least 18 years old. A total of 200 people are needed for this study. Enrollment in this study requires no more than 5 minutes of your time. You will need to enroll in this study outside of class sometime during the next 7 days.

II. Procedures: To take part in this study you must be at least 18 years old, have or create a Facebook account, and “friend” the person named on the attached sheet via Facebook. For your involvement in this study you will be told two extra credit questions for your final exam before the exam. The questions will be posted as a “Status Update” by the person you “friend” for this study. Your involvement in this study does not guarantee you will get credit for these questions. Failure to answer the questions correctly may result in no extra credit. Only students who “friend” the person named on their attached sheet will be able to find out the extra credit questions via [www.facebook.com](http://www.facebook.com). Students unable or unwilling to take part in the study may e-mail the researcher at [facebookprojects@yahoo.com](mailto:facebookprojects@yahoo.com) to find out the extra credit questions.

III. Risks: In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits: The benefit of your involvement includes the chance to help us learn about the impact Facebook has on college students today.

V. Voluntary Participation and Withdrawal: You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. Instructions for dropping out of the study are on the attached sheet. If you do not wish to take part in this study or you wish to drop out, you will need to e-mail the researcher at [facebookprojects@yahoo.com](mailto:facebookprojects@yahoo.com) to find out the extra credit questions.

VI. Confidentiality: We will keep your records private to the extent allowed by law. Dr. Jason Reifler and Holly Teresi will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP) and/or the Food and Drug Administration (FDA), and the sponsor). We will use a study number rather than your name on study records. The information you provide will be stored on password and firewall protected computers. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VIII. Contact Persons: Contact Dr. Jason Reifler at [jreifler@gsu.edu](mailto:jreifler@gsu.edu) or Holly Teresi at [hteres1@student.gsu.edu](mailto:hteres1@student.gsu.edu) if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or [svogtner1@gsu.edu](mailto:svogtner1@gsu.edu).

VIII. Acknowledgement of Consent and Copy of Consent Form to Subject: If you agree to take part in this study, please follow the instructions on the sheet attached. Please note that by “friending” the person named in these instructions on Facebook you are consenting to taking part in this study. Please keep this page as a copy of the consent you are providing for your records.

*APPENDIX F. IRB APPROVAL: KNOWLEDGE EXPERIMENT (SURVEY PHASE)*

Georgia State University  
Department of Political Science  
Informed Consent

Title: Facebook Social Network Experiment  
Principal Investigator: Jason Reifler  
Holly Teresi

I. Purpose: You are invited to participate in a research study. The purpose of this study is to learn how talking about politics impacts people's political behavior. You are invited to participate because you are enrolled in POLS 2401 and are at least 18 years old. Participation in this study will take no more than 10 minutes of your time during class today.

II. Procedures: To participate in this study you must finish the attached questionnaire.

III. Risks: In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits: The benefit of your involvement includes the chance for you to talk about your own experience with Facebook. Your input will also help us learn about the impact Facebook has on political discussion.

V. Voluntary Participation and Withdrawal: You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop answering questions at any time.

VI. Confidentiality: We will keep your records private to the extent allowed by law. Dr. Jason Reifler and Holly Teresi will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP) and/or the Food and Drug Administration (FDA), and the sponsor). We will use a study number rather than your name on study records. The information you provide will be stored on password and firewall protected computers. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VII. Contact Persons: Contact Dr. Jason Reifler at [jreifler@gsu.edu](mailto:jreifler@gsu.edu) or Holly Teresi at [hteres1@student.gsu.edu](mailto:hteres1@student.gsu.edu) if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or [svogtner1@gsu.edu](mailto:svogtner1@gsu.edu).

VIII. Copy of Consent Form to Subject: Please tear off the back page of this survey to keep a copy of this consent form.

If you are willing to volunteer for this research, please sign and print your name below.

---

Participant (Sign)

---

Date

---

Participant (Print)

---

Principal Investigator or Researcher Obtaining Consent

---

Date

*APPENDIX G. IRB APPROVAL: SOCIAL ENDORSEMENTS SURVEY EXPERIMENT*

Georgia State University  
Department of Political Science  
Informed Consent

Title: Dispositional Factors In Understanding Competitive Political Messages

Principal Investigator: Jason Reifler, PhD, Assistant Professor, Department of Political Science, Georgia State University, 38 Peachtree Center Ave. Suite 1005, Atlanta, GA, USA 30303-2514

Purpose: You are invited to participate in a research study. The purpose of the study is to investigate how citizens make sense of political information that they receive. You were invited to participate because you are a student in POLS 1101. Around 1000 participants will be recruited for this study. Participation will require 1-2 hours of your time.

Procedures: If you decide to participate, you will answer about questions on your political beliefs, may read some news articles or transcripts, and describe some basic information about yourself. This research will be done totally online, and you will receive 3 points extra credit to be applied to your course grade. Your answers will be completely confidential. You will interact with no one else.

Risks: In this study, you will not have any more risks than you would in a normal day of life. It is important to know that some of the questions in this survey ask about contemporary political issues, and that participants may feel discomfort about some of the topics they will be asked about.

Benefits: Participation in this study may not benefit you personally. Overall, we hope to gain information to understand more about how people make sense of the information they receive about politics. If you have not participated in a political science study before, this is a good opportunity to experience first hand how political science research is conducted.

Voluntary Participation and Withdrawal: Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

Confidentiality: We will keep your records private to the extent allowed by law. The survey will ask you for some identifying information in order to be able to award the extra credit. Once the extra credit is awarded, all personally identifying information will be deleted from all computer files and web servers. Only Dr. Jason Reifler will have access to the information you provide. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

Contact Persons: Call Dr. Jason Reifler at 404-413-6176 ([poljar@langate.gsu.edu](mailto:poljar@langate.gsu.edu)) if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or [svogtner1@gsu.edu](mailto:svogtner1@gsu.edu).

Copy of Consent Form to Subject: Please print a copy of this consent form for your records.

This study has been approved by the Georgia State Institutional Review Board for the Protection of Human Subjects.

Clicking "Yes" below indicates that you agree to participate in the study.

*APPENDIX H. IRB APPROVAL: MOBILIZATION FIELD EXPERIMENT*

Georgia State University  
Department of Political Science  
Informed Consent

Title: The Facebook Social Network Project  
Principal Investigator: Holly Teresi  
Jason Reifler

I. Purpose: You are invited to join a research study. The purpose of the study is to understand to study the link between social networking sites and politics. You are being asked to join this study because are at least 18 years of age. A total of 600 people will be part of this study. Involvement in this study will require no more than 5 minutes of your time.

II. Procedures: To join this study you must “friend” Holly Teresi (<http://www.facebook.com/holly.teresi>) on Facebook and include a message with your birthday (MM/DD/YY), instructor’s name (Jones), and class time (MW 11-12:15). For your participation in this study you will be given access to two exam questions in advance of the final exam which will be posted by the researcher via the “Status Update” function on Facebook. The questions will remain posted on the researcher’s page through the end of the semester. Students not participating or who terminated their “friendship” with the researcher before the questions are posted may e-mail the researcher at [hteres1@student.gsu.edu](mailto:hteres1@student.gsu.edu) for the extra credit questions. The researcher will provide the questions via e-mail at the same time she posts them on Facebook. As a participant of this study you may receive messages from the researcher through Facebook functions including the researcher’s Status Updates (presented to you on your News Feed) or posts and comments made directly to your Facebook wall. The researcher may also use your name and/or the information you provide by enrolling in the study to match public records, such as electoral participation, to study participants.

III. Risks: In this study, you will have no more risks than you would in a normal day of life.

IV. Benefits: Participation in this study may not benefit you personally. Overall, we hope to gain information to understand more about how people make sense of the information they receive on social networking sites. If you have not participated in a research project before, this is a good opportunity to experience first hand how academic research is conducted.

V. Voluntary Participation and Withdrawal: Joining this study is voluntary. You do not have to be in this study. If you decide to be in this study and change your mind, you have the right to drop out at any time by “unfriending” Holly.

VI. Confidentiality: We will keep your records private to the extent allowed by law. Holly Teresi and her faculty advisor, Dr. Jason Reifler, will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP), and the sponsor). We will use a respondent number rather than your name on study records with a key stored separately. The information you provide will be stored on a password and firewall-protected computer. Your name and other facts that might point to you

will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VII. Contact Persons: Contact Holly Teresi at [hteres1@student.gsu.edu](mailto:hteres1@student.gsu.edu) or Dr. Jason Reifler at [jreifler@gsu.edu](mailto:jreifler@gsu.edu) if you have questions about this study. Contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or [svogtner1@gsu.edu](mailto:svogtner1@gsu.edu) if you have questions or concerns about your rights as a participant in this research study.

VIII. Copy of Consent Form to Subject: Please keep this consent form for your records.