

Political Participation Through Facebook Groups

An Examination of the Political Behavior of Facebook Group Members

Benjamin Tyler Leigh



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Department of Education – Faculty of Educational Sciences

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Abstract

Recent headlines have been dominated by the role of social media in political events, including the 2016 election of Donald Trump. This study seeks to add to the burgeoning academic literature examining the impacts of social media on political life by examining political participation through politically-oriented Facebook groups. Initiated by personal observations, this study aims to contribute to our understanding of political behavior by examining if, how, and why political Facebook group membership affects the political behavior of group members. This study also examines political Facebook group members' rationales for joining political Facebook groups and attempts determine which social groups are the most active in these groups.

Using data collected through an original survey of 17 Facebook groups, this study shows that members of political Facebook groups are more politically active than non-members. In particular, members of political Facebook groups are more likely than non-members to vote in state and local elections, volunteer to support a political campaign, and discuss politics online. In addition, this study shows that political Facebook group members are more likely than non-members to experience changes in their political opinions due to interactions on Facebook, although no evidence is found supporting the hypothesized causal mechanism of the observed opinion change. Furthermore, there is evidence that holding liberal political opinions makes one more likely to join political groups. Finally, this study finds that the most frequent reason Facebook users join political groups is to keep informed.

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1 Introduction

Social media is becoming an increasingly important part of daily life for Americans. It facilitates communication with long-lost relatives and friends, eases the spread of information (and misinformation), and encourages users to share personal information and life updates, all with the goal of bringing the world closer together. As social media platforms become more integral to society, they are beginning to influence more than just the social aspects of our lives. Increasingly, social media is becoming an important part of politics; candidates use social media to communicate with constituents and voters, news organizations seek to spread information on social media platforms, and everyday people discuss politics and form political opinions from interactions on social media.

Social media's role in politics came into the spotlight after Barack Obama's 2008 election campaign shook up traditional campaigning by using social media to communicate with voters, rather than the traditional voter lists and phone banks of previous campaigns (Carr, 2008). Since then, social media has been a key part of elections and political life. The Arab Spring revolutions that swept out autocrats in Egypt and other Arab countries began with Facebook groups created to protest government brutality, showing the power social media has to build communities and organize protests (Vargas, 2012). The internet and social media helped the 2011 Occupy Movement to gain international support by allowing organizers to mobilize protesters across the world (Berkowitz, 2011). In 2012, the Pope created an official Papal Twitter account, joining hundreds of other politicians and public figures (Smith-Spark, 2012). During these years, many were hopeful that social media could work to support democracy, expanding it to new corners of the world and helping public figures to reach and hear from a wider array of people (Tucker et al., n.d.).

Fast-forward to today, and the hopes that social media will support and encourage democracy have taken serious blows. Fake news and partisan propaganda were spread far and wide during the 2016 election campaign, highlighting polarization and dissatisfaction throughout the electorate (Tucker et al., n.d.). Russia stands accused of nefarious manipulations of voters through Facebook and Twitter, seeking to undermine the freedom and fairness of US elections (Frenkel & Benner, 2018). Even as this study is being conducted and written, a whistleblower has come forward with details of a

massive Facebook data breach orchestrated to collect data on tens of millions of Americans, which was then used to covertly influence voters in favor of Donald Trump (Cadwalladr & Graham-Harrison, 2018).

Clearly, social media has become an important part of the political arena in the US, but with the rapid updates to social media platforms and algorithms, research has struggled to keep pace with the need to understand how social media impacts political behavior. New methods such as netnography and data scraping have enabled researchers to begin to study political phenomenon online, but better tools are needed to collect data amid the current culture of privacy concerns and the steps being taken to protect social media users' privacy (Rogers, 2013). This study aims to address the gaps in the current literature by examining the political behavior of members of political Facebook groups. In this chapter, an overview of Facebook and Facebook groups—the subject of this study—is given, followed by the aims and research questions guiding the study. The rationale for the study and the significance of the research are the next two sections of this chapter, followed by a section discussing the relationship of this study to the field of education. The chapter concludes by providing a brief overview of the remainder of the study.

1.1 An Overview of Facebook and Facebook Groups

By the end of 2017, Facebook claimed around 2.13 billion users around the world (“Company Info,” 2018). Of those 2.13 billion users, over half, 1.4 billion, use the social networking site daily. According to the social networking site, Facebook’s mission is “to give people the power to build community and bring the world closer together” by allowing users to communicate with one another, form groups of people with similar interests, share information and media, and generally express themselves (“Company Info,” 2018).

A popular feature of Facebook is the “Groups” tool, which allows users to create and invite friends to be a part of a group. These groups provide a space for like-minded individuals to discuss and share information on anything they choose (“Facebook Help Center: Groups,” n.d.). Groups exist for almost any interest imaginable; Cool Dog Group is a group of over 500,000 members who share pictures of cute dogs doing interesting things, while Pantsuit Nation is a group with nearly 4 million members that arose from Hillary Clinton supporters after the 2016 election. Unfortunately, Facebook does not

publish data on how users engage with different features of the platform, so no data is available on how many users participate in groups. This is one of the largest obstacles to research on Facebook.

Although Facebook restricts the data that it shares, outside researchers have worked to estimate the frequency of some behaviors on the social media platform. Pew Research Center estimates that over 68% of adults in the US use Facebook regularly (*Social Media Fact Sheet*, 2018). This makes Facebook the most-used social media platform in the US by a significant amount (*Social Media Fact Sheet*, 2018). Furthermore, half of all adult Facebook users in the US get their news solely from Facebook, as opposed to other social media platforms (Grieco, 2017). Roughly 45% of all American adults get news from Facebook, although they may also use other sources of news (Grieco, 2017).

1.2 The Aim of this Study

As noted above, social media is changing the political landscape in the US. Facebook is the most influential of the social media platforms, and so it is the focus of this research. Specifically, this study aims to explore how social media platforms are altering political opinion and behavior. This will be done by surveying members of political Facebook groups to examine the relationship between group membership, political polarization, and certain aspects of political participation.

1.3 Research Questions

Two research questions guide the research:

1. Who participates in political Facebook groups?
2. How does membership in political Facebook groups affect political behavior?

The first question will guide data collection on who joins political groups. Because Facebook does not allow external researchers access to data about users' specific activity on Facebook, it is difficult to estimate who participates in political groups. This hides any potential inequalities in participation that may be important for researchers to consider, so this study seeks to provide some basic information on political group composition.

The second question aims to clarify the relationship between political Facebook groups and certain political behaviors. Large portions of the literature on politics and social media discuss the potential for echo chambers¹, but there is little exploration of the effects of echo chambers on political opinion and behavior. In the theoretical framework, I argue that political Facebook groups are echo chambers and are therefore perfect cases to examine in order to further our understanding of echo chambers and their impact on behavior.

1.4 Rationale for the Research

The rationale for conducting this research is two-fold. The topic first became interesting to me based on personal experience. As a member of a popular Facebook group aimed at Democrats after the 2016 election, I have noticed several startling trends among fellow group members. First, group members are often encouraged by the group to sever relationships with family and friends who hold views that run contrary to the main views of the group. Members who did so were encouraged and supported by group members. Second, the group discussions and posts became more and more thoroughly monitored and curated, limiting the breadth of opinions expressed to those explicitly supported by the group's administrators. This gave rise to the third trend, which was a shifting in the tone of posts from supportive of other group members to combative against Republicans and Donald Trump.

After noticing these trends, I began exploring the academic literature for research on political participation through social media. Many studies have examined the changing nature of politics through social media, but there is so much data to examine and changes are made so quickly that there was little research on political Facebook groups (Barberá, Jost, Nagler, Tucker, & Bonneau, 2015; Dahlberg, 2001; Dalrymple & Scheufele, 2007; Shah, Cho, Eveland Jr., & Kwak, 2005; Stephenson & Crête, 2010; Tucker et al., n.d., 2017). Several researchers have examined polarization on social media, but they have not done so using the social capital/radicalization framework I use

¹ Echo chambers are spaces, often digital, in which like-minded people share and discuss largely confirmatory views, thereby limiting their exposure to diverse opinions or facts that could challenge their views. The term arises from the idea that the same thoughts and opinions “echo” around the space, reinforcing biases without challenging underlying assumptions (Guess et al., n.d.; Vicario et al., 2016).

in this study (Iyengar, Sood, & Lelkes, 2012; Lelkes, 2016; Suhay, Bello-Pardo, & Maurer, 2018).

Based on the gaps in the literature, I began this research to further explore the observations I made about political participation on Facebook. Using a survey, I will collect data from political Facebook groups to address gaps in the literature and to explain the observations I made.

1.5 Significance of the research

Political socialization is the process through which people “learn” political norms and develop their own political opinions (Lee, Shah, & McLeod, 2013; Niemi & Hepburn, 1995). Although scholars disagree over where and how people are socialized into politics, it is generally agreed that most socialization takes place in a person’s youth, either at home or through the formal education system (Davies, 1965). In the US, many scholars have argued that the bulk of political socialization took place at school through civics and government courses and student government activities (Niemi & Hepburn, 1995). In schools, political socialization can be somewhat controlled and students were all exposed to norms that upheld democratic values and supported democratic practices (Niemi & Junn, 2005). Others, however, show that education alone does not explain the complete political socialization process. Several scholars shed doubt on the assumption that political socialization occurs primarily in schools by showing that family and pre-adult factors play significant roles in a child’s political socialization (Berinsky & Lenz, 2011; Lauglo, 2016; Persson, 2012).

Now, a new group of scholars is arguing that the internet and social media play important roles in political socialization (Dimitrova, Shehata, Strömbäck, & Nord, 2014; Loader, Vromen, & Xenos, 2014). These scholars point out that young people may not be prepared for online socialization in contexts where they will often interact with conflicting ideas and where undemocratic norms of incivility abound (Lee et al., 2013). It is crucial to the health of democracy that researchers and policy-makers understand how political socialization is changing as more of it occurs online. If more people are exposed to misinformation and undemocratic norms, it is the duty of policy-makers to work to correct these trends. This study examines how political Facebook groups may socialize individuals in new ways, with the goal of furthering the understanding of online socialization.

1.6 Relation to Education

A main goal of the US public education system is to prepare students to be active and knowledgeable citizens (Niemi & Hepburn, 1995). Traditionally, this goal has been met through civic education curriculum and student government activities in public schools, but with more socialization happening online, it may be necessary for the education system to change its approach to educating and preparing future citizens. This study deals directly with political socialization outside the school and the family, and how it may engender different behaviors and opinions in citizens. Although this new online socialization is outside the education system, that does not mean it is irrelevant to education. On the contrary, better understanding how political socialization through social media affects behaviors and norms will aid educators in developing new civic curriculum to help combat the spread of misinformation online (*Social media as a platform for tomorrow's teaching*, 2017). Education in general is undergoing rapid changes as technology and the knowledge economy become more central to American life. This research can help inform policy-makers and educators as they adapt curriculum, education models, and teaching styles to new challenges facing students and teachers in the 21st century.

In addition, despite being a form of learning, political socialization is most often seen as an issue for political scientists to study. Some education scholars examine the impacts of education on political activity, but few explore the process of political socialization as a process of learning and informal education. This study conceptualizes political socialization as a learning process, thereby placing this research simultaneously in the fields of political science and education.

1.7 Outline

The next chapter in this thesis is the review of literature, which discusses major research pertaining to political participation, political deliberation, and how the internet is altering political activities. Following that is the theoretical framework, which lays out the radicalization hypothesis. The radicalization hypothesis is the central hypothesis being tested in this study, and expected findings that would support the hypothesis are also discussed in the third chapter. The fourth chapter focuses on the methodology of the study. Survey design and delivery, the sampling frame, and researcher positionality are

all discussed in the methodology chapter. Following the chapter on methodology, the fifth chapter presents the findings from the main survey, followed by a chapter discussing the implications of the findings and placing them within the wider academic literature. The final chapter of the thesis is the conclusion, which discusses limitations of the study and directions for future research, in addition to making concluding remarks on the data and analyses presented in this thesis.

2 Review of Literature

The review of literature for this study will focus on two primary areas of research. One, political participation, is one of the longest standing fields of research in political science. The second area of research examined in this chapter will be political deliberation and participation online. In contrast to the literature on political participation, the literature on the internet as a space for political participation is relatively new and more vibrant.

2.1 A Review of Political Participation Literature

Early political science research, especially in the American context, focused heavily on political participation. This study seeks to build on previous understandings of political participation by connecting traditional political participation with new forms of participation enabled by the internet and social media. In order to do this, however, it is first necessary to define political participation. The first subsection will establish a definition for political participation in the context of this study. The second, third, and fourth subsections will then build off this definition of participation by examining and discussing what activities count as political participation, who participates the most in politics, and why some people participate but others do not, respectively.

2.1.1 What is Political Participation?

Political participation was first conceptualized within the context of research into political systems and democracy. One of the forefathers of modern political science and sociology, Seymour Martin Lipset, defined political systems as systems allowing political actors to exercise power and influence over the political process without challenging or overthrowing the system itself (Lipset, 1960, p. 45). Robert Dahl, another important early political scientist, similarly noted that “a political system is any persistent pattern of human relationships that involves, to a significant extent, power, rule, or authority” (Dahl, 1963, p. 3).

Although neither of these early definitions of political systems use the phrase “political participation” outright, both suggest a need for people to be involved in the system. Dahl references “human relationships” that involve exercises of power and authority as a key part of his definition, and Lipset similarly refers to political actors exercising power within

the system (Dahl, 1963, p. 3; Lipset, 1960, p. 45). It is these human interactions within the political system, often involving power and authority, that have come to be defined as political participation. Unfortunately, these early definitions do not discuss how power and authority are distributed in a society, nor do they address how actors actually exercise their power and authority.

The distribution of power and authority in a political system is crucial to the study of politics. Political systems are differentiated by how broadly power and authority are distributed in a society (Mesquita & Smith, 2011; Verba & Nie, 1972). When a few people hold political power and authority, a country is autocratic, whereas a broad distribution of power and authority makes a country democratic (Collier & Levitsky, 2013; Mesquita & Smith, 2011; Schmitter & Karl, 1991). Democracies require widespread political participation from citizens who hold political actors accountable by participating in free and fair elections (Barro, 1999; Dahl, 2005; Schmitter & Karl, 1991). The failure of early researchers to differentiate between systems with different distributions of power and authority when discussing political participation limits the applicability of their definitions.

As other researchers built upon the work of Lipset, Dahl, and others, they began differentiating between political elites and non-elites when discussing political participation. The focus shifted from political systems down to the level of private individuals and how they interact with political leaders and decision-makers (Milbrath & Goel, 1977; Muller, 1977; Verba & Nie, 1972). For several years, voting was the main focus of political participation research and little interest was given to other types of political activities (Wolfinger & Rosenstone, 1980, p. 1). Although voting and elections remain central foci of modern-day research into autocracies and democratization (Diamond, 2006; Gandhi & Lust-Okar, 2009; Lindberg, 2006), research into political participation in stable democracies has expanded to recognize activities like protesting, donating to campaigns, and writing letters to elected officials (Milbrath & Goel, 1977, pp. 12–16; Muller, 1977; Verba, Scholzman, Brady, & Nie, 1993).

In *Participation in America*, Sidney Verba and Norman Nie recognize the expanding concept of political participation by defining political participation as “those legal activities by private citizens which are more or less directly aimed at influencing the selection of governmental personnel and/or the actions they take” (Verba & Nie, 1972).

According to Verba and Nie, participation is not just limited to the selection of political elites but also includes activities aimed to influence elite decision-making. Two additional parts of this definition merit further discussion. First, political participation is done by private citizens. By using the phrase “private citizens,” Verba and Nie highlight the distinction between political elites, who hold power and authority in the government, and non-elites, who are average people unable to change policy directly. Verba and Nie suggest that political participation is the activity of non-elites as they seek to influence the actions of elites, who hold the actual power to change policies. Second, this definition stipulates that political participation is only made up of legal activities. The use of the word “legal” limits the application of this definition of political participation, as the same action can be legal in one country and illegal in another. Does that mean, for example, that campaigning for an opposition party or candidate is political participation in the US but not in a single-party state where opposition parties are outlawed? What if an activity that was previously legal is made illegal? Does that activity cease to be a form of political participation?

To address the questions left by Verba and Nie’s definition, Lester Milbrath and Madan Goel put forth their own definition of political participation, defining participation as “those actions of private citizens by which they seek to influence or to support government and politics” (Milbrath & Goel, 1977). This definition is quite similar to the definition from Verba and Nie, but it does not stipulate that the actions must be legal. By providing a more general definition for political participation, Milbrath and Goel allow a wider range of activities to be considered political participation. Although their definition is still widely accepted, significant changes to the political participation landscape brought on by advances in information and communication technologies have necessitated an updated conceptualization of political participation.

Current research is further expanding the concept of political participation and re-branding it as civic engagement. Civic engagement as a concept is broader than political participation and goes beyond activities that directly influence political elites (Germes Janmaat, 2008). Political participation is now thought of as activities aimed at directly influencing political elites, while civic engagement includes political participation and also encompasses a range of activities that are important to attitude and value formation (Carpini, Cook, & Jacobs, 2004; Ekman & Amnå, 2012; Galston, 2004; Mitra

et al., 2016). Activities considered a part of civic engagement include participating in civil society organizations, volunteering in the community, or engaging in political discussions with friends (Ekman & Amnå, 2012; Mitra et al., 2016).

2.1.2 How do People Participate in Politics?

Now that political participation has been defined, it is possible to discuss the types of activities that are considered political participation. A fairly broad range of activities can be considered as forms of political participation, so scholars have devised different ways of classifying political participation activities. There are two major classification schemes used in the literature on political participation, both of which are discussed in this subsection.

The first classification scheme for political participation classifies political activities as either democratic or aggressive. The key difference between democratic and aggressive activities is that democratic activities are legal, while aggressive activities are not (Muller, 1977). In recognition of this, some researchers prefer to label these categories legal and illegal (Opp, Burow-Auffarth, & Heinrichs, 1981; Sabucedo & Arce, 1991). Muller (1977) specifies that democratic activities support the political system and do not seek to overthrow it. He further breaks down democratic activities into conventional or unconventional based on whether or not the activity occurs within the political system or outside of it, respectively (Muller, 1982). Conventional democratic political participation includes activities such as voting, campaigning, and contacting politicians, while unconventional participation includes activities like boycotting, protesting, and petition drives (Sabucedo & Arce, 1991).

In contrast to democratic activities, as defined by Muller, aggressive participation is aimed at overthrowing or changing the system drastically (Muller, 1982). Aggressive participation is characterized by the illegality of the action, according to Muller, and is often violent. Aggressive participation includes activities like riots and political assassinations (Muller, 1977). The focus on the legality of an action as the defining characteristic of democratic versus aggressive participation limits the applicability of his scheme for classifying political activities. Similar to the issues mentioned with Verba and Nie's (1972) definition of political participation, using legality as a means of classifying activity limits how broadly the classification scheme can be used. Some actions may be

legal in one country but illegal in another, which blurs the lines between democratic and aggressive political activities. For this reason, another classification scheme is preferred by many scholars and will be used for this study.

To side-step the question of the legality of a political activity, many researchers classify political participation as conventional or unconventional, similar to Muller's (1982) breakdown of democratic political participation. Conventional participation consists of those activities that take place within the system and are generally supportive of sociopolitical institutions (Milbrath & Goel, 1977). Activities that are considered conventional forms of participation include voting, campaigning for a politician, donating time or money to a campaign, and contacting elected officials (Milbrath & Goel, 1977; Sabucedo & Arce, 1991; Verba & Nie, 1972; Verba et al., 1993).

In contrast, unconventional methods of participation challenge the system and seek to dramatically alter the status quo (Sabucedo & Arce, 1991). Unconventional participation is noted for its aggressive tactics and includes many of the activities labelled as "aggressive" under the democratic – aggressive political participation classification scheme (Muller, 1982). It is important to note, however, that not all unconventional activities are illegal. Unconventional participation is further broken down into civil disobedience and political violence (Muller, 1982). Civil disobedience includes activities such as boycotts, protests, and petition drives, while political violence includes riots, civil war, and assassinations (Muller, 1977, 1982; Sabucedo & Arce, 1991).

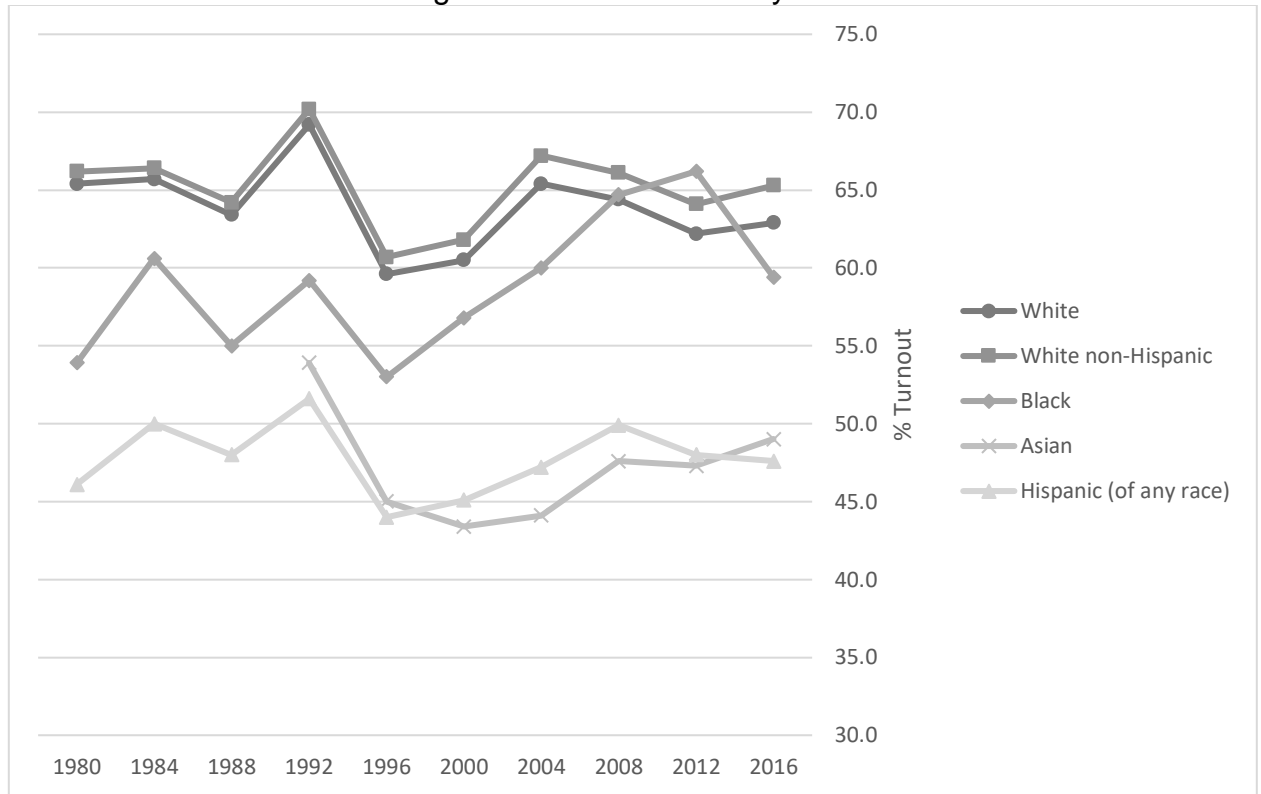
2.1.3 Who Participates in Politics?

From the early days of political science and electoral research, it was clear that not everyone participated in politics to the same degree. As scholars began to examine who participated and who didn't, they noticed striking disparities between different groups of people. Demographic characteristics like age, race, and gender correlated, and still do correlate in many cases, with varying levels of participation. This section discusses the most salient demographic variables that affect participation by using voter turnout trends since 1984 to illustrate the disparities in participation between different groups.

One of the most well-known and widely discussed disparities in participation in the US occurs along racial lines (Wolfinger & Rosenstone, 1980, pp. 90–91). As illustrated in Figure 2.1 below, participation is highest among white Americans, with at least 60% of

white (non-Hispanic) citizens participating in every major national election since 1984. In comparison, black and Hispanic participation rates are around 15 percentage points lower, typically hovering around 50% or less. Although the Obama elections saw very high black turnout, it is unclear if this trend will continue or if participation levels will dip down.

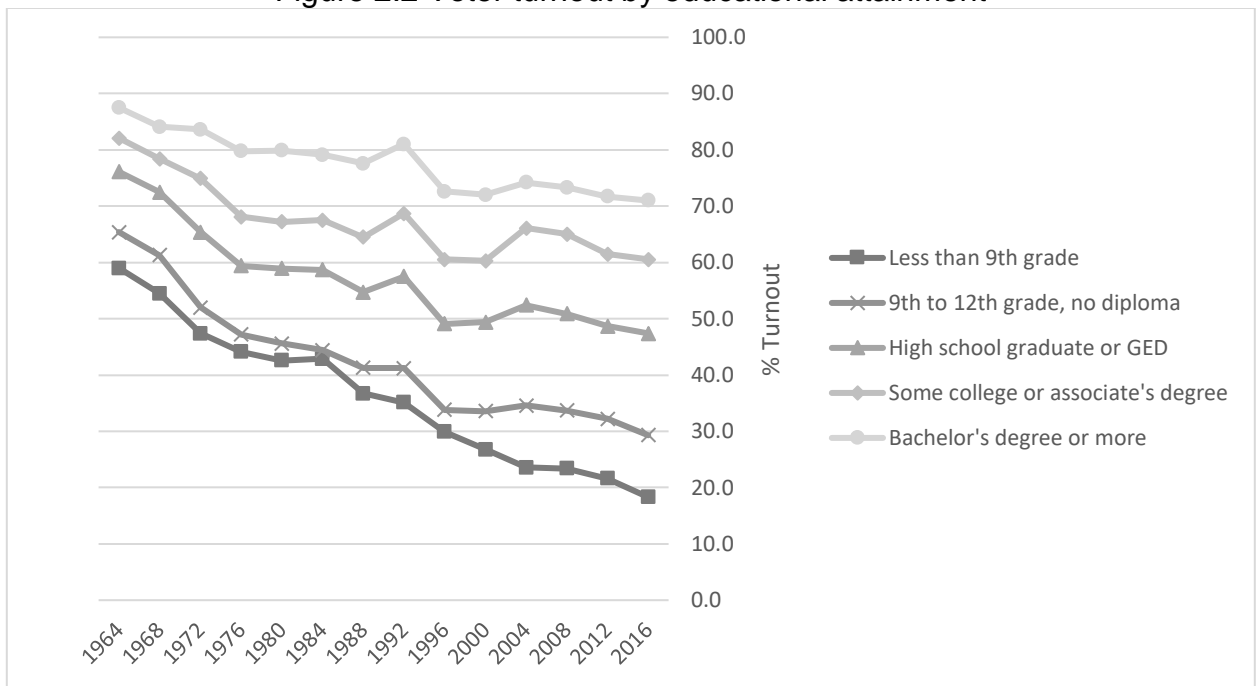
Figure 2.1 Voter turnout by race



Source: "Voting in America: A Look at the 2016 Presidential Election," 2017

Another well-known characteristic affecting participation is education level. Numerous studies have shown that the more educated a person is, the more likely he or she is to vote and engage in other political activities (Lipset, 1960, p. 187; Wolfinger & Rosenstone, 1980, pp. 18–20, 24–25). Figure 2.2 illustrates this trend very clearly by showing voter turnout by education level.

Figure 2.2 Voter turnout by educational attainment



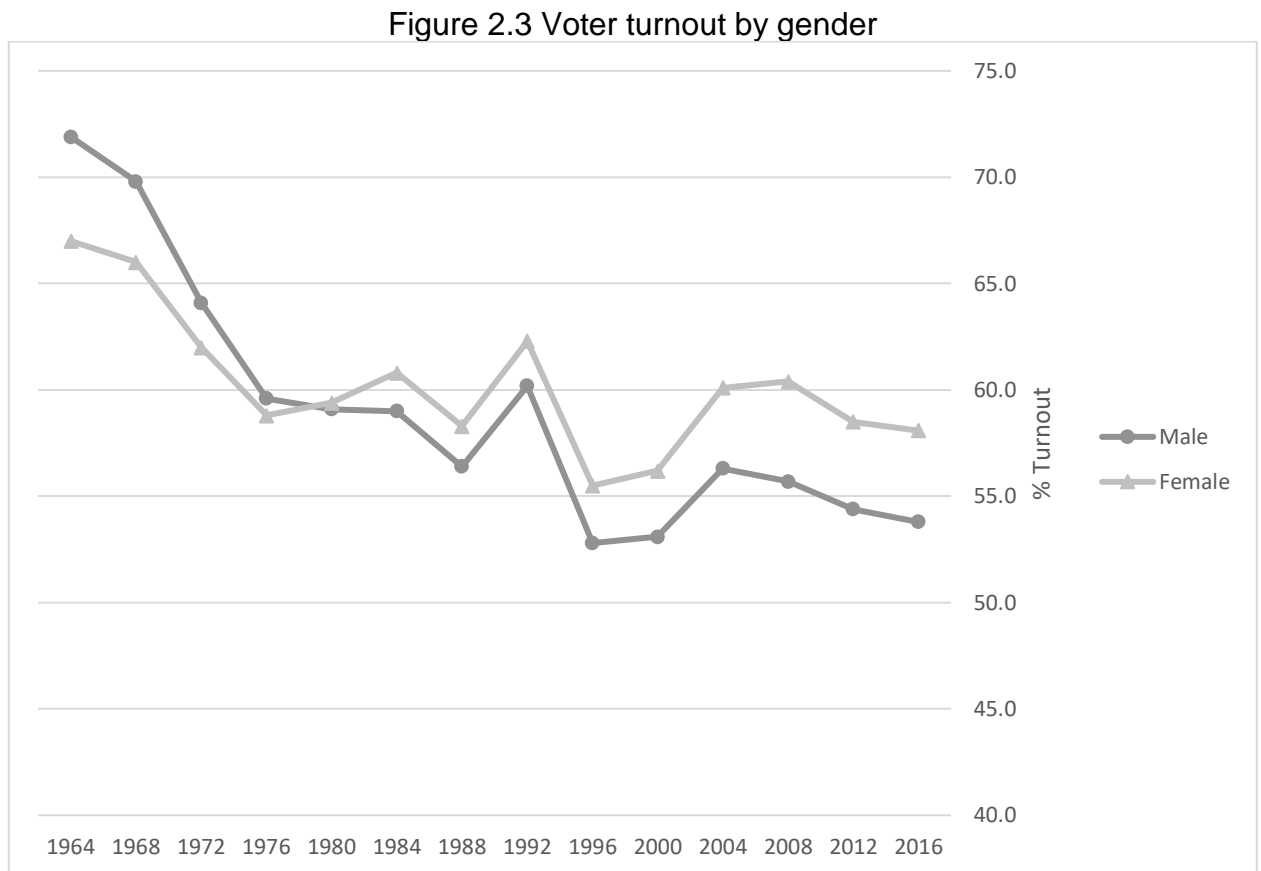
Source: "Voting in America: A Look at the 2016 Presidential Election," 2017

Recent research has shown that, although education is a strong predictor of political participation, it matters how one conceptualizes and measures education. Early research focused heavily on educational attainment, or how far a person got in school (Lipset, 1960). Early research found that educational attainment is linked with higher general levels of participation and an increased willingness to engage in political protests (Hall, Rodeghier, & Useem, 1986; Ravitch, 2001). More recent research has called these findings into question, however, using new methodological techniques to show that simply attending more school does not necessarily correlate with increased participation (Acemoglu, Robinson, Johnson, Robinson, & Yared, 2014; Berinsky & Lenz, 2011; Persson & Oscarsson, 2008).

As the link between educational attainment and political participation has been called into question, scholars have shifted to examining educational achievement—how well a person performs in school—and political participation. Some researchers have resisted this trend, pointing out that the education system forces out low achieving students earlier than high achievers, so achievement and attainment are closely linked. Nonetheless, research has shown that the better a student performs in school, the more likely he or she is to participate in politics later in life (Lauglo & Oia, 2008). Furthermore, students who participate in extracurricular activities in school like student government or

service organizations also show higher levels of political participation (Sherrod, Torney-Purta, Lehmann, Oswald, & Schulz, 2001).

Gender is yet another characteristic that seems to relate to political participation. In general, men vote and participate more often than women, although there is some evidence that this trend may be changing, as seen in Figure 2.3 below. Some authors argue this is based on traditional notions of politics being a male dominated field, but as gender equality progresses, women are becoming more active in politics (Lipset, 1960, p. 187; Wolfinger & Rosenstone, 1980, p. 38).

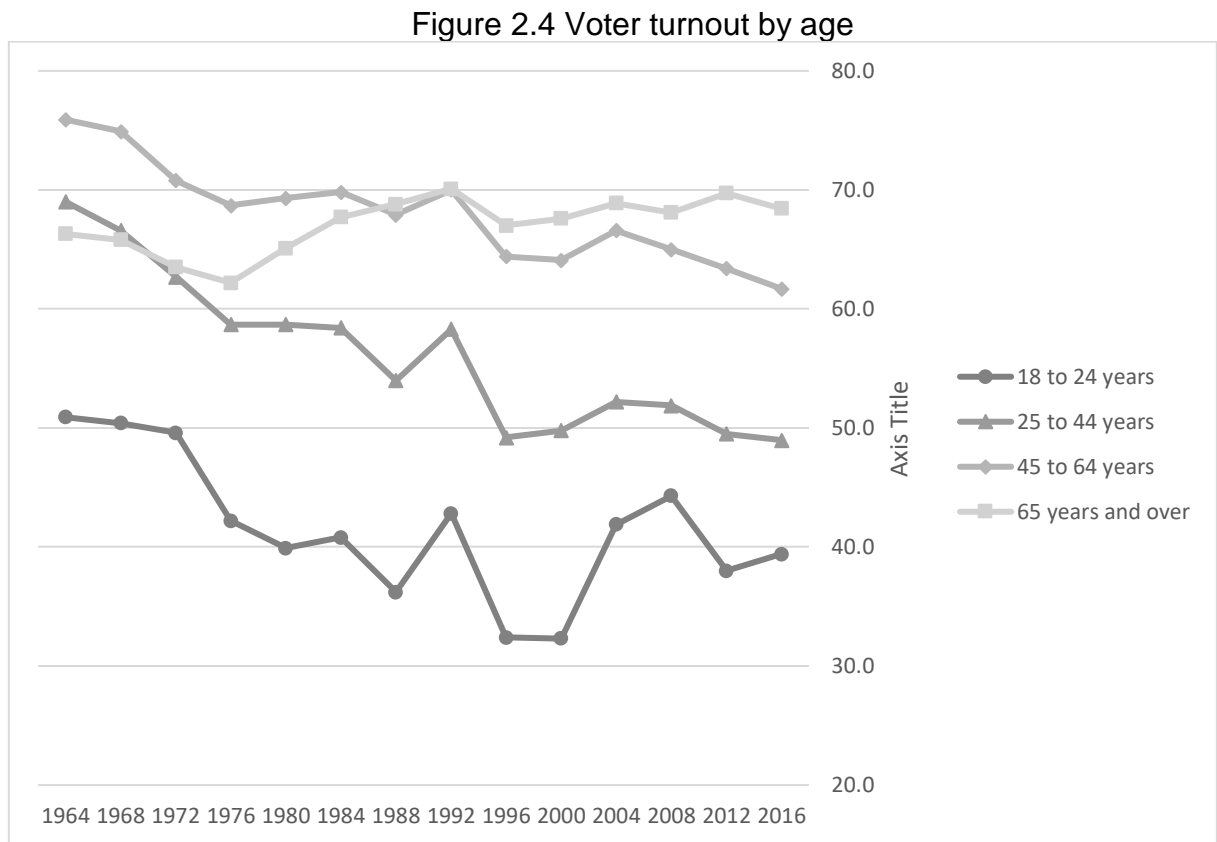


Source: "Voting in America: A Look at the 2016 Presidential Election," 2017

A characteristic affecting participation that has received increased attention recently is political party affiliation. A recent study of voters in presidential elections showed that conservatives/Republicans vote more consistently over time, while liberals/Democrats are less consistent voters over time and tend to have a high degree of variability in participation, depending on features of the political landscape (Pew Research Center, 2017). Interestingly, this trend disappears as a person becomes more extreme in their

political views; more partisan citizens participate at higher levels than those with more moderate views (Lipset, 1960; Milbrath & Goel, 1977, p. 40; Palfrey & Poole, 1987).

Finally, age is also a strong predictor of political participation. Numerous studies have shown that participation increases from young adulthood through middle-age, then slightly tapers off as people reach old age (Milbrath & Goel, 1977; Wolfinger & Rosenstone, 1980). This trend is stable across different countries, but age loses some of its predictive power when education, gender, and race are controlled for (Nie, Verba, & Jae-on, 1974). Figure 2.4 illustrates this trend.



Source: "Voting in America: A Look at the 2016 Presidential Election," 2017

2.1.4 Why People do or don't Participate in Politics

A number of theories abound about why some people participate in politics while others do not. Theories of political participation can be grouped in four main branches, each of which is discussed in this section. One of the earliest groups of theories seeking to explain variations in political participation approaches the question as an issue of rationality. Other researchers note that political participation varies by general socioeconomic status (SES) and discuss why that is the case. The third and fourth

groups of theories build on the SES models of participation. One group examines the resources necessary to participate in politics, while the other examines how the sociopolitical landscape affects the decision to participate in politics.

One early strand of research approached political participation as a cost-benefit analysis made by perfectly rational actors (Aldrich, 1976). Theories in this group initially assumed that all people had perfect information about the costs and benefits of participation, and weighed the costs against the benefits (Aldrich, 1993). As research showed that actors did not all have the same information and incentive structures varied, models shifted from assuming people make perfectly rational participation decisions to models of bounded rationality (Whiteley, 1995).

Bounded rationality is based on the idea that actors do make rational decisions within the information constraints placed on them by the outside world. Theories attempting to explain political participation using bounded rationality suggest that imperfect information about candidates, political processes, and current events change the cost-benefit analysis of participation and leads to the variations in political participation discussed above (Bäck, Teorell, & Westholm, 2011; Norrander & Grofman, 1988). Researchers using bounded rationality models examined how different racial and socioeconomic groups faced different costs and benefits to participating (Goodin & Dryzek, 1980). Some researchers focused on how barriers to voting like poll taxes and literacy tests made it costlier for some groups to participate than others, while other researchers examined how different groups have access to different information, and this leads not only to different participatory behavior, but also different electoral preferences (Delli Carpini, 2000).

As researchers continued to expand bounded rationality theories of participation, individual levels of motivation to participate and interest in politics began to be considered as additional variables affecting the cost-benefit analysis of rational participation (Hechter, 1994; Lipset, 1960). Several studies show that the higher an individual's interest in politics, the more likely he or she is to participate (Palfrey & Poole, 1987; Verba & Nie, 1972). Others show that higher perceptions of political efficacy increase one's likelihood of participating in politics, although there is some evidence that this may only lead to registering to vote, as opposed to actually voting (Finkel, 1985; Nie, Powell, & Prewitt, 1969; Timpone, 1998). Additionally, several

studies have shown that motivation to participate plays a key role in decisions to participate, and motivation can be intrinsic or extrinsic (Hechter, 1994; Kuklinski, Quirk, Jerit, & Rich, 2001).

Further research and thinking about the bounded rationality of participation, coupled with an expanding focus on political participation beyond simple electoral participation, led some researchers to posit that the decision to participate is two-fold. First, an individual decides whether or not to participate based on the expected costs and benefits, and then the person decides how to participate (Goodin & Dryzek, 1980; Milbrath & Goel, 1977). As this theory became more widespread, researchers began to focus on how socioeconomic factors impacted the rationality of participating by altering access to information, creating cross-cutting political pressures that reduce motivation to participate, and placing barriers to participation in the social and political environments (Brownill & Carpenter, 2007; Mutz, 2002; Palfrey & Poole, 1987; Wolfinger & Rosenstone, 1980).

The second major branch of theories explaining variations in political participation note that political participation generally correlates with socioeconomic status (SES) (Timpone, 1998; Verba & Nie, 1972; Verba et al., 1993; Wolfinger & Rosenstone, 1980). In the US, people with higher SES tend to be white, better educated, middle aged or older, and richer. As evidenced by data presented in the previous section, “Who Participates in Politics?” all of these characteristics closely correlate with higher levels of political participation. In contrast, lower SES Americans tend to be non-white—often Hispanic or black, less educated, poorer, and very young or very old. The evidence presented in the previous section also confirms that these characteristics correlate with lower political participation.

Numerous studies have shown that SES is a strong predictor of both expected and actual political participation across a range of political activities (Lipset, 1960; Wolfinger & Rosenstone, 1980). Analyses of different SES scales across multiple countries have shown that the wider the gap in socioeconomic status between those at the top of the SES scale and those at the bottom, the less likely those at the bottom of the scale are to show interest in politics and to participate (Solt, 2008). Put another way, when general social inequality in a country is relatively high, those at the bottom are less likely to participate politically. Although these theories deal with the correlation between SES

and political participation, they do little to explain the mechanisms behind the trend. The final two branches of theories seeking to explain political participation attempt to answer the question of *why* SES is closely related with participation.

One group of theories argues that certain resources are needed for participation in politics, and their distribution throughout society differs by SES, thereby explaining the variations in participation (Brady, Verba, & Lehman Schlozman, 1995). Researchers posit many resources as being important to participation, but three stand out as being consistently discussed and supported by research: time to participate (either free time or the ability to take time off work), money to support candidates and campaigns, and the civic skills to navigate the complex political landscape (Lauglo & Oia, 2008; Sherrod et al., 2001; Wolfinger & Rosenstone, 1980).

Brady et al. (1995) show that the distribution of time, money, and civic skills does vary by certain characteristics that also influence or indicate SES. For example, civic skills are closely related to more education and community engagement, both of which in turn also correlate with higher levels of SES. Their research shows that SES does not have a direct causal relationship with political participation, but rather both stem from the same root variables. Researchers using rationality to explain participation variations have used the research by Brady et al. to re-examine the “cost” side of the decision to participate, in addition to theories about the sociopolitical environment and participation.

The final important strand of research into political participation seeks to identify structural barriers in the environment that either impede or enable participation of different groups (Timpone, 1998). These theories note that decisions to participate in politics are not made in a vacuum, and outside forces often play a role in determining one’s likelihood of participating (Verba & Nie, 1972). Several studies have shown that the social and political environments affect the distribution of resources necessary for participation (Giles & Dantico, 1982; Kuklinski et al., 2001). For example, poll taxes raised the monetary costs of participation for many black Americans during the segregation era, and literacy tests raised the civic skills requirements to participation (Delli Carpini, 2000).

2.2 Online Political Deliberation

Political activity online most often takes the form of political deliberation. Political deliberation can take place off- or online, but the internet and social media provide new spaces for new forms of deliberation. This section of the review of literature will focus on research discussing these new forms of political deliberation, as well as their impact on political behavior. Political deliberation and how the internet has changed deliberation will be discussed in the first section. The second will deal with deliberation and discussion through social media, and the third section will cover echo chambers and the diversity of views online. The final section will deal with the implications of political deliberation moving online.

2.2.1 Political Deliberation and the Internet

Political deliberation is a form of conventional political participation. At the core, political deliberations are discussions between people aimed at finding solutions to common political problems (Stromer-Galley, 2003). These discussions are often cross-cutting, exposing people to diverse views, which helps deliberators to further develop their own political views, resolve conflict, and potentially change the views of others (Tucker et al., n.d.). Many of these outcomes reinforce and support democratic practices and values, leading researchers to argue that political deliberation is central to healthy democracy (Mutz, 2006). Despite its importance to democracy, people do not engage in political deliberation with the goal of influencing government (Hoffman, Jones, & Young, 2013).

Patterns in who engages in political deliberation are similar to broader patterns in political participation. In general, political deliberation is more common among men, the wealthy, the best educated, and those with high SES (Hoffman et al., 2013; Lipset, 1960; Verba et al., 1993; Wolfinger & Rosenstone, 1980). Additionally, those with more interest in politics and higher perceptions of efficacy are more likely to engage in political deliberations (Wyatt, Katz, & Kim, 2000). These trends are consistent in face-to-face, offline deliberations; it is unclear if these trends also apply to online political deliberation.

People engage in political deliberations in two main ways: intentionally and unintentionally. Intentional public deliberation occurs when people seek out spaces for political discussions, like debate societies (either face-to-face or in the form of political

Facebook groups) or make explicitly political posts on social media (Wojcieszak & Mutz, 2009). Unintentional political deliberation arises naturally from conversations about issues that are apolitical on the surface and is the more common way for people to encounter political deliberations (Wojcieszak & Mutz, 2009).

With the arrival of the internet and decreased communication costs, political deliberation is undergoing significant changes. On the internet, deliberation often takes place in public or semi-public spaces and statements are recorded, making deliberation more permanent and less private than face-to-face deliberation (Wyatt et al., 2000). In addition, many deliberations take place on social media platforms that prevent deliberators from interpreting contextual clues, like body language and tone of voice, which can lower the quality of discussions (Munger, 2017). The potential for anonymity also encourages incivility and wears down norms of polite interaction (Munger, 2017). Finally, there is some evidence that although online deliberation does not take the place of offline political participation, the internet may be providing a space for people to participate in deliberations who otherwise might not (Hoffman et al., 2013; Stromer-Galley, 2002). These findings have helped assuage the fears of researchers and others who are concerned that the rise of “armchair activism” and online political participation are threatening the quantity and quality of offline political participation.

Armchair activism, or clicktivism, is the idea that activism can be conducted online through social media without leaving the comfort of home (Drumbl, 2012). Some scholars fear that armchair activism comes with a trade-off: highly visible and effective but more resource-costly forms of activism, such as protesting or boycotting, will become less popular as people prefer to protest online. Proponents of armchair activism argue that decreasing communication costs make online activism more accessible to a wider range of people, thereby bringing new voices into public debates (Xenos, Vromen, & Loader, 2014). Others supporters note that the free flow of information online means more people are informed about important issues and it is easier for dedicated activists to create communities and find support for their causes (Lim, 2012).

Opponents of armchair activism point to the decreased costs of activism as a problem. Lower costs to activism can dilute the intensity of the issue, lessening the efficacy of political action and weakening pressure on decision-makers to cave to activists' demands (Verba & Nie, 1972). Armchair activists tend to have short attention spans,

often flitting from one issue to the next, but rarely committing meaningful levels of resources and energy to addressing an issue (Drumbl, 2012). Some researchers have shown that online activism does not increase one's likelihood of engaging in offline political action, but this finding is disputed (Baumgartner & Morris, 2010).

2.2.2 Deliberation and Discussion on Social Media

Much of the research around online political deliberation seeks to explore the differences between face-to-face and online deliberation. One major focus for researchers is evaluating the quality of online deliberations, which many believe to be lower quality than face-to-face deliberations because of the higher rates of incivility found in online political discussions (Papacharissi, 2004; Rosner, Winter, & Kramer, 2016). Social media users often express frustration over political disagreements online, which are perceived to be less respectful than face-to-face disagreements (Rosner et al., 2016; Wyatt et al., 2000). Weeks (2015) finds that the lack of respect in online deliberation can increase anger, which in turn increases a person's susceptibility to hyper partisan propaganda and misinformation. Levendusky, Druckman, and McLain (2016) show that greater incivility can lead to unfriending between deliberators. Others present evidence that incivility online creates negative perceptions of the opposition (Iyengar et al., 2012).

Incivility online goes beyond mass political behavior to include interactions with political elites. Researchers show that political actors are frequent targets of incivility online, and this leads them to be less engaging and more confrontational or defensive online (Theocharis, Barberá, Fazekas, Popa, & Parnet, 2016). The effects of incivility online, as discussed above, are harmful to democratic norms and institutions, driving the idea that online political deliberation may be harmful for democracy (Tucker et al., n.d.).

In addition to examining incivility in online deliberation, researchers also explore the characteristics of people who engage in political deliberation online. As mentioned earlier, political deliberation online is thought to follow the same participation trends as other political activities: the higher a person's SES, the more likely it is that he or she will deliberate online (Hoffman et al., 2013). It is difficult to confirm these theories, however, due to methodological challenges in collecting data on social media users (Eveland, Morey, & Hutchens, 2011). Researchers have shown that more passive

communication styles and a dislike of conflict decrease a person's likelihood of engaging in deliberations online (Eveland et al., 2011). When coupled with a lack of interest in politics, these traits lead to "lurking," or watching deliberations take place without actively taking part (Eveland et al., 2011; Tucker et al., n.d.).

2.2.3 Diversity of Views and Echo Chambers

2.2.3.1 *Diversity of Views*

In face-to-face deliberation, cross-cutting interactions—interactions between people who hold different views—bring the largest benefits of political deliberation by exposing deliberators to alternative views and diverse opinions (Stromer-Galley, 2003). It is unclear, however, just how much diversity of views social media users are exposed to on a regular basis. Stromer-Galley (2003) finds evidence that users enjoy diverse interactions online. Given that her findings are over a decade old and the speed with which internet platforms change, these findings may not be true anymore. Other researchers note that the majority of connections on social media are weak ties², which increases the likelihood of being exposed to diverse viewpoints (Tucker et al., n.d.). Furthermore, the algorithms used by social media sites to determine the order in which information is displayed may play a significant role in whether diverse or confirmatory information is shown to users (Bakshy, Messing, & Adamic, 2015; N. Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2017). In general, social media users who engage in online deliberation perceive higher rates of disagreement than those who engage in face-to-face deliberation (Barnidge, 2017). Mutz and Martin (2001) show that it takes a lot of effort to avoid cross-cutting interactions by selecting only confirmatory information, and at least 40% of internet users have been exposed to diverse views online.

Other researchers find information suggesting that it may be easier than previously thought to avoid diverse viewpoints online. In an examination of online political chatrooms, Wojcieszak and Mutz (2009) find that over half of political chatrooms expose members to only confirmatory views, while a mere 10% consistently expose members to cross-cutting views. More recent research has shown high degrees of polarization on different social media platforms, which limits the spread of diverse views and reinforces

² For a detailed discussion the nature and structure of weak ties, see Granovetter (1983).

partisan beliefs (Munger, 2017; N. Newman et al., 2017). Many researchers note that exposure to cross-cutting ideas varies by platform, and updates to algorithms and user interfaces can have significant impacts on the diversity of information users encounter (Tucker et al., n.d.).

Despite research suggesting that traditional cross-cutting political deliberations increase the legitimacy of and tolerance for opposing views, there is evidence that cross-cutting deliberation online may not have the same benefits (Wyatt et al., 2000). Several researchers find that cross-cutting interactions can lead to polarization (Iyengar et al., 2012; Munger, 2017). Preotiuc-Pietro, Hopkins, Liu, and Ungar (2017) find support for this by observing that the more partisan a person is, the more likely he or she is to share and be exposed to extremely partisan and polarized content on social media. Klofstad, Sokhey, and McClurg (2013) show that partisans are more likely to experience disagreements in their social networks, which can lead to anger. Lelkes (2016) finds that partisans increasingly dislike and distrust the other side. Other researchers find that deliberation on social media tends to reinforce and strengthen partisan views (Garrett et al., 2014). These may be causes of the incivility discussed in the previous section, which leads to anger and further reinforces a cycle of polarization and unfriending (Weeks, 2015). Munger (2017) shows that moderating comments is largely ineffective in curtailing incivility and partisan polarization unless it is performed by someone with similar demographic characteristics to the deliberator (i.e. white middle-aged men are the most effective moderators of other white middle-aged men but are poor moderators of young African American women).

Only a few researchers have found positive effects of cross-cutting interactions online. Some note that exposure to cross-cutting deliberations online can help social media users to develop interest in politics and higher levels of political efficacy (Hoffman et al., 2013; Kenski & Stroud, 2006). This in turn can increase the likelihood of political participation, both online and off (Finkel, 1985).

2.2.3.2 *Echo Chambers*

Researchers fear that as partisan polarization on social media continues to develop, echo chambers will develop. Echo chambers are ideologically homogenous groups that reinforce confirmation biases and encourage polarization by limiting the diversity of

views people are exposed to (Guess, Nyhan, Lyons, & Reifler, n.d.; Vicario, Vivaldo, Bessi, Zollo, & Scala, 2016). Echo chambers can naturally develop when partisan social media users cull their social media connections to avoid the incivility and anger that comes from increased polarization (Bakshy et al., 2015). Additionally, echo chambers can be intentionally formed as like-minded people form groups and share information that supports their values (Vicario et al., 2016).

Echo chambers stem from the increased flood of information available to internet users. The internet has lowered the barriers to producing and consuming information, and information mediaries, like reporters and journalists, no longer act as gatekeepers limiting the flow of information (Tucker et al., n.d.). It is impossible for all information to be consumed, so people must choose what to expose themselves to (Guess et al., n.d.; Vicario et al., 2016). Many people tend to selectively expose themselves to information that supports their values and beliefs; this is called the confirmation bias and is the driving force behind the development of echo chambers (Guess et al., n.d.; Quattrociocchi, Scala, & Sunstein, 2016). Put another way, people must restrict information consumption in some way, and many use the confirmation bias to do so. As social media users are continually exposed to confirmatory information and less cross-cutting information, it is believed that tolerance for opposing viewpoints decreases, which can damage democracy (Mutz, 2006; Quattrociocchi et al., 2016).

As mentioned above, echo chambers can be naturally occurring or intentionally formed. Naturally occurring echo chambers are the main concern of researchers, as they are harder to detect and combat the effects of (Bakshy et al., 2015; Krasodomski-Jones, 2017). Development of naturally occurring echo chambers is sped by the algorithms used by social media platforms to show users information that matches their preferences, inadvertently limiting users' exposure to cross-cutting information (Bakshy et al., 2015; Guess et al., n.d.; Krasodomski-Jones, 2017; N. Newman et al., 2017). This differs from the traditional consumption of information in that information on social media is curated and delivered to users, largely based upon their social ties (N. Newman et al., 2017). Before social media, users intentionally sought out information, which typically lead to more rounded and diverse news consumption (Guess et al., n.d.; N. Newman et al., 2017).

Ample research shows that echo chambers increase polarization in at least two ways. In the first, echo chambers segregate viewpoints and limit cross-cutting interactions, which in turn lowers the quality of political deliberation (Levendusky et al., 2016). This is especially the case for salient political issues such as abortion rights or gun control, where opposing sides tend to draw battle lines and discussion rarely expands to include more diverse opinions (Barberá et al., 2015; Krasodomski-Jones, 2017). The second way in which echo chambers polarize is by limiting exposure of positive information about the opposition, which decreases trust and tolerance and can increase partisan anger (Iyengar et al., 2012). This in turn reinforces the echo chamber and the views of those within it, further propagating polarization (Weeks, 2015).

Fortunately, recent studies have shown that echo chambers may not be as prevalent, nor as impenetrable, as previously thought. Guess et al. (n.d.) find that social endorsements of information are able to overcome the confirmation bias, meaning that social media users are receptive to cross-cutting information. If a person's social network does not include people with diverse views, however, this finding is moot (Guess et al., n.d.). Research from Facebook itself shows that on average, 20% of users' friends hold ideologically dissonant views, indicating that the majority of users have the potential to be exposed to cross-cutting information (Bakshy et al., 2015). Guess et al. (n.d.) interpret the finding that social media users perceive higher levels of conflict on social media to mean that social media is actually more, not less, cross-cutting than face-to-face discussions. They then go on to argue that echo chambers are more prevalent in face-to-face interactions than online (Guess et al., n.d.). Finally, Krasodomski-Jones (2017) finds echo chambers to be most active at the extremes of the political spectrum and that the majority of social media users are moderate enough to be exposed to at least a marginal amount of cross-cutting information. Taken together, these findings suggest that, although echo chambers are undoubtedly problematic, they may not be as widespread as initially assumed.

2.2.4 The Impacts of Social Media as an Information Source

The previous three sections have discussed research that gives an overview of the status of political deliberation online and on social media. Although the effects of certain aspects of online deliberation have been discussed, this section will turn to the impacts of political deliberation in general taking place online. In general, three main effects are

discussed in the literature: digital media usage and its impact on political knowledge, how digital and social media are widening the gaps in political knowledge among societal groups, and the link between online deliberation and political participation.

Multiple studies have found evidence that social media users have higher levels of political knowledge than non-users (Dalrymple & Scheufele, 2007; Groshek & Dimitrova, 2011). These findings should be interpreted with caution however, as the people most likely to use social media are also those with the highest political knowledge (Dalrymple & Scheufele, 2007; Kenski & Stroud, 2006). Dalrymple and Scheufele (2007) find that exposure to online media and party communications correlates with increased political knowledge, although Iyengar et al. (2012) suggest that this exposure might bias people in inaccurate directions on specific issues. More recently, Groshek and Dimitrova (2011) have shown that the decreasing quality and reliability of information online may have reversed earlier observations of positive relationships between digital media usage and political knowledge.

Studies have also observed widening gaps in political knowledge among internet users. Researchers have found that internet and social media users with higher levels of political interest consume more political news online and engage in political deliberation more readily than those with lower levels of interest in politics (Groshek & Dimitrova, 2011; Kenski & Stroud, 2006; Wyatt et al., 2000). Since political interest can be related to a wide variety of societal and SES characteristics, it is problematic that there is a widening gap in political knowledge, as this may further entrench inequalities in political participation (Kenski & Stroud, 2006). Recent research shows that even social media users who avoid political information may still be exposed to some political information through entertainment news, and this might help limit the development of a knowledge gap (Barberá et al., 2015; N. Newman et al., 2017).

Finally, research shows a positive relationship between participation in political deliberation online and the likelihood of participating in politics. Several studies have found that civic talk online encourages political participation offline, but this relationship is mediated by perceptions of efficacy and political interest (Hoffman et al., 2013; Klostad, 2009). Others find that political discussion online may encourage deliberators to develop higher levels of perceived efficacy and interest in politics, which could also

increase offline participation (Finkel, 1985; Hoffman et al., 2013; Kenski & Stroud, 2006).

3 Theoretical Framework

The purpose of this study is to examine the political behavior of members of political Facebook groups. The study seeks to answer two over-arching questions, the first of which is as follows: who participates in political activities online? Specifically, this study will collect data on who engages in political discussions on Facebook and who joins political Facebook groups. Does the internet equalize political participation differences as some scholars argue (Schlozman, Verba, & Brady, 2010)? Or does it just further entrench the participation gaps already seen in society? Is it only the most partisan that join political Facebook groups?

This study hopes to collect data on how and why the political behavior of political Facebook group members differs from Facebook users that are not members of political groups. Are group members more active politically? Do they tend to engage in certain types of political activities more than others? How do group members form bonds with other group members, and does this influence their opinions and actions? In particular, it is hypothesized that group membership causes group members' opinions to strengthen through the radicalization process discussed in this section, which in turn alters political behavior.

In this section, the theoretical framework for the study is constructed, and expected findings are discussed. The first section will examine the first research question by discussing the role of the internet in overcoming structural barriers to political participation. The second section will present models of group polarization and radicalization that may explain changes to the distribution of social capital in an individual's network to answer the second question.

3.1 The Internet and Barriers to Political Participation

As discussed in the literature review for this study, political participation varies greatly between different segments of the population. In general, the better educated, more money, and higher SES a person obtains, the more likely he or she is to participate in a range of political activities (Lipset, 1960; Wolfinger & Rosenstone, 1980). Theories abound as to why participation varies along different social characteristics, but recent

research seems to have converged in support of theories positing that barriers to participation exist in the sociopolitical environment (Kuklinski et al., 2001).

Although there are numerous barriers to political participation, three barriers to political participation are particularly relevant to this study. The first is a lack of civic skills or knowledge necessary to undertake certain political activities (Brady et al., 1995). For example, without the knowledge of how to register to vote, where to vote, or how to contact a politician, participation becomes difficult or impossible. Second, a lack of resources can limit political participation (Brady et al., 1995). Time and money are two examples of resources necessary for certain political activities, like campaigning for a candidate or donating to an interest group. Without them, it isn't possible to engage in certain activities. Finally, the legal environment places barriers to participation before certain people (Kuklinski et al., 2001). For example, the US requires citizenship before allowing a person to vote, and only a natural-born citizen of the US can be President.

The internet, and social media in particular, have the potential to overcome these three barriers, thereby equalizing political participation in the online sphere. Morris and Morris (2013) show that social media users with no interest in politics and no knowledge of political processes are exposed to political information through their social networks, raising their level of civic knowledge and helping them to acquire some civic skills. This finding indicates that civic skills are not necessary to participate in political activities online, since civic skills can be attained through social media. In this way, social media removes the civic knowledge barrier to participation. Brady et al. (1995) argue that civic knowledge and skills is primarily attained through schooling. If social media does reduce the need for civic skills to participate, then I expect to find little to no relationship between education and participation in political deliberations on Facebook. Other researchers note that civic skills are acquired throughout a person's lifetime (Nie et al., 1974). As with education, I expect not to find a relationship between online political deliberation and age if social media does in fact reduce the civic skills needed to participate in political activities.

As internet access becomes more widespread and easily obtainable, more people are able to use social media and other aspects of the internet. Even the most economically disadvantaged people in the US can access the internet for free from public libraries and other institutions, making the internet an open access environment (Morris &

Morris, 2013). By being open access, the internet and social media lower the costs to participating in certain activities, breaking down the resource barrier to political participation. With this in mind, I expect that SES will have a weak or non-existent relationship with political deliberation. I expect youths and minorities in particular to benefit the most from the removal of this barrier. Furthermore, open access to the internet removes the legal barriers to participation that many immigrants face when trying to participate in more traditional activities, so I expect to see higher rates of participation from those groups as well.

Finally, the internet facilitates asynchronous interactions by storing comments, likes, posts, tweets, and other actions (Antoci, Sabatini, & Sodini, 2014). This means that users do not have to be online at the same time to interact and participate in political activities like deliberation. These asynchronous interactions remove the need to have free time as a resource for participation, further breaking down resource-based barriers to participation. Brady et al. (1995) show that free time has a fairly random distribution along SES, although Newman, Johnson, and Lown (2014) suggest that people with lower SES are less likely to use free time for traditional political activities. Because social media reduces the need for free time to participate and serves a primarily social function, I expect that SES will be less of a predictor of participation in political deliberation online than in more traditional modes of offline political participation.

3.2 Group Polarization and Radicalization on Facebook

The second research question guiding this study asks how political behavior differs between members and non-members of political Facebook groups. This section lays out the hypothesized mechanism through which group membership alters political behavior. In short, this hypothesis, called the radicalization hypothesis, argues that political group membership alters individual member's opinions, and the change in opinion experienced by members causes changes to political behavior. The process through which opinions change is based upon models of radicalization, which are discussed below.

Although radicalization is a common phrase amongst political scientists, a definition of the concept is still being developed and agreed upon. Borum (2011) defines radicalization as the process by which a person's views and opinions become more

extreme and characterized by a willingness to engage in undemocratic practices to reach one's goals. This definition leaves some ambiguity however, as it fails to clarify what is meant by "undemocratic practices." Does an increased willingness to engage in simple unconventional participation, sometimes referred to as undemocratic participation, mean a person is radicalizing? Or does "undemocratic practices" refer to more extreme actions like seeking to overthrow the government? While it is likely that Borum sees undemocratic practices as more extreme activities like rebellion and terrorism than simply boycotting, his definition lacks clarity.

Della Porta (2011) sees radicalization as a two-part process—radicalization of thoughts, ideas, and values, and radicalization of actions. She notes that radicalization is simply the process by which one becomes more open to and supportive of extreme ideologies and actions, and one can be radicalized in action but not in thought, and vice versa. Della Porta fails to explain "extreme" as a concept, however, which limits its applicability of this definition.

Van Stekelenburg (2014) conceives radicalization as a process on the same continuum of politicization and polarization. As individuals begin to relate ostensibly apolitical events to political issues and identify as members of a political group, the process of politicization begins. Over time, as individuals' identities solidify, they begin to blame an external "enemy" for the political issues they observe, and individuals begin to form groups to oppose the enemy. This is polarization. At the extreme end of the process, individuals begin to advocate opinions and beliefs that directly contradict the norms of society and become more willing to use political violence to meet their political goals. This is the radicalization portion of the process.

All three authors highlight radicalization as a process of increasingly extreme political opinions and actions. Van Stekelenburg's (2014) description of the process is the most clearly defined of the three. Therefore, van Stekelenburg's conceptualization of radicalization as a process of politicization and polarization culminating in a willingness to use violence to pursue goals contrary to societal norms is used in this study. It is important to note, however, that this thesis focuses on the process of radicalization, not the outcome.

Many different researchers have posited multitudinous pathways to radicalization depending on who is radicalized and in what context the process takes place. Although van Stekelenburg provides a strong definition of radicalization, she does little to evaluate the mechanisms of radicalization. Models of individual radicalization within a group are the most relevant to this study, and one model in particular forms the basis of the theoretical framework for this study.

McCauley and Moskaleiko (2008) provide an overview of the 12 most prevalent mechanisms through which individuals are radicalized. One mechanism is of particular interest to this study: extremity shift in like-minded groups. It is important to note that this process is not conscious or intentional; instead, it begins to occur when certain conditions are met.

Extremity shift in like-minded groups occurs when people, often strangers, form groups to discuss political issues and share opinions. As members of the group begin to form social bonds and trust with one another, members begin to identify with the group and a set of characteristics of group members becomes “salient” (McCauley & Moskaleiko, 2008). During this time, there is also a shift in members’ opinions driven by political deliberations (Sunstein, 2008). Numerous studies have shown that the post-deliberation opinions held by members of a group tend to be more extreme than the pre-deliberation opinions members held prior to political discussions in a group (Moscovici & Zavalloni, 1969; Myers, 1975; Pruitt, 1971)³. This shift towards the extreme occurs as members are exposed to confirmatory arguments that support individual’s previously held beliefs (Myers, 1975; Pruitt, 1971). In like-minded groups, such as political Facebook groups formed around a political ideology, the absence of alternative and cross-cutting arguments within the group supports the individual’s previously formed opinions (Pruitt, 1971). As individuals within the group argue in favor of more extreme opinions, the dearth of counter arguments leads individual’s opinions to move towards the extreme (Sunstein, 2008). As group identity continues to develop, members begin to see themselves as right and those that oppose them as wrong; any group members disagreeing either leave or are forced out (van Stekelenburg, 2014).

³ See Pruitt (1971) for a thorough discussion of all theorized mechanisms through which polarization of opinion in groups occurs.

At this point in the process, groups have reached the stage of polarization. Many groups of like-minded individuals reach this stage and stop, because there is no view extreme enough to continue pushing the group towards more radical beliefs and actions (McCauley & Moskalenko, 2008). A very few groups will continue along the path to radicalization, however. As these few groups continue to become more and more radical, group members will begin cutting social ties with friends and family members who hold opposing views, further limiting exposure to cross-cutting arguments and strengthening social bonds within the group (van Stekelenburg, 2014).

As groups continue down the road to radicalization, group norms become powerful forces acting on members' behavior, encouraging them to behave as the group does. This helps to further build social bonds within the group and make the group more cohesive as more extreme views and actions are discussed (Sunstein, 2008). Since members have cut ties with former friends and family members, they are now more and more dependent upon the group for social bonds, which increases pressures to conform. Eventually, the groups' opinions will solidify around extreme and radical beliefs and actions, and the social bonds and group cohesion formed during the radicalization process will bind members together (Putnam, 2000; van Stekelenburg, 2014). Again, it is worth noting here that the process is not a conscious one, nor a uniform one. Groups and group members are not necessarily aware of polarization radicalization as it happens, and not all groups and group members undergo the process of polarization and radicalization in the same way, or even at all.

A salient feature of this process is the social bonds formed within the group and the severing of bonds with people outside the group. Although McCauley and Moskalenko (2008) do not use the phrase, these bonds are a form of social capital. Putnam (2000) defines social capital as the trust and norms of reciprocity and support that exist in social networks. Social capital as a concept is based on the idea that investment in social relationships returns a profit, similar to any other type of investment, and the profits take the form of resources embedded in social networks that can be drawn upon as needed (Lin, 1999).

Putnam (2000) breaks social capital down into two types: bridging and bonding. Bridging social capital arises from social bonds that connect people of different groups (Putnam, 2000). An example of this is the social bond between a young minority student

and her older, wealthy, highly educated, white mentor. In contrast, bonding social capital is found in the social bonds between people of the same group, like two white professors of the same age who became friends in graduate school (Putnam, 2000).

Both types of social capital play important roles in the radicalization process as described above. Bonding social capital links group members together, while bridging social capital exposes them to cross-pressures and alternative ideas from non-group members. By severing ties with non-group members, individuals in the radicalizing group eliminate bridging social capital, which plays a crucial role in facilitating cross-cutting interactions, which in turn help to build and maintain tolerance and trust across disparate societal groups (Putnam, 2000).

I argue that the groups described in this process of radicalization bear striking similarities to polar Facebook groups. In both instances, groups of like-minded individuals get together to share information and deliberate on political issues. Information shared within radicalizing groups is often confirmatory, as is the case in echo chambers. The rest of this section will apply radicalization theory to political Facebook groups acting as echo chambers.

Political Facebook groups are intentionally formed groups of like-minded individuals created to share largely confirmatory information and to discuss political issues. These groups act as echo chambers, reinforcing members' views and decreasing trust in and the legitimacy of opposing viewpoints. As social capital develops between Facebook group members, polarization occurs, and members begin to label political issues as "us" versus "them." Many groups may stop here, but a few are expected to continue down the road to radicalization. Some members may begin severing social ties that create bridging social capital, and the group's opinions will become more extreme.

Bearing in mind the mechanisms of group radicalization discussed above, I expect to find evidence of several trends in the data collected for this study. I expect political behavior to differ for political group members and non-group members. Specifically, I expect group members to be more active politically and to be more likely to be involved in high cost political activities, such as volunteering for a campaign, donating to a political cause, or attending a protest. If the radicalization hypothesis is correct, I expect to find evidence of group membership causing changes to individual's opinions and

evidence that changes to individual's opinions causes changes in political behavior. Additionally, I expect opinion change among group members to be associated with behaviors that occur along the radicalization process, including making friends in the group and severing social bonds with people outside the group.

4 Methodology

Consistent with research trends in studies of political behavior, this study uses survey methodology to collect data on Facebook users who are members of politically oriented Facebook groups. The use of a survey to collect data, as opposed to structured interviews, is cheaper, easier to administer and analyze, and facilitates data collection from a larger sample (Bryman, 2012). Since this study focuses on online political behavior, a web-based survey was used. Web-based surveys further reduce the costs of survey administration and data collection, and research has shown that the findings from web-based surveys are comparable to those of more traditional postal- or telephone-based questionnaires (Stephenson & Crête, 2010). Furthermore, confidentiality is better maintained through a web-based survey, and respondents have more privacy to answer difficult or uncomfortable questions.

In this chapter, the research methodology for the study is discussed. The first section lays out the overall research design and is followed by a section detailing the design of the original web-based survey used to collect data. The third section discusses the results of the pilot-test of the survey. Sampling and distribution procedures are explained in section four. Characteristics of the sample are discussed in section five. Section six describes ethical considerations for the research, and section seven discusses researcher positionality.

4.1 Research Design

As noted above, this study will use a survey of Facebook users to collect data on opinion and behavior change in political Facebook groups. A survey was selected for two reasons. First, it allows for the collection of standardized responses from a large sample that facilitates analysis using quantitative techniques. Since this study aims to examine political behaviors using a defined hypothesis—radicalization of opinion underlies changes to political behavior exhibited by group members—quantitative analysis can provide the tools to test the hypothesis in a larger sample than alternative methodologies would allow. Second, the survey methodology limits researcher interactions with respondents, thereby reducing potential biases that could arise in the data due to researcher positionality, which is discussed in more detail in subsection 4.7.

The final research design for this study has been slightly modified from that of the proposal for the study. Initially, the study was planned as a case study of one or two political Facebook groups, consisting of a survey of members, a text analysis of posts to the group wall, and a network analysis of interactions on randomly selected posts within the group. Two main hindrances arose that necessitated the change in methodology. The first was privacy protection procedures enacted by Facebook that severely limit the ability of external researchers to collect data from users. It appears in earlier research that access to data for network analyses was easier to obtain, but a new update from Facebook now prevents researchers from collecting this type of data. Second, the extremely low response rate necessitated a wider dispersal of the survey. The research questions for the study remain unaltered.

To address the issues above, changes were made to the sampling procedures for the research. Instead of collecting responses from a single Facebook group to use as a case study, a sample of political Facebook groups was selected, and the survey was distributed to members of these groups. In addition, a control group of Facebook users who are not members of political groups was added. This was done to facilitate the analysis of results by allowing for comparisons to be made between Facebook users who are and are not members of political groups. The survey design, detailed in 4.2 below, remained unchanged.

4.2 Survey Design and Delivery Platform

4.2.1 Survey Design

One question this study seeks to answer is “who participates in political groups online?” In order to do this, the first section of the survey collects data on the demographics of respondents, including age, gender, race, and educational attainment. Additionally, these questions collected data that can be used as controls in the analysis of responses. In the US context, it is standard to collect background data on survey respondents, as variables like education level and race are often very closely correlated with a wide range of sociopolitical behaviors (Lauglo & Oia, 2008; Lipset, 1959, 1960; Milbrath & Goel, 1977; Nie, Junn, & Stehlik-Barry, 1996; Nie et al., 1974; Persson & Oscarsson, 2008; Verba et al., 1993; Wolfinger & Rosenstone, 1980). For example, African Americans may tend to have smaller but more active social networks, which

could affect their likelihood of forming new bonds in an online group (Ajrouch, Antonucci, & Janevic, 2001). This has obvious implications for the study, and therefore ought to be considered. By collecting this data, steps can be taken during the analysis to ensure that background characteristics are not influencing the relationships and behaviors observed between variables.

The second section of the survey collects data to identify the political beliefs of respondents. This section serves two purposes. The first is to shed more light on who participates in political groups by examining the relationship between political ideology and group membership. Is one side of the political spectrum more likely to engage in political deliberation online than the other, or are both equally active? Second, this allows for the observation of behavioral changes in relation to respondents' political ideology.

Initially, I planned to write questions for this section in order to create an original measure of political opinion. This turned into a daunting task, as each question needed to be supported with previous public polling data and theory on US public opinion. To eliminate this need, an 11-question survey from the Pew Research Institute was selected for inclusion. The survey from Pew was selected for numerous reasons. First, Pew Research Center is a well-regarded public polling agency in the US, and its surveys are widely used in academia and politics. Second, high-quality polling methods were used to pilot-test and refine the survey with a sample far larger than it was possible to obtain in the context of this study. Finally, the Pew survey is short but highly effective in providing data on respondent political ideology and the strength of the respondent's views. To ensure the survey collected political ideology data correctly, respondents were also asked to self-report how they identify politically, and respondents' self-identifications were correlated with an aggregated political ideology scale calculated using the questions from the Pew Research Center survey⁴. Analysis of the political ideology scale from the pilot-test of the survey is discussed in more detail in 4.3.

⁴ See Partisan ID Scale in Appendix D: Scale Construction and Reliability/Validity of Measures and Questions for further information on the reliability and validity of the measures of political ideology.

The final section of the survey seeks to answer the following question: “how does the political behavior of political Facebook group members differ from non-members?” To answer this question, the survey collects data on specific social and political behaviors. In particular, questions collect data on three sets of behaviors: cross-cutting interactions, as measured by the diversity of respondents’ social media networks; changes to social capital, measured by respondents’ willingness to engage in confrontation and to make friends; and opinion radicalization, measured by respondents’ perceptions of changes to their own opinions. Questions were designed based on theoretical understandings of political behavior and the social behaviors that underpin certain political behaviors. Several questions are posed in different manners throughout this section in order to facilitate the construction of scales and as a way to measure the internal reliability of the survey. The final draft of the survey along with variable names and how responses were coded is included in Appendix A: Full Survey and Codebook.

4.2.2 Survey Delivery Platform

Previous GLOBED students conducted surveys for their thesis research and recommended various survey platforms, including Google Forms and Survey Monkey. In addition to these platforms, I performed a Google search to explore other potential survey delivery platforms. Google Forms was quickly discounted as a delivery platform as I didn’t feel it offered enough data security or enough nuanced control of survey design to meet the needs of this survey. Survey Monkey used a more advanced software that allowed me more control in designing how the survey was delivered, but it still lacked the data security I was hoping to find. In addition, many features were premium and required paid access, which I preferred to avoid.

After exploring other publicly available options, I decided to see if the University of Oslo (UiO) offered any resources for data protection or survey delivery. The University has significant resources for both that I have free access to as a student, so I opted to use the survey delivery platform from the University, called *Nettskjema*. This survey platform stores responses in a secured data environment, in accordance with ethical requirements from NSD, discussed in great detail in 4.6 below. Additionally, by using resources from UiO, data is stored in Norway. This means that the US government cannot legally track submissions, nor can they gain access through a simple request

process, as is standard in the US. This provides an extra layer of protection for an issue that some respondents initially expressed anxiety over. Finally, responses are easily exported to Excel and SPSS files, allowing for easy analysis of the results.

4.3 Pilot Testing

Pilot testing of the survey began October 30th, 2017 after comments from my thesis supervisors were received and the final survey was uploaded to Nettskjema. The pilot testing was conducted in two stages. The first involved distributing the survey to politically aware friends and classmates who could further comment on word choice, survey design, and any errors. Additionally, this group was used to determine how long the survey would take respondents to complete. Pilot testers received a document with instructions for completing the field trial as well as some follow-up questions on the survey. This document is included in Appendix B: Instructions to Pilot-Testers.

The second phase of the pilot test began at the recommendation of my supervisors. Initially, I had not planned to do a more thorough pilot test of the survey but was encouraged to do so. This phase involved distributing the survey to three politically oriented Facebook groups in order to test the performance of the survey in situations similar to how the main research will be collected. One group included in the pilot test was for conservatives/Republicans, while another was for liberals/Democrats. The third group was a bipartisan group of liberals and conservatives. A list of groups the survey was distributed to for pilot testing can be found in Appendix C: Facebook Groups included in .

Over the two phases of field testing, 21 respondents took part in the survey. This is a very low response rate given that the Facebook groups each had over 100 members. Nonetheless, this provided enough cases to perform a preliminary analysis of the data to ensure the survey questions performed as expected.

Most of the analysis focused on the second section of the survey, which is focused on determining the political ideology of respondents. The first section collects data on respondents' backgrounds, which is fairly straightforward, and the third section collects data on behaviors. It is difficult to assess the reliability or validity of these questions solely within the context of the survey, thus they were excluded from detailed analysis at the time of the pilot testing. Analysis for the second section included correlations

between a respondent's political self-identification and their answers to questions throughout the section, followed by a regression with political self-identification as the dependent variable and answers to questions as the independent variables. For this analysis, political self-identification is assumed to be an accurate measure of political ideology and a reasonable predictor of political attitudes and values (Conover & Feldman, 1981). All questions except for two had significant and positive correlations with self-identification, indicating that the majority of questions performed as expected and adequately predict a respondent's political ideology.

The two questions that did not perform as expected dealt with 1) US intervention abroad and 2) government protection of the environment. Upon further reflection, it makes sense that the first question did not behave as expected, as the extreme ends of the political spectrum in the US (extreme liberals and extreme conservatives) are more likely to support isolationist policies, while the middle of the spectrum supports more interventionist policies. The second question, about government protection of the environment, does not behave in a manner expected, even after further consideration of US public opinion and examination of the data collected so far. I hope that more complete data from the main survey will provide better information on why this question does not perform as expected.

The regression, which uses political self-identification as the dependent variable and answers to the 11-question panel as the independent variables, showed that up to 80% of the variation in political self-identification can be explained by the eleven questions (adjusted $R^2 = .8$), but none of the coefficients were significant, and some of the signs went in unexpected directions. It is possible that this is caused by the method of coding of the extremity of answers. Respondents' political self-identification was scored on a scale of 3 to -3⁵, but answers to questions in this section varied in scoring from as little as 1 to -1 to as great as 3 to -3. For example, a respondent may self-identify as "extremely liberal" which is coded as a -3, and hold the view that business corporations make too much profit, which is coded as a -1. The sign of both codes is negative, indicating that the political opinion is a liberal one and is consistent with the

⁵ Keeping with the left – right layout of the US political spectrum and superimposing it on a number line, liberal views were coded as negative while conservative views were coded as positive, with 0 representing neutral or independent views. Responses are coded this way throughout the survey.

respondent's self-identification. However, this question only allows for answers to be coded as 1 or -1, so it does little to indicate the extremity of the answer.

In addition to analyzing the relationships between the individual questions and respondents' political self-identification, I used data collected during the pilot test to construct and test the reliability and validity of a single variable for political ideology. This variable was constructed by aggregating respondents' answers to the 11 political ideology questions from the second portion of the survey. This was done with the hope of creating a single variable of political ideology that allows for a comparison of the extremity of views and accurately reflects the political orientation of respondents. To ensure the accuracy of this measure, hereafter referred to as the Partisan ID score, a number of statistical tests were performed on the data.

First, Cronbach's Alpha was calculated to determine the reliability of the items (AERA, APA, & NCME, 2014). Reliability is defined as how well multiple items measure the same construct (Vaske, Beaman, & Sponarski, 2017). In this case, the construct being measured is the political ideology of the respondent. Cronbach's Alpha for the 11-question panel is .9, indicating that the questions are a reliable measure of political ideology and can be aggregated into a single variable.

Next, the convergent validity of the aggregated political identification score was analyzed by correlating the score with respondents' self-identification. Convergent validity is a way of measuring the accuracy with which a scale measures a construct by comparing two different measures of the same construct (AERA et al., 2014). Political self-identification and the aggregated political identification score have a Pearson Correlation of .908 ($p = .000$), indicating that the aggregated political identification score has high validity as a measure of respondents' political ideology. Furthermore, when regressed, using political self-identification as the dependent variable, the aggregated political identification score explains approximately 80% of the variation in political self-identification (adjusted $R^2 = .8$), indicating that this single measure is slightly more accurate than the 11-question panel. Taken together, these measures of reliability and validity indicate that the aggregated political identification score performs as intended and can be used in analyzing data from the main survey.

4.4 Sampling and Survey Distribution

4.4.1 Random Sampling of Politically Oriented Facebook Groups

When researchers don't know the composition of a population, it is difficult to ensure a survey is collecting a representative sample. Since one of the goals of this research is to identify who joins and participates in politically oriented Facebook groups, it was not possible to create a detailed sampling frame to identify sample targets. To address this difficulty, sample matching was used.

Sample matching is a method of non-probability sampling used to obtain a semi-representative sample (Baker et al., 2013). Using this method, target populations that are expected to be similar in composition to the overall population are invited to take part in the survey. In the context of this study, the overall population would be Facebook users who are also members of political Facebook groups. To obtain a sample of this population, a number of political groups were identified, and group members were invited to take part in the survey through a post on the group page. Posts included a brief description of the study, as well as a link to the survey.

Politically oriented Facebook groups were identified through a simple Facebook search using the terms "liberal," "conservative," "republican," and "democrat." Based upon group descriptions, an equal number of groups from the left and the right of the American political spectrum were selected, as well as a few groups with mixed membership. Groups were selected for inclusion based upon their size and if I could gain access to the group as a researcher. Larger groups were assumed to be more representative than smaller groups and posting in larger groups meant that more people were exposed to the survey. Most groups required membership approval, and many of the approval processes were based upon answers to questions relating to the prospective member's political views. I answered any questions posed to me honestly, and I did not seek to join groups if it would require dishonest answers to questions to have my membership request approved.

In total, 17 groups were invited to participate in the survey, all of roughly the same size. Of these, four groups were apolitical and used primarily to collect control responses, as discussed in detail in subsection 4.4.2 below. Four groups identify as liberal or Democratic, and another four groups identify as conservative/Republican. An additional

four groups are bipartisan and include members from across the political spectrum. The final group was used to organize a political rally. This group is not linked with either side of the political spectrum. Further details on the groups will be withheld to protect respondent confidentiality.

4.4.2 Convenience Sampling of Control Group

To facilitate drawing conclusions from the survey data collected, data was also collected from a control group of Facebook users who do not belong to political Facebook groups. Due to resource constraints, a convenience sample of this group was collected by making posts to my personal Facebook wall and in four Facebook groups that are not politically oriented. It is likely that some Facebook users reached through the convenience sampling will be members of politically oriented Facebook groups that did not receive invitations to participate in the survey. These respondents will still be able to complete the survey for members of politically oriented Facebook groups, and it is not expected that their inclusion will affect the accuracy of the sampling.

4.5 Sample Characteristics

The sample collected for this study includes 93 respondents, 28 of whom are members of political groups on Facebook. Of the 28 group members, 15 belonged to liberal or Democratic groups, six belonged to bipartisan groups, two were members of conservative groups, and five respondents chose not to identify their group's political ideology. Given that an equal number of liberal and conservative political groups were included in the sample, it is surprising that the sample is skewed towards liberal respondents. It is possible that researcher positionality as a liberal male affected survey response rates. Researcher positionality is discussed in more detail in section 4.7.

The racial composition of the sample is overwhelmingly white. 92.5% of respondents identified as white or Caucasian (non-Hispanic). 4.3% of respondents were Asian or Pacific Islander. Black or African American respondents composed just over 1% of the sample. One respondent identified as mixed-race, and another chose not to provide racial information. No respondents identified as Hispanic/Latino or Native American.

Although less skewed than the racial composition of the sample, the age composition of the sample is also skewed. 45.2% of respondents were between the ages of 18 and 24,

and a further 28% were 25-34 years old. 35 – 44 year olds account for 5.4% of the sample. Respondents aged 45-54 years old account for 10.8% of the sample, and 9.7% of respondents were over 55 years of age. Only one person, or 1.1% of the sample, was under 18 years old.

Respondents were also asked to provide their gender. 60.2% of the sample identified as female, while 36.6% identified as male. 3.2% identified as non-binary.

The education levels of respondents are more varied, but the majority of the sample, 51.6% of respondents, was composed of people with Bachelor's Degrees. Respondents with Master's Degrees made up 22.6% of the sample. 4.3% of respondents have some high school education, and 2.2% only have a high school diploma. Respondents with some college education make up 8.6% of the sample. 5.4% of the sample is made up of respondents with a professional degree, and another 5.4% of respondents possess doctorate degrees.

Finally, respondents provided information on their political ideology. 10.8% of respondents identified as extremely liberal, 37.6% identified as moderately liberal, and 16.1% identified as somewhat liberal, meaning that a majority of the sample is liberal. Respondents identifying as independent, or neither conservative nor liberal, made up 16.1% of the sample. 19.4% of respondents were somewhat conservative, and an additional 9.7% were moderately conservative. No respondents identified as extremely conservative.

4.6 Ethical Considerations

Due to the type of information collected through the survey, ethical approval was required to undertake this study. Personally-identifying information including age, race, gender, and education level are collected through the survey. The online delivery of the survey also means that information such as IP address and other digital identifiers were collected. Together, this information could be used to identify respondents, thereby jeopardizing the confidentiality of responses to potentially sensitive questions, such as those pertaining to voting behavior and political opinions.

As the primary researcher for this study, I am ethically obligated to ensure adequate steps are taken to protect respondents' answers to survey questions. *Nettskjema*, the

survey delivery platform for this study, provides some data protection for surveys with sensitive information. Additionally, responses are password protected and distribution of survey data is limited to one password protected laptop. Following the completion of the study, data will be anonymized and any files with identifying information will be deleted. These data protection procedures were approved by the Norwegian Centre for Research Data (NSD) on September 22, 2017. A copy of the approval can be found in Appendix E: Ethical Approval from NSD.

4.7 Researcher Positionality

As a researcher exploring social phenomenon, it is important to consider my position in relationship to the research topic and subjects. A researcher's values and opinions shape the way in which he or she selects research topics, conducts inquiry, and interprets results (Bryman, 2012). It is not possible for social researchers to be completely unbiased when conducting research, so it is crucial that the researcher is reflexive about his or her position in relation to the position of the research object (Cohen, Manion, & Morrison, 2007).

As a politically active American, this research topic is highly relevant to my life. As noted in the introduction, the impetus for researching opinion change in political Facebook groups developed from personal experience. Following the 2016 election of Donald Trump, I saw the political behavior of many friends and acquaintances change. This change in behavior was accompanied by a change in rhetoric and discourse that seemed to arise from an underlying change in political opinion. Most notably, I noticed this change among members of political groups that I was also a member of. As a result of my membership in political Facebook groups, it is possible that I am examining and collecting data on a set of behaviors and processes that have influenced me personally, which could have a profound effect on the research.

Steps were taken to counter the potential biases arising from my close position with the research subject. The choice of survey methodology was one step taken to limit researcher bias. A written survey delivered online and without direct interaction with the researcher limits the potential for researcher biases to emerge in the treatment of respondents. All respondents received the same questions and inputs, limiting the potential influence of my opinions and position in the field. Additionally, I approached

the research from an etic standpoint, seeking to collect and analyze data as a researcher, not as a participant in the processes under investigation. In order to do this properly, I stopped participating in all political Facebook groups. Where before I was an active participant and contributed to discussions in the groups, after starting the research, I stopped participating and interacting in these groups. As I did this, I shifted my perspective from that of a participant to that of an observer and researcher, with the hopes of limiting the impact of my personal biases on the research process. Instead of joining discussions in political groups, I approached them as political phenomenon to be studied from a removed distance. It is my hope that removing myself from groups similar to those that I studied will limit the effects of my personal biases on the research. Following the conclusion of the research, I expect to resume a more active, albeit a more cautious role in political groups.

Despite the steps taken to mitigate the influence of my position in relation to the research topic, it is impossible to do so completely. The research methodology relies on Facebook to deliver the survey, which means that potential respondents will be able to see information about me before deciding to participate in the survey. I am a young, white, liberal male, and all three of these characteristics are expected to influence response rate. Those the most different from me (minorities, conservatives, women, and/or older people) may be discouraged from participating in the survey due to the intense partisan climate in the US and on social media and the general distrust exhibited towards outsiders.

5 Findings and Analysis

This chapter presents the major findings from data collected through the survey methodology discussed in chapter 4. The first section of this chapter will discuss who deliberates online, followed by sections detailing who is most likely to join political Facebook groups and why. The fourth section will show how the political behavior of group member differs from that of non-group members. Section five discusses how group membership relates to opinion change. The sixth and final section will discuss data pertaining to the theorized mechanisms of opinion change in political Facebook groups.

5.1 Online Political Deliberation

The theoretical framework for this study argues that the internet removes barriers to political participation that prevent certain societal groups from participating in political activities. To test this argument, data on four background characteristics theoretically linked to variations in political participation—race, age, gender, and education—was collected and analyzed using contingency tables and measures of independence. The results are presented in this section.

The literature review shows that levels of political participation vary by race. As a form of political participation, it can be assumed that political deliberation will follow the same trends as other political activities, and there should be a clear relationship between race and political deliberation online. If the arguments in the theoretical framework are correct, however, then there will not be a relationship between race and online political deliberation. Table 5.1 shows the frequency and percentage of respondents who have and have not engaged in political deliberation online broken down by racial identity. Due to small sample size, the chi square test of independence could not be used to measure the relationship between the two variables. Instead, the maximum likelihood ratio is used to indicate the relationship between race and online deliberation. The high p-value ($p = .582$) of the maximum likelihood ratio indicates that there is not a statistically significant relationship between race and online deliberation in the data collected. Although this finding supports the arguments made in the theoretical framework, the small sample size and racial bias of the sample severely limit the credibility of the finding.

Table 5.1 Political Deliberation by Race

	Have not engaged in political deliberation online	Have engaged in political deliberation online	Total
White	27	59	86
<i>Percentage</i>	31.40%	68.60%	100.00%
Asian/Pacific Islander	2	2	4
<i>Percentage</i>	50.00%	50.00%	100.00%
African American	0	1	1
<i>Percentage</i>	0.00%	100.00%	100.00%
Other	0	1	1
<i>Percentage</i>	0.00%	100.00%	100.00%
Unspecified	0	1	1
<i>Percentage</i>	0.00%	100.00%	100.00%
Total	29	64	93

Age is another characteristic the literature review shows is related to levels of political participation. Assuming that political deliberation online follows the same trends as other political activities, the data should show a clear relationship between aging and increasing levels of engagement in political deliberation. The lack of a relationship between age and political deliberation would support the arguments made in the theoretical framework. Table 5.2 shows frequencies and percentages of respondents who have and have not engaged in online deliberation, broken down by age. Again, the small sample size prohibited the use of the chi square test for independence, so the maximum likelihood ratio is used to examine the data for potential relationships. The high p-value ($p = .51$) could suggest that there is not a clear relationship between the two variables, supporting the theoretical framework. As with race, above, the lack of a significant finding does not conclusively prove the hypothesis set out in the theoretical framework, due to the small sample size.

Table 5.2 Political Deliberation by Age

	Have not engaged in political deliberation online	Have engaged in political deliberation online	Total
Under 18	0	1	1
<i>Percentage</i>	0.0%	100.0%	100.0%
18-24	14	28	42
<i>Percentage</i>	33.3%	66.7%	100.0%
25-34	6	20	26
<i>Percentage</i>	23.1%	76.9%	100.0%
35-44	1	4	5
<i>Percentage</i>	20.0%	80.0%	100.0%
45-54	3	7	10
<i>Percentage</i>	30.0%	70.0%	100.0%
55 +	5	4	9
<i>Percentage</i>	55.6%	44.4%	100.0%
Total	29	64	93

The literature review shows that gender also relates to political participation by presenting data indicating that men are more politically active than women. If gender relates to online deliberation in the same way it relates to other forms of political participation, then there will be a clear and statistically significant relationship between gender and online deliberation in the data. Table 5.3 shows the frequencies and percentages of respondents who have and have not engaged in online political discussions, broken down by gender. After analysis, the high p-value ($p = .283$) of the maximum likelihood ratio suggests there is not a clear relationship between gender and online deliberation, supporting the arguments made in the theoretical framework, although the same limitations apply to this finding as the findings for race and age.

Table 5.3 Political Deliberation by Gender

	Have not engaged in political deliberation online	Have engaged in political deliberation online	Total
Female	17	39	56
<i>Percentage</i>	30.4%	69.6%	100.0%
Male	12	22	34
<i>Percentage</i>	35.3%	64.7%	100.0%
Non-binary	0	3	3
<i>Percentage</i>	0.0%	100.0%	100.0%
Total	29	64	93

Finally, education is shown to be closely related to political participation in the literature review. Table 5.4 presents the frequencies and percentages of respondents who have

and have not engaged in online political discussions, broken down by education level. The maximum likelihood ratio for the data has a high p-value ($p = .465$), supporting the hypothesis made in the theoretical framework that education will not relate to online deliberation. This finding must be interpreted with caution, however, due to the small sample size.

Table 5.4 Political Deliberation by Education Level

	Have not engaged in political deliberation online	Have engaged in political deliberation online	Total
Some high school, no diploma	2	2	4
<i>Percentage</i>	50.0%	50.0%	100.0%
High school graduate	1	1	2
<i>Percentage</i>	50.0%	50.0%	100.0%
Some college credit, no degree	2	6	8
<i>Percentage</i>	25.0%	75.0%	100.0%
Bachelor's Degree	18	30	48
<i>Percentage</i>	37.5%	62.5%	100.0%
Master's Degree	3	18	21
<i>Percentage</i>	14.3%	85.7%	100.0%
Professional Degree	2	3	5
<i>Percentage</i>	40.0%	60.0%	100.0%
Doctorate Degree	1	4	5
<i>Percentage</i>	20.0%	80.0%	100.0%
Total	29	64	93

One final set of findings bear mentioning in this section. The survey collected data on respondents' past political actions in order to construct a scale indicating a respondents' level of past political participation⁶. Data from the Participation Score was compared to the four characteristics discussed in this section above in order to determine if there is a relationship between race, age, gender, or education and past political participation. Based on the literature review, it is expected that there will be a statistically significant relationship between the Participation Scale and each of the four characteristics. High p-values for the maximum likelihood ratio for political participation and all four

⁶ The Participation Score was created by summing the total number of distinct political activities a respondent had done in the past to create a scale ranging from 0 to 7, indicating past levels of political activity. Political activities included in this scale are: voting in local, state, and federal elections; donating to a political campaign or cause; volunteering for a political campaign or cause; attending a political protest or rally; and engaging in political discussion online.

characteristics—race ($p = .775$), age ($p = .287$), gender ($p = .136$), and education ($p = .225$)—indicate that the expected relationships are not present in the data collected through this survey. The implications of this finding are discussed in detail in the next chapter, Discussion.

5.2 Political Facebook Group Membership

Little research has been conducted evaluating the demographic characteristics of political Facebook groups. As a result, there is no hypothesis for the expected demographic composition of political groups on Facebook, and analysis of the data was exploratory, seeking to identify significant relationships between group membership and demographic characteristics of members. Data on five demographic characteristics of group members, race, age, gender, education, and political ideology⁷, are presented in this section, along with data showing relationships between group membership and demographic characteristics, where applicable.

Race is the first demographic characteristic of interest. As noted in the methodology chapter, the sample for this study is overwhelmingly white. As a result, it is difficult to draw conclusions about the racial composition of group members. Nonetheless, the racial data collected is presented in Table 5.5, below. White/Caucasian (non-Hispanic) respondents make up 92.9% of group members and 92.3% of non-group members. 3.6% of group members are Asian/Pacific Islander, compared with 4.6% of non-group members. A further 3.6% of group members identify as mixed race. No black/African Americans identified as group members. There is no statistically significant relationship between race and group membership based on the maximum likelihood ratio ($p = .422$).

⁷ Political ideology is measured by respondents' self-identification of their political views on a liberal – conservative scale with seven possible response options (see “self_pol_ID in Appendix A: Full Survey and Codebook). To confirm the reliability and validity of this measure, a series of 11 questions collected respondents' opinions on a range of political issues. Responses were used to create a Partisan ID score as an alternative measure of respondents' political ideology. More information on the construction of this score and tests of reliability and validity of the measures of political ideology can be found in Appendix D: Scale Construction and Reliability/Validity of Measures and Questions.

Table 5.5 Group Membership by Race

	Non-Group Member	Group Member	Total
White	60	26	86
<i>Percentage</i>	69.8%	30.2%	100.0%
Asian/Pacific Islander	3	1	4
<i>Percentage</i>	75.0%	25.0%	100.0%
African American	1	0	1
<i>Percentage</i>	100.0%	0.0%	100.0%
Other	0	1	1
<i>Percentage</i>	0.0%	100.0%	100.0%
Unspecified	1	0	1
<i>Percentage</i>	100.0%	0.0%	100.0%
Total	65	28	93

The variation in the age of group members can be seen in Table 5.6, below. Group members tended to be younger, with 39.3% of group members being 18-24 years old and another 39.3% being 25-34 years old. 18-24-year olds make up 47.7% of the non-group sub-sample, and 25-34-year olds account for 23.1% of non-group members. 10.7% of group members were 45-54 years of age, compared with 10.8% of non-group members. Respondents aged 55 or older made up 7.1% of the group subsample and 10.8% of the non-group subsample. The high p-value for the maximum likelihood ratio ($p = .653$) indicates there is not a clear relationship between age and political group membership.

Table 5.6 Group Membership by Age

	Non-Group Member	Group Member	Total
Under 18	1	0	1
<i>Percentage</i>	100.0%	0.0%	100.0%
18-24	31	11	42
<i>Percentage</i>	73.8%	26.2%	100.0%
25-34	15	11	26
<i>Percentage</i>	57.7%	42.3%	100.0%
35-44	4	1	5
<i>Percentage</i>	80.0%	20.0%	100.0%
45-54	7	3	10
<i>Percentage</i>	70.0%	30.0%	100.0%
55 +	7	2	9
<i>Percentage</i>	77.8%	22.2%	100.0%
Total	65	28	93

Table 5.7 shows the gender composition of the group member sub-sample compared to the non-group member sub-sample and the overall sample. Women make up the largest percentage of respondents, with 50% of group members and 64.6% of non-group members identifying as female. 39.3% of group members identify as male, while 35.4% of non-group members are male. Finally, 10.7% of group members identify as non-binary. There are no non-binary non-group members. In the case of gender, the maximum likelihood ratio has a small p-value ($G^2 = 8.002$, $p = .018$), indicating that there is a statistically significant relationship between group membership and gender. The magnitude of Cramer's V, an indication of the strength of association between two categorical variables, suggests that there is a moderately weak association between gender and group membership ($\phi_c = .288$, $p = .021$). The ordinal association of the relationship cannot be determined.

Table 5.7 Group Membership by Gender

	Non-group member	Group member	Total
Female	42	14	56
<i>Percentage</i>	75.0%	25.0%	100.0%
Male	23	11	34
<i>Percentage</i>	67.6%	32.4%	100.0%
Non-binary	0	3	3
<i>Percentage</i>	0.0%	100.0%	100.0%
Total	65	28	93

The largest percentage of group members, 57.1%, obtained a bachelor's degree, as seen in Table 5.8. 49.2% of non-group members also earned a bachelor's degree. Group members with master's degrees account for 28.6% of the subsample, while only 20% of the non-group subsample have master's degrees. 3.6% and 7.1% of group members hold professional degrees and doctoral degrees, respectively. Professional degree-holders account for 6.2% of non-group members, and doctorate degree-holders make up 4.6% of non-group members. Finally, 3.6% of group members only received some college education, compared with 10.8% of non-group members. Analysis of the two variables using the maximum likelihood ratio shows there is no statistically significant relationship between education and group membership ($p = .32$).

Table 5.8 Group Membership by Education Level

	Non-group member	Group member	Total
Some high school, no diploma	4	0	4
<i>Percentage</i>	100.0%	0.0%	100.0%
High school graduate	2	0	2
<i>Percentage</i>	100.0%	0.0%	100.0%
Some college credit, no degree	7	1	8
<i>Percentage</i>	87.5%	12.5%	100.0%
Bachelor's Degree	32	16	48
<i>Percentage</i>	66.7%	33.3%	100.0%
Master's Degree	13	8	21
<i>Percentage</i>	61.9%	38.1%	100.0%
Professional Degree	4	1	5
<i>Percentage</i>	80.0%	20.0%	100.0%
Doctorate Degree	3	2	5
<i>Percentage</i>	60.0%	40.0%	100.0%
Total	65	28	93

As illustrated in Table 5.9, the group member subsample is predominately liberal. 17.9% of group members are “extremely liberal” and 60.7% are “moderately liberal”. The non-group subsample has 7.7% of respondents identifying as “extremely liberal” and 27.7% identifying as “moderately liberal.” 3.6% of group members and 7.7% of non-group members identify as “somewhat liberal.” 14.3% of group members call themselves “independent” and only 3.6% identify as “moderately conservative.” 16.9% of non-group members are “independent” and 12.3% are “moderately conservative.” No respondents identified as “extremely conservative.” The low p-value for the maximum likelihood ratio ($G^2 = 22.352, p = .000$) indicates there is a statistically significant relationship between political ideology and group membership. Goodman’s gamma indicates there is a moderately strong relationship between being liberal and joining a group ($\gamma = -.613, p = .000$)⁸.

⁸ The negative sign of gamma is due to the negative codes assigned to the liberal response options: “Extremely Liberal,” “Moderately Liberal,” and “Somewhat Liberal.”

Table 5.9 Group Membership by Political Ideology

	Non-group member	Group member	Total
Extremely Liberal	5	5	10
<i>Percentage</i>	50.0%	50.0%	100.0%
Moderately Liberal	18	17	35
<i>Percentage</i>	51.4%	48.6%	100.0%
Somewhat Liberal	5	1	6
<i>Percentage</i>	83.3%	16.7%	100.0%
Independent	11	4	15
<i>Percentage</i>	73.3%	26.7%	100.0%
Somewhat Conservative	18	0	18
<i>Percentage</i>	100.0%	0.0%	100.0%
Moderately Conservative	8	1	9
<i>Percentage</i>	88.9%	11.1%	100.0%
Extremely Conservative	0	0	0
<i>Percentage</i>	0.0%	0.0%	0.0%
Total	65	28	93

5.3 Why Join Political Facebook Groups?

Respondents who stated they are members of political Facebook groups were asked to explain why they joined these groups. Responses were coded to facilitate analysis of the reasons people join these groups. The results of the analysis of these responses is discussed in this subsection.

The most common response to “why did you join [a political Facebook] group?” was to keep informed. One quarter of respondents (7 of 28) noted that they joined political groups to either keep informed on current events or to learn more about political issues important to them. 18% of respondents (5 of 28) said they joined a group in order to participate in the group’s offline political activity. Multiple respondents answering in this way formed groups of friends on Facebook specifically to organize offline events. Another 18% (5 of 28) of respondents joined a group in order to increase their exposure to like-minded people. These respondents are self-selecting into a primarily confirmatory information environment, also known as an echo chamber. 10% of responses (3 of 28) mentioned seeking acceptance and support from people with similar opinions. Three final explanations for joining groups occurred in less than 10% of responses, as follows: to encounter cross-cutting ideas, opinions, and deliberation; to

join a group that represents an official party (i.e. a Facebook group for members of the Green Party living in Georgia); and to avoid conflict while discussing politics by limiting the diversity of viewpoints.

5.4 The Political Behavior of Group Members

One of the aims of this study is to show how the political behavior of political Facebook group members differs from the political behavior of non-members. To do so, the survey asked respondents about past political activities and used this data to construct a Participation Score ranging from zero to seven for each respondent⁹. For the entire sample, the median Participation Score was 4. The political group member subsample had a median Participation Score of 5, while the non-group member subsample median was 4. Analysis of the contingency table for Participation Score by group membership, displayed in Table 5.10 below, shows there is a moderate positive relationship between the two variables ($G^2 = 18.744$, $p = .009$; $\gamma = .509$, $p = .000$).

Table 5.10 Participation Score by Group Membership

	0	1	2	3	4	5	6	7	Total
Non-Group Member	5	3	6	14	15	7	10	5	65
<i>Percentage</i>	7.7%	4.6%	9.2%	21.5%	23.1%	10.8%	15.4%	7.7%	100.0%
Group Member	0	0	0	4	5	7	4	8	28
<i>Percentage</i>	0.0%	0.0%	0.0%	14.3%	17.9%	25.0%	14.3%	28.6%	100.0%

By analyzing the component political behaviors that comprise the Participation Score, it is possible to examine the relationships between specific political activities and group membership. Although this analysis does not show causality between the two variables, it can help to provide a more complete picture of the types of political activities group members are most likely to engage in. Of the seven political activities included in the participation score, four showed statistically significant relationships with group membership. Voting in a local election and group membership have a strong positive relationship ($\chi^2 (1, N = 93) = 5.802$, $p = .016$; $\gamma = .796$, $p = .002$). Voting in a state election and group membership also have a strong positive relationship ($G^2 = 6.54$, $p = .011$; $\gamma = .78$, $p = .003$). Additionally, there is a moderately strong positive relationship

⁹ See Appendix D: Scale Construction and Reliability/Validity of Measures and Questions for further information on the construction and reliability/validity of the Participation Score.

between volunteering for a political campaign or cause and group membership ($\chi^2 (1, N = 93) = 9.665, p = .002; \gamma = .631, p = .004$). Finally, there is a moderate positive relationship between online political deliberation and group membership ($\chi^2 (1, N = 93) = 5.33; \gamma = .579, p = .009$). In all, these findings indicate that group members are more likely than non-members to have voted in state and local elections, volunteered for political campaigns or causes, and engaged in political deliberation online. These findings are discussed in detail in the next chapter.

The Future Participation Score is a measure of anticipated future political behavior¹⁰. Table 5.11 shows the distribution of respondents in political Facebook groups by Future Participation Score. Analysis of the Future Participation Score with group membership indicates that there is a relationship between the two variables ($\chi^2 (4, N = 93) = 9.912, p = .042$), although the insignificance of measures of ordinal association limit further analysis of this relationship. In order to gain insight into this relationship, the dichotomous translation of the Future Participation Score was also analyzed in relation to group membership¹¹. This analysis indicates there is moderately positive relationship between the two variables when group membership is treated as the dependent variable ($\chi^2 (1, N = 93) = 8.328, p = .004; d = .305, p = .006$). Based on this data, it can be said that group membership may cause higher levels of future political participation.

¹⁰ Respondents were asked to indicate their agreement/disagreement that political interactions on Facebook made them more likely to engage in four political activities: voting, running for office, donating to a political campaign, and attending a protest. Responses were recoded into dichotomous variables indicating whether or not a respondent thought they would perform a specific activity, and these variables were summed to give a single score indicating the number of future political activities a respondent anticipated participating in. This is referred to as the Future Participation Score.

¹¹ To calculate the dichotomous Future Participation Score, Future Participation Scores of zero to two were recoded as zero to indicate lower levels of anticipated future participation, while scores of three and four were recoded as one to indicate higher levels of anticipated future participation.

Table 5.11: Future Participation Score by Group Membership

	0	1	2	3	4	Total
Non-Group Member	13	28	9	11	4	65
<i>Percentage</i>	20.00%	43.10%	13.80%	16.90%	6.20%	100.00%
Group Member	6	5	2	11	4	28
<i>Percentage</i>	21.40%	17.90%	7.10%	39.30%	14.30%	100.00%
Total	19	33	11	22	8	93
<i>Percentage</i>	20.40%	35.50%	11.80%	23.70%	8.60%	100.00%

5.5 Group Membership and Opinion Change

The theoretical framework for this study hypothesizes that Facebook users who join political Facebook groups are more likely to experience opinion change than non-members of political groups^{12,13}. Overall, 64.3% of group members reported experiencing opinion change as a result of political interactions online, while only 40% of non-group members believed that their online political interactions caused opinion change. Table 5.12, below, shows the frequencies and percentages of respondents who did and did not experience opinion change, broken down by group membership. In this case, the sample is large enough to analyze the contingency table using the chi-square test of independence. The low p-value ($\chi^2(1, N=93) = 4.630, p = .031$) indicates that there is a statistically significant relationship between group membership and experiencing opinion change. Further analysis using Goodman's gamma ($\gamma = .459, p = .029$) indicates that group membership and opinion change have a moderately positive relationship. This confirms the hypothesis that group members are more likely to experience opinion change caused by political interactions on Facebook than non-group members. The relationship between group membership and opinion change is discussed in more detail in the next chapter.

¹² Two questions were included in the survey to collect data on group-members' opinion change. One asked respondents if they experienced opinion change, and the other asked if respondents' opinions had strengthened. The questions were intended to measure similar constructs, but analysis showed that the two questions did not perform as expected. More information on the analysis and reliability/validity of questions can be found in Appendix D: Scale Construction and Reliability/Validity of Measures and Questions.

¹³ Responses from two questions were compiled in order to analyze opinion change among respondents. Appendix A shows the specific questions asked. "Pol_op_strength" collected data on non-group members and "group_op_strength" collected data on group members.

Table 5.12 Opinion Change by Group Membership

	No Opinion Change	Opinion Change	Total
Non-group Member	39	26	65
<i>Percentage</i>	60.00%	40.00%	100.00%
Group Member	10	18	28
<i>Percentage</i>	35.70%	64.30%	100.00%
Total	49	44	93
<i>Percentage</i>	52.70%	47.30%	100.00%

5.6 Opinion Change and Political Behavior

In the theoretical framework for this paper, it is argued that political Facebook groups act as echo chambers and radicalize the views of members. The previous sections show that there is a relationship between political Facebook group membership and opinion change, the operationalized measure of radicalization used in this study. Additionally, there is evidence of a relationship between group membership and political behavior. After analysis of the Participation Score, which measures past political participation, and opinion change using a contingency table and the maximum likelihood ratio, there is no evidence of a relationship between the two variables. Furthermore, there is no evidence of a relationship between any of the component political activities that comprise the Participation Score and opinion change. The implications of these findings are discussed in the next chapter.

In contrast, there is a statistically significant relationship between expected future participation and opinion change. Table 5.13, below, shows the distribution of Future Participation Scores, broken down by those who did experience polarization and those who did not. Analysis of the data using chi square indicates there is a relationship between the two variables ($\chi^2(4, N = 93) = 23.497, p < .0005$). Furthermore, Somers' d, an indication of the ordinal association of two variables, indicates a moderate positive relationship between opinion change and future political participation when future political participation is treated as the dependent variable ($d = .556, p < .0005$). This indicates that experiencing opinion change tends to make one more likely to participate in future political activities, suggesting that opinion change may alter political behavior.

Table 5.13: Opinion Change by Future Participation Score

		No Polarization	Polarization	Total
Future Participation Score	0	16	3	19
	<i>Percentage</i>	84.20%	15.80%	100.00%
	1	22	11	33
	<i>Percentage</i>	66.70%	33.30%	100.00%
	2	5	6	11
	<i>Percentage</i>	45.50%	54.50%	100.00%
	3	5	17	22
	<i>Percentage</i>	22.70%	77.30%	100.00%
	4	1	7	8
	<i>Percentage</i>	12.50%	87.50%	100.00%
	Total	49	44	93
	<i>Percentage</i>	52.70%	47.30%	100.00%

Analysis of the component behaviors that comprise the Future Participation Score shows that opinion change increases the likelihood of an individual participating in three of the four component behaviors. Opinion Change has a moderately positive effect on the likelihood of donating to a political campaign ($\chi^2 (1, N = 93) = 16.603, p < .0005; d = .405, p < .0005$). Opinion Change has a moderately weak but positive effect on running for office ($\chi^2 (1, N = 93) = 10.922, p = .001; d = .282, p = .001$). Finally, opinion change has a moderately positive effect on deciding to attend a political protest ($\chi^2 (1, N = 93) = 17.927, p < .0005; d = .432, p < .0005$).

At this point, it is also important to note that analysis of future and past political participation using the dichotomous translations of the Future Participation Score and the Participation Score indicates there is no statistically significant relationship between the two variables¹⁴. The implications of this finding are discussed in the chapter six.

5.7 Mechanisms of Opinion Change in Groups

The model of radicalization outlined in the theoretical framework and reviewed here is the hypothesized mechanism through which opinion change occurs in groups. Facebook users join political groups, forming friendships and developing social capital

¹⁴ Participation Scores of zero to three were recoded as zero to indicate lower levels of past participation, while scores of four through seven were recoded to one to indicate higher levels of past participation.

bonds with other group members. In groups that continue down the pathway towards radicalization, group dialogue becomes increasingly supportive of confronting friends and family with alternative political views. Coupled with the increasingly combative nature of group discourse at this stage in the process, group members may decide to confront friends and family with opposing views, which in turn curtails the individual's exposure to cross-cutting ideas and opinions. When coupled with increased exposure to confirmatory information in the political group/echo chamber, this leads to opinion change towards the most extreme view in the group.

The survey collected data on five independent variables relating to this mechanism of opinion change: the presence of cross-cutting interactions in respondents' Facebook networks¹⁵; the amount of cross-cutting interactions in respondents' Facebook networks¹⁶; whether or not the group held more extreme views than the respondent¹⁷; whether respondents made friends with other group members¹⁸; and to what extent respondents felt the group supported confronting friends and family with alternative views outside the group¹⁹. This section will first present findings from the analysis of individual variables, followed by a sub-section presenting analysis of any relationships between the independent variables and opinion change. Unless otherwise specified, the analysis below focuses exclusively on the group member sub-sample (N=28).

Respondents were asked to express their level of agreement with the following statement: "I have friends who would disagree with many of the main messages of this group." This was done to determine if group members are exposed to any cross-cutting ideas through Facebook, even if only a very small amount. Responses were coded from -2 to +2 to indicate level of disagreement or agreement with the statement. The mean response is .89, with 22 of 28 respondents agreeing that they have friends who hold political views in opposition to the group. This indicates that a large majority of group members have the potential to encounter cross-cutting ideas in their friend networks.

Group members were also asked to express agreement/disagreement with the idea that *many* of their friends would oppose the main message of the group. Responses were

¹⁵ Measured by "group_friends_disagree." See Appendix A.

¹⁶ Measured by "group_friends_maj_disagree." See Appendix A.

¹⁷ Measured by "group_extreme." See Appendix A.

¹⁸ Measured by "group_made_friends." See Appendix A.

¹⁹ Measured by "group_supp_confront." See Appendix A.

again coded on a scale of -2 to +2. Having many friends who disagree with the group's point of view is expected to indicate higher levels of exposure to cross-cutting ideas, so responses to this question were used as an indicator of the amount of cross-cutting ideas group members are exposed to. Analysis of responses shows that exactly half of respondents agree to some extent with the statement (14 of 28). The mean response is .04, which indicates that slightly more respondents "strongly agree" with the statement than "strongly disagree."

Another question collected data on the group's opinion in relation to the respondent's opinion. Analysis from responses to this question shows that a slim majority of group members thought the group they belonged to held more extreme views than the respondent themselves (15 of 28). The mean of all responses is .11, supporting this finding.

Respondents were asked to express their agreement/disagreement with the following statement: "I have made friends in or through this group (even if I have not met them offline)." A majority of group members, 17 of 28 respondents, disagreed with the statement, leading to a mean response of -.36. This indicates that only a minority of respondents (11 of 28) formed friendships in political Facebook groups, thereby developing social capital bonds with other group members.

Finally, respondents were asked to what extent they agree that the group encouraged members to confront friends and family with opposing political views. A small majority of respondents (16 of 28) disagreed that the group encouraged them to confront friends and family with opposing views, leading to a mean response of -.21. This indicates that a large minority of respondents (12 of 28) did receive support and encouragement from group members to confront friends and family over political issues, potentially severing social capital ties.

5.7.1 Interactions between Variables

Initial analysis of the variables representing different aspects of the radicalization hypothesis suggests the radicalization hypothesis may not be the mechanism through which opinion change occurs among members of political Facebook groups. A logistic regression was used to examine the relationships between the five independent

variables and the dependent variable, opinion change²⁰. None of the variables showed statistically significant relationships with opinion change, and the model was deemed a poor overall fit of the data. As a result, the logistic regression is not presented here.

Although logistic regression analysis of the variables discredits the radicalization hypothesis developed in the theoretical framework, further analysis of the data using contingency tables showed that statistically significant relationships do exist between three of the independent variables and opinion change. This analysis is presented below.

First, analysis shows there is a relationship between the amount of cross-cutting interactions²¹ and opinion change. Due to the small sample size, analysis of the contingency table, presented below in Table 5.14, relies upon the maximum likelihood ratio. Analysis using the maximum likelihood ratio shows that there is a relationship between the amount of cross-cutting interactions and opinion change ($G^2 = 23.098$, $p = .006$). Cramer's V indicates that the relationship is moderate ($\phi_c = .477$, $p = .024$). Goodman's gamma is insignificant, meaning conclusions cannot be drawn about the directionality of the relationship.

²⁰ The measure of group members' opinion change used in this study, "group_op_strength," was recoded from a four-point Likert scale to a dichotomous variable indicating whether or not respondents experienced opinion change, based on whether the respondent agreed or disagreed with the statement. A dichotomous dependent variable allowed for analysis using a binary logistic regression.

²¹ Measured by "group_friends_maj_disagree." See Appendix A: Full Survey and Codebook.

Table 5.14 Contingency Table for Having Many Friends Who Disagree with the Group
by Opinion Change

		Level of agreement with the statement: I believe my political opinions have strengthened as a result of being in this group				
		Strongly Disagree	Disagree	Agree	Strongly Agree	Total
Level of agreement with the statement: Many of my Facebook friends outside of this group would disagree with the discussions and posts in this group	Strongly Disagree	2	2	0	0	4
	<i>Percentage</i>	50.0%	50.0%	0.0%	0.0%	100.0%
	Disagree	1	1	5	3	10
	<i>Percentage</i>	10.0%	10.0%	50.0%	30.0%	100.0%
	Agree	1	0	6	2	9
	<i>Percentage</i>	11.1%	0.0%	66.7%	22.2%	100.0%
	Strongly Agree	0	3	0	2	5
	<i>Percentage</i>	0.0%	60.0%	0.0%	40.0%	100.0%
	Total	4	6	11	7	28

Second, the maximum likelihood ratio for the data contained in the contingency table below, Table 5.15, indicates there is a relationship between finding the group to be supportive of confrontation²² and opinion change ($G^2 = 21.059$, $p = .012$). Cramer's V indicates the relationship is moderate ($\phi_c = .486$, $p = .019$). The high p-value for Goodman's gamma means conclusions about the directionality of the relationship cannot be made.

²² Measured by "group_supp_confront." See Appendix A: Full Survey and Codebook.

Table 5.15 Contingency Table for Group Support for Confrontation by Opinion Change

		Level of agreement with the statement: I believe my political opinions have strengthened as a result of being in this group				
		Strongly Disagree	Disagree	Agree	Strongly Agree	Total
Level of agreement with the statement: This group has given me the support and/or courage to confront friends and family members over differences in political opinion	Strongly Disagree	2	1	0	1	4
	<i>Percentage</i>	50.0%	25.0%	0.0%	25.0%	100.0%
	Disagree	0	2	9	1	12
	<i>Percentage</i>	0.0%	16.7%	75.0%	8.3%	
	Agree	2	3	2	3	10
	<i>Percentage</i>	20.0%	30.0%	20.0%	30.0%	100.0%
	Strongly Agree	0	0	0	2	2
	<i>Percentage</i>	0.0%	0.0%	0.0%	100.0%	
Total	4	6	11	7	28	

Third, there is a relationship between making friends in the group²³ and opinion change. The maximum likelihood ratio, again used due to small sample size, indicates a relationship between the two variables ($G^2 = 22.19$, $p = .008$). In this case, gamma is statistically significant and indicates a moderate positive relationship between making friends in the group and opinion change ($\gamma = .591$, $p = .002$). Table 5.16 shows the contingency table used in this analysis.

²³ Measured by “group_made_friends.” See Appendix A: Full Survey and Codebook.

Table 5.16 Contingency Table for Making Friends by Opinion Change

		Level of agreement with the statement: I believe my political opinions have strengthened as a result of being in this group				
		Strongly Disagree	Disagree	Agree	Strongly Agree	Total
Level of agreement with the statement: I have made friends in or through this group (even if I have not met them offline)	Strongly Disagree	4	2	2	1	9
	<i>Percentage</i>	44.4%	22.2%	22.2%	11.1%	100.0%
	Disagree	0	1	6	1	8
	<i>Percentage</i>	0.0%	12.5%	75.0%	12.5%	100.0%
	Agree	0	3	2	1	6
	<i>Percentage</i>	0.0%	50.0%	33.3%	16.7%	100.0%
	Strongly Agree	0	0	1	4	5
	<i>Percentage</i>	0.0%	0.0%	20.0%	80.0%	100.0%
Total	4	6	11	7	28	

6 Discussion

In this chapter, the findings from the data and analyses presented in the previous chapter are discussed and contextualized. The first section discusses findings from data pertaining to political deliberation online. The second section will discuss political group membership on Facebook, followed by the third section discussing the reasons respondents gave for joining groups. The political behavior of group members is discussed in section four, followed by the fifth section, which discusses opinion change and group membership. The sixth section discusses the radicalization hypothesis as a mechanism of opinion change in groups.

6.1 Online Political Deliberation

The theoretical framework for this study argues that because the internet reduces the resource-costs to political participation, there should be no relationship between variables measuring a respondent's demographic characteristics and whether or not a respondent has engaged in political deliberation online. Specifically, the survey collected data on race, age, gender, and education to test this hypothesis.

Analysis of the data collected shows that there are no statistically significant relationships between race, age, gender, or education and past deliberation online. Although this finding does not disprove the hypothesis, it does not confirm the hypothesis either. Given the lack of a relationship between race, age, gender, or education and the participation score, despite ample research confirming relationships between these variables and levels of political participation²⁴, it seems that the most likely explanation for the absence of these relationships is that the sample was simply too small to adequately show relationships.

6.2 Political Facebook Group Membership

Based on the data collected, two background characteristics have significant relationships with political Facebook group membership. The first is gender, which analysis shows has a modest relationship with group membership. Unfortunately, the

²⁴ The following works, discussed in detail in the Review of Literature, show the relationships between race, age, gender, and education and political participation: Lipset (1960); Milbrath & Goel (1977); Nie, Verba, & Jae-on (1974); Wolfinger & Rosenstone (1980).

analysis does not show how gender and group membership relate to one another, so few conclusions can be drawn about the nature of the relationship. Liberal political ideologies share a moderately strong, positive relationship with group membership, suggesting that the more liberal a respondent was, the more likely he or she was to also be a group member. This does not show causality—a liberal political ideology does not cause people to join groups—but it does show that there is a relationship between the two variables. It is also possible that the relationship is due to a response bias or the bias of the sample towards liberal political ideologies. All other demographic characteristics lacked statistically significant relationships with group membership. As with online political deliberation, it is possible that the lack of observed relationships is due to the small sample size.

6.3 Why Respondents Joined Political Groups

As noted in the analysis, the most frequently cited reason for joining political Facebook groups was to keep informed, supporting the expectation that group members would look to the group for information on current events. Since the majority of political groups are partisan, it can be assumed that the information being shared in the group is somewhat biased towards the group's viewpoint. Most respondents in this survey joined political groups with views matching their own, suggesting that the information they are exposed to is largely confirmatory. Given the high proportion of respondents who reported cross-cutting interactions, joining a political group may be a way to limit exposure to diverse and conflicting information, thereby raising the proportion of confirmatory information respondents are exposed to. This is likely to limit the benefits accrued from cross-cutting interactions. In a few rare cases, respondents noted joining bipartisan groups in order to obtain more well-rounded information on relevant political issues. Future research can probe the type of information people expect to obtain from political groups, the type of information groups expose members to, and how obtaining updates on current events through partisan groups impacts actual knowledge of current events and political issues.

The analysis also revealed that approximately 20% of respondents joined groups explicitly to increase their exposure to like-minded people and ideas. In other words, this group self-selected into an online echo chamber with the goal of limiting their exposure to cross-cutting interactions and ideas. Interestingly, there was no correlation between

joining groups to be exposed to like-minded ideas and joining groups to stay informed. This suggests that people looking to stay informed about current events are not necessarily looking to expose themselves to solely confirmatory information, even if that is the effect. Additional research is needed to determine what types of groups attract Facebook users looking to keep informed as compared with users who are looking for like-minded people and ideas. Future research can also explore why people seek like-minded ideas and groups.

Nearly 20% of respondents joined online political groups in order to plan and organize offline political action. This is an important finding, as it may help mollify concerns over armchair activism²⁵. Finding that two-fifths of respondents joined political Facebook groups to organize offline political action supports researchers who argue that social media and the internet, at the least, do not negatively influence offline political action (Lim, 2012; Xenos et al., 2014). This finding reflects the increasingly important role of the internet and social media in political life and action in the United States. Future research can explore the connection between online and offline political action in other post-industrial countries and compare this with political action in developing countries.

6.4 The Political Behavior of Group Members

Section 5.4 presents data on the political behavior of group members and non-group members. The analysis shows that there is a significant relationship between political Facebook group membership and political participation, indicating that group members are more politically active than non-group members. This is not a surprising finding, if political group membership is conceptualized as a political activity. Across all the academic literature, the strongest predictor of participation in a specific political activity is past participation in other political activities. Therefore, it is unsurprising that respondents with the highest levels of past political participation, measured by the Participation Score, are also the most likely to be members of a political Facebook group. Evidence indicating a relationship between future political participation and group membership provides the first piece of evidence from this study supporting the

²⁵ See the following works, discussed in the Review of Literature, for further information on armchair activism: Baumgartner & Morris (2010); Drumbi (2012); Xenos et al. (2014).

hypothesis that echo chamber membership alters the political behavior of members. This evidence is built upon and discussed later in this chapter.

Specifically, group members are more likely to engage in four political activities: discussing politics online, voting in state and local elections, and volunteering for a political campaign or cause. It is unsurprising that group membership and online political deliberation vary together, since the most prevalent activity in political Facebook groups is discussing politics. Voting in state and local elections often relates to higher levels of interest in politics and higher levels of overall political participation, so it is expected that there would be a relationship between voting in state and local elections and group membership, for the same reason there is a relationship between online political deliberation and group membership. Based on the assumption that members of a political group are more interested in politics, it is also unsurprising that group members are more likely to volunteer to support a political campaign or cause. Volunteering is distinct from discussing politics online and voting in state and local elections, however, because it is a more costly activity to engage in (Brady et al., 1995). Finding that group members are more likely to volunteer could indicate that group members either have more resources overall to devote to political activities, or they are more willing to spend their resources on political participation activities. If we assume that group members are generally more interested in politics than non-group members, then it makes sense that they would also be more willing to spend resources on political activities. Unfortunately, it is not possible to prove that group members have higher levels of interest in politics. As a result, these conclusions must rest on the assumption that since group members exhibit higher levels of political participation than non-group members and higher levels of political participation typically relate to higher levels of political interest, group members have higher levels of political interest than non-group members.

6.5 Group Membership and Opinion Change

The theoretical framework for this study conceptualizes political Facebook groups as online echo chambers and hypothesizes that group members' opinions change as a result of being in a political group/echo chamber. The process of politicization, polarization, and radicalization is put forth as explaining the process of opinion change in groups. The first step in testing this hypothesis is to show that there is opinion change occurring in political Facebook groups. The analysis presented in section 5.5 indicates

that opinion change does occur in groups, and opinion change occurs more frequently in group members than non-group members. Based on the specific wording of the question asked of group members²⁶—which asked if respondents thought their opinions changed “as a result of” their group membership—and the percentage of group members agreeing with the statement (18 of 28, 64.3% of respondents), it can be concluded that group membership caused changes in members’ political opinions in a majority of cases.

Although it is not possible to draw many further conclusions about the direction or magnitude of the opinion change experienced by group members, it is possible to theoretically connect opinion change with the observed differences in political behavior between group members and non-group members. The two questions that collected data on opinion change for group members and non-group members specifically used the word “strengthened” when asking respondents about opinion change²⁷. Robison, Leeper, and Druckman (2018) note that the stronger an opinion is, the more likely it is that the opinion will affect behavior. The strengthening of group members’ opinions observed in the data could explain the differences in political behavior between group members and non-group members. As group members’ opinions strengthen through exposure to confirmatory information in the political group/echo chamber, those opinions have an increasing effect on political behavior, leading to the higher rates of political participation among group members. This is a potential alternative to the radicalization hypothesis, explaining how political groups/echo chambers influence political behavior through changes to opinion strengthen as opposed to the content of the opinion. Unfortunately, it is not possible to test this hypothesis with the data collected, so it cannot be proven that group membership caused the opinion strengthening observed in the data, nor is it possible to prove that opinion strengthening caused the differences in political behavior between group and non-group members.

²⁶ See Appendix A: Full Survey and Codebook, group_op_strength

²⁷ See Appendix A: Full Survey and Codebook, pol_op_strength and group_op_strength. For a more thorough discussion of the measures of opinion change used in this survey, see Appendix D: Scale Construction and Reliability/Validity of Measures and Questions.

6.6 Opinion Change and Political Behavior

Section 5.6 presents evidence of a relationship between opinion change and future political behavior. Analysis of the data indicates that opinion change may encourage higher levels of future political participation. This finding should be interpreted with caution, however, as the measure of opinion change and the measure of future political activity both rely upon respondent perceptions. It is likely that observing opinion change and political behavior using a longitudinal study would show more nuance and potentially completely different relationships. Nonetheless, this finding suggests that political groups may make future political participation more likely by altering the opinions of members.

The strongest predictor of future behavior is almost always past behavior. Despite the theoretical links between past and future behavior, the data from this study shows no relationship between past and future political behavior. In the context of this survey, this is not a surprising finding, since the survey asks respondents about participation in future political activities caused by political interactions on Facebook, as opposed to simply asking respondents what political activities they thought they would participate in in the future. Although the absence of a statistically significant relationship does not mean there is no relationship, this finding suggests that the observed relationships from group membership through opinion change to future participation are not due simply to group members being more politically active. Furthermore, the absence of a relationship between past political behavior and opinion change could also indicate that the relationship observed between future participation and opinion change is not due to respondents who experienced opinion change simply having higher levels of participation to begin with.

6.7 Mechanisms of Opinion Change in Groups

The theoretical framework lays out the radicalization hypothesis as the method through which groups cause opinion change in members. The findings from two of the independent variables—presence of cross-cutting interactions and group extremity in relation to the respondent—provide insights into opinion change in groups. First, a large majority of respondents agreed that they are exposed to cross-cutting interactions online. This suggests that even if political Facebook groups are echo chambers with the potential to affect members' opinions and political behavior, the majority of group

members would still be exposed to cross-cutting interactions from their friend network, potentially mediating the effects of the echo chamber. Second, a small majority of respondents (15 of 28) felt that the group in general held opinions that were more extreme than the respondent's opinions. Sunstein (2008) argues that opinions in a group tend to converge towards the most extreme individual opinion held in the group. With Sunstein's finding in mind, the data from this study suggests that a majority of respondents are in settings where they could experience opinion change towards more extreme opinions. Unfortunately, due to the lack of significance during analysis, it is not possible to confirm a relationship between group extremity and opinion change, a finding which would support the radicalization thesis.

Due to the small sample size, only three variables showed significant relationships with opinion change in group members, and none of the regressions showed significant findings. The amount of cross-cutting interactions respondents were exposed to has a moderate relationship with opinion change, but the insignificance of gamma limits further analysis of the ordinal association of the two variables. Without insight into how the two variables relate to one another, few conclusions can be drawn from this finding. Group support for confrontation also has a moderate relationship with opinion change. Again, the insignificance of gamma limits the conclusions that can be drawn from this finding.

Unlike the two variables discussed above, conclusions can be drawn from the relationship between making friends in the group and opinion change. As shown in the analysis, respondents who made friends in a political group were more likely to say political interactions in the group changed their opinion than group members who did not make friends. This finding offers some support for the radicalization hypothesis. This relationship shows that there is a positive relationship between developing social capital within political groups and opinion change, which supports one part of the radicalization hypothesis.

All in all, the data collected provides little support for the radicalization hypothesis. The data shows a causal relationship between group membership and opinion change in many cases. Only one of five independent variables had a relationship with opinion change that supports the radicalization hypothesis, and the lack of a causal relationship between either group membership or opinion change and political behavior limits the

support found for the radicalization hypothesis. Nonetheless, none of the findings disprove the radicalization hypothesis, so future research can test the hypothesis more thoroughly.

7 Conclusion

The final chapter of this study includes four parts. The first part of this chapter will make concluding remarks on political group membership and political behavior. The second section will discuss the implications of this study for policy-makers and educators, followed by a section outlining the limitations of this study. The final section will discuss future research possibilities.

7.1 Concluding Remarks on the Effects of Political Group Membership on Political Behavior

Based on the analysis of the data collected through this study, it is unclear who participates most in online political deliberation and who joins political Facebook groups. There is evidence that Facebook users holding liberal ideologies are more likely to join groups, but this finding must be interpreted cautiously given the overall liberal bias of the sample. The absence of statistically significant findings neither confirms nor refutes the hypothesis that the internet and social media lower barriers to political participation and equalize participation levels among different social groups.

This study has presented evidence showing that group membership has a moderately positive effect on future political behavior. The data also shows that being in a political Facebook group makes one more likely to experience opinion change as a result of political interactions on Facebook. Based on this finding, it can be inferred that some aspect of political interactions unique to political Facebook groups promotes opinion change. Coupled with the higher rates of opinion change among group members, this finding also indicates that political groups, by promoting processes that lead to opinion change, have an effect on political behavior. Unfortunately, there is scant evidence that this opinion change is caused by the radicalization process outlined in the theoretical framework, so it is likely that an alternative process accounts for the relationships observed.

7.2 Implications of this Study

The findings of this study have several implications. First, the demonstrated link between polarization and future political behavior could indicate that as a person becomes more polarized, he or she may also become more politically active. This

means that echo chambers create not just more partisan people, but more partisan and more politically active people. Depending upon how widespread echo chambers are, having large numbers of increasingly active and increasingly partisan political actors could have serious repercussions on political life. Additionally, as polarization in the US increases, this could mean that there will be higher levels of political activity from the general public. Although this could be good for the health of democracy, links between echo chambers and lower civility and trust in the opposition may herald a shift towards more combative political participation (Barnidge, 2017; Klofstad et al., 2013).

Additionally, as shown in the analysis, the number one reason people join political groups is to keep informed, yet there is ample evidence that information from Facebook and social media is often misleading, hyper-partisan, or outright fake (Tucker et al., n.d.). Policy-makers must be aware of the spread of fake or misleading information on social media, and discussions ought to be had about policies and regulations to curtail and prevent the spread of misinformation. Potential policy changes include posting warnings on misleading information and increasing public awareness of misleading information through digital literacy campaigns or other public events. While it would be ideal for policy changes to be instituted and overseen by elected officials, given the hyper-partisan nature of American politics today, it may be more realistic to expect these changes to come from social media platforms and civil society. Facebook is working to create a ranking of news sources, in the absence of actions from elected policy-makers. Other social media platforms could and should follow suit, with the help of civil society.

Undoubtedly, educators and civic education curriculum will play a crucial role in mediating the potential negative effects of social media on democracy. One important way in which educators can combat potential negative effects is by providing students the tools and knowledge to identify misleading or hyper-partisan information, with the goal of decreasing the spread of fake news. Given the role of hyper-partisan information in polarizing consumers of this information, teaching students to be aware and cautious of hyper-partisan information could impede the spread of polarization into future generations. Teachers can supplement tools to identify hyper-partisan information by educating students on implicit biases and how that affects the information people consume, as well as by providing resources for finding unbiased and factually correct

information. Providing students with the skills and resources to find high quality information would not only create more knowledgeable citizens, but could also decrease the need for echo chambers. When students are better able to discriminate between high and low quality information, they may be less tempted to use echo chambers as a tool to sort through the deluge of information available online.

Beyond preparing students to consume information in new media environments, it is also important for educators to ensure that all students receive the tools and skills needed for active political participation. The internet and social media have the potential to decrease differences in political participation across different segments of American society, but it is crucial that students are equally prepared to participate. Digital learning and literacy must become an integral part of compulsory education in order to provide equal opportunities for participation to future generations.

7.3 Limitations of the Study

There are three main limitations to this study. First, the survey methodology and extremely low response rate made it difficult to estimate the demographic characteristics of political group membership. It is difficult to calculate the exact response rate, since Facebook's algorithms may have influenced who was exposed to the survey²⁸. As a result, it is unclear if people didn't participate in the survey because they saw the invitation to participate and were uninterested in taking part or if they did not even see the invitation in the first place. More advanced research methodologies need to be developed in order to facilitate behavioral research on Facebook and other social media platforms. Second, resource and time limitations prevented a longitudinal study of radicalization and opinion change over time, so respondents' perceptions were relied on instead. This is a less reliable measure of opinion change and radicalization and is therefore a limitation of the study. Finally, the study focuses narrowly on American Facebook groups, limiting the generalizability of the findings. Further research can explore echo chambers and opinion change on other social media platforms and using data from other countries.

²⁸ Facebook uses complex algorithms to rank and display information based on the information's relevance to specific users, based on the user's interests and past activity. See Oremus (2016) for a more detailed discussion of Facebook's algorithms.

7.4 Future Research

The findings of this study have highlighted possibilities for future research, which can be broken into three broad strands. The first strand deals with who joins political Facebook groups. One question future research can address is how people decide to join political Facebook groups. Do people join groups that they already have friends in, or do people select groups to join based on some aspect of their identity? Researchers can also examine what social groups are most active in Facebook groups and if there are negative consequences for social groups that are less active in political Facebook groups.

The second strand of possible future research relates to behavior in political Facebook groups. This study shows that political interactions in political Facebook groups cause opinion change in many instances, but it is unclear why some people experience opinion change as a result of group interactions while others do not. Future research can explore what makes people “susceptible” to opinion change in groups and how opinion change brought on by interactions in political groups affects political behaviors. In addition, new research can explore how group characteristics such as the group’s mission and vision, culture, and administration structure facilitate or impede opinion change in members.

Finally, additional research is needed to explore political behavior and opinion change outside of political Facebook groups. The data shows that opinion change caused by political interactions on Facebook does occur to non-group members, but this sample was not the focus of the study, so little data was collected on opinion change in non-group members. Research can focus on the algorithms used by social media sites to prioritize the information seen by users and how these algorithms may create de facto echo chambers that alter users’ opinions and behavior, even if users have high amounts of cross-cutting interactions.

The three strands of research discussed above provide ample possibilities for future research into online political behavior. The internet and social media are becoming increasingly vital parts of Americans’ political lives, so it is crucial that researchers, policy-makers, and citizens are aware of the impacts of these communication technologies on political behavior. This study shows that opinion change does occur

more frequently inside political Facebook groups than outside of them, but a number of important questions must be addressed so this process can be better understood.

References

- Acemoglu, D., Robinson, J. A., Johnson, S., Robinson, J. A., & Yared, P. (2014). From Education to Democracy? *NBER Working Paper Series*, 11204(March).
- AERA, APA, & NCME. (2014). *Standards for Educational and Psychological Testing*. Washington, D.C.: American Educational Research Association.
- Ajrouch, K. J., Antonucci, T. C., & Janevic, M. R. (2001). Social networks among blacks and whites: the interaction between race and age. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, 56(2), S112–S118. <https://doi.org/10.1093/geronb/56.2.S112>
- Aldrich, J. H. (1976). Some problems in testing two rational models of participation. *American Journal of Political Science*, 20(4), 713–733. Retrieved from <http://www.jstor.org/stable/10.2307/2110568>
- Aldrich, J. H. (1993). Rational Choice and Turnout. *American Journal of Political Science*, 37(1), 246–278. <https://doi.org/10.2307/2111531>
- Antoci, A., Sabatini, F., & Sodini, M. (2014). Bowling alone but tweeting together: The evolution of human interaction in the social networking era. *Quality and Quantity*, 48(4), 1911–1927. <https://doi.org/10.1007/s11135-013-9863-z>
- Bäck, H., Teorell, J., & Westholm, A. (2011). Explaining Modes of Participation: A Dynamic Test of Alternative Rational Choice Models. *Scandinavian Political Studies*, 34(1), 74–97. <https://doi.org/10.1111/j.1467-9477.2011.00262.x>
- Baker, R., Brick, J. M., Bates, N. A., Battaglia, M., Couper, M. P., Dever, J. A., ... Tourangeau, R. (2013). *Report of the AAPOR Task Force on Non-Probability Sampling*.
- Bakshy, E., Messing, S., & Adamic, L. (2015). Exposure to ideologically diverse news and opinion on Facebook. *Science*, 348(6239), 1130–1133.
- Barberá, P., Jost, J. T., Nagler, J., Tucker, J. A., & Bonneau, R. (2015). Tweeting From Left to Right: Is Online Political Communication More Than an Echo Chamber? <https://doi.org/10.1177/0956797615594620>
- Barnidge, M. (2017). Exposure to Political Disagreement in Social Media Versus Face-to-Face and Anonymous Online Settings. *Political Communication*, 34(2), 302–321. <https://doi.org/10.1080/10584609.2016.1235639>
- Barro, R. J. (1999). Determinants of Democracy. *Journal of Political Economy*, 107(S6), S158–S183. <https://doi.org/10.1086/250107>

- Baumgartner, J. C., & Morris, J. S. (2010). MyFaceTube Politics Social Networking Web Sites and Political Engagement of Young Adults, 24–44.
- Berinsky, A. J., & Lenz, G. S. (2011). Education and Political Participation: Exploring the Causal Link. *Political Behavior*, 33(3), 357–373. <https://doi.org/10.1007/s11109-010-9134-9>
- Berkowitz, B. (2011). To occupy Wall Street, occupy the internet first. Reuters. Retrieved from <https://www.reuters.com/article/us-wallstreet-protests-media/to-occupy-wall-street-occupy-the-internet-first-idUSTRE79377W20111004>
- Borum, R. (2011). Radicalization into Violent Extremism I: A Review of Social Science Theories. *Journal of Strategic Security*, 4(4), 7–36. <https://doi.org/10.5038/1944-0472.4.4.1>
- Brady, H. E., Verba, S., & Lehman Schlozman, K. (1995). Beyond Ses: A Resource Model of Political Participation. *The American Political Science Review*, 89(2), 271–294.
- Brownill, S., & Carpenter, J. (2007). Participation and planning: Dichotomies, rationalities and strategies for power. *Town Planning Review*, 78(4), 401–428. <https://doi.org/10.3828/tpr.78.4.2>
- Bryman, A. (2012). *Social Research Methods* (4th ed.). Oxford: Oxford University Press.
- Cadwalladr, C., & Graham-Harrison, E. (2018, March 17). Revealed: 50 million Facebook profiles harvested for Cambridge Analytica in major data breach. *The Guardian*.
- Carpini, M. X. D., Cook, F. L., & Jacobs, L. R. (2004). Public Deliberations, Discursive Participation and Citizen Engagement: A Review of the Empirical Literature. *Annual Review of Political Science*, 7(1), 315–344. <https://doi.org/10.1146/annurev.polisci.7.121003.091630>
- Carr, D. (2008, November 9). How Obama Tapped Into Social Networks' Power. *The New York Times*.
- Cohen, L., Manion, L., & Morrison, K. (2007). *Research Methods in Education* (6th ed.). New York: Routledge.
- Collier, D., & Levitsky, S. (2013). Democracy with Adjectives: Conceptual Innovation in Comparative Research, 49(3), 430–451.
- Company Info. (2018). Retrieved March 19, 2018, from <https://newsroom.fb.com/company-info/>
- Conover, P. J., & Feldman, S. (1981). The Origins and Meaning of Liberal /

- Conservative Self-Identifications. *American Journal of Political Science*, 25(4), 617–645.
- Dahl, R. (1963). *Modern political analysis*. Englewood Cliffs, N.J., Prentice-Hall [1963]. Retrieved from <http://proxy-remote.galib.uga.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cat05769a&AN=uga.995460843902959&site=eds-live>
- Dahl, R. (2005). What Political Institutions Does Large-Scale Democracy Require? *Political Science Quarterly*, 120(2), 187–197. <https://doi.org/10.1002/j.1538-165X.2005.tb00543.x>
- Dahlberg, L. (2001). The Internet and Democratic Discourse: Exploring The Prospects of Online Deliberative Forums Extending the Public Sphere. *Information, Communication & Society*, 4(4), 615–633. <https://doi.org/10.1080/13691180110097030>
- Dalrymple, K. E., & Scheufele, D. A. (2007). Finally Informing the Electorate ? How the Internet Got People Thinking about Presidential Politics in 2004, 12(3), 96–111. <https://doi.org/10.1177/1081180X07302881>
- Davies, J. C. (1965). The Family's Role in Political Socialization. *The Annals of the American Academy of Political and Social Science*, 361, 10–19.
- Della Porta, D. (2011). Guest Editorial: Processes of Radicalization and De-Radicalization. *International Journal of Conflict and Violence*, 6(1), 4–10.
- Delli Carpini, M. X. (2000). In search of the informed citizen: What Americans know about politics and why it matters. *The Communication Review*, 4(1), 129–164. <https://doi.org/10.1080/10714420009359466>
- Diamond, L. (2006). Promoting Democracy in Post-Conflict and Failed States: Lessons and Challenges. *Taiwan Journal of Democracy*, 2(2), 93–116.
- Dimitrova, D. V., Shehata, A., Strömbäck, J., & Nord, L. W. (2014). The Effects of Digital Media on Political Knowledge and Participation in Election Campaigns: Evidence From Panel Data. *Communication Research*, 41(1), 95–118. <https://doi.org/10.1177/0093650211426004>
- Drumbl, M. A. (2012). Child soldiers and clicktivism: Justice, myths, and prevention. *Journal of Human Rights Practice*, 4(3), 481–485. <https://doi.org/10.1093/jhuman/hus023>
- Ekman, J., & Amnå, E. (2012). Political participation and civic engagement: Towards a new typology. *Human Affairs*, 22(3), 283–300. <https://doi.org/10.2478/s13374-012-0024-1>

- Eveland, W. P., Morey, A. C., & Hutchens, M. J. (2011). Beyond Deliberation : New Directions for the Study of Informal Political Conversation from a Communication, *61*, 1082–1103. <https://doi.org/10.1111/j.1460-2466.2011.01598.x>
- Facebook Help Center: Groups. (n.d.). Retrieved March 19, 2018, from https://www.facebook.com/help/1629740080681586/?helpref=hc_fnav
- Finkel, S. E. (1985). Reciprocal Effects of Participation and Political Efficacy: A Panel Analysis. *American Journal of Political Science*, *29*(4), 891–913.
- Frenkel, S., & Benner, K. (2018). To Stir Discord in 2016, Russians Turned Most Often to Facebook. *International New York Times*. International Herald Tribune. Retrieved from <http://proxy-remote.galib.uga.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=edsgin&AN=edsgcl.528117472&site=eds-live>
- Galston, W. A. (2004). Civic education and political participation. *Political Science and Politics*, *37*(2), 263–266. <https://doi.org/10.1017.S1049096504004202>
- Gandhi, J., & Lust-Okar, E. (2009). Elections Under Authoritarianism. *Annual Review of Political Science*, *12*(1), 403–422. <https://doi.org/10.1146/annurev.polisci.11.060106.095434>
- Garrett, R. K., Gvirsman, S. D., Johnson, B. K., Tsfati, Y., Neo, R., & Dal, A. (2014). Implications of Pro- and Counterattitudinal Information Exposure for Affective Polarization. *Human Communication Research*, *40*, 309–332. <https://doi.org/10.1111/hcre.12028>
- Germen Janmaat, J. (2008). The Civic Attitudes of Ethnic Minority Youth and the Impact of Citizenship Education. *Journal of Ethnic and Migration Studies*, *34*(1), 27–54. <https://doi.org/10.1080/13691830701708676>
- Giles, M. W., & Dantico, M. K. (1982). Political Participation and Neighborhood Social Context Revisited. *American Journal of Political Science*, *26*(1), 144–150. <https://doi.org/10.2307/2110844>
- Goodin, R., & Dryzek, J. (1980). Rational Participation: The Politics of Relative Power. *British Journal of Political Science*, *10*(3), 273–292. <https://doi.org/10.1017/S0007123400002209>
- Granovetter, M. (1983). The Strength of Weak Ties: A Network Theory Revisited. *Sociological Theory*, *1*, 201–233.
- Grieco, E. (2017). *More Americans are turning to multiple social media sites for news*. Retrieved from <http://www.pewresearch.org/fact-tank/2017/11/02/more-americans-are-turning-to-multiple-social-media-sites-for-news/>

- Groshek, J., & Dimitrova, D. (2011). A Cross-Section of Voter Learning, Campaign Interest and Intention to Vote in the 2008 American Election: Did Web 2.0 Matter? *Estudos Em Comunicação*, 9, 355–375. Retrieved from <http://www.ec.ubi.pt/ec/09/pdf/EC09-2011Mai-19.pdf>
- Guess, A., Nyhan, B., Lyons, B., & Reifler, J. (n.d.). *Avoiding the Echo Chamber About Echo Chambers: Why selective exposure to like-minded political news is less prevalent than you think*.
- Hall, R. L., Rodeghier, M., & Useem, B. (1986). Effects of Education on Attitude to Protest. *American Sociological Review*, 51(4), 564–573.
- Hechter, M. (1994). The Role of Values in Rational Choice Theory. *Rationality and Society*, 6(3), 318–333. <https://doi.org/10.1177/1043463194006003003>
- Hoffman, L. H., Jones, P., & Young, D. (2013). Does my comment count? Perceptions of political participation in an online environment. *Computers in Human Behavior*, 29(6), 2248–2256. <https://doi.org/10.1016/j.chb.2013.05.010>
- Iyengar, S., Sood, G., & Lelkes, Y. (2012). Affect, not ideology: A social identity perspective on polarization. *Public Opinion Quarterly*, 76(3), 405–431. <https://doi.org/10.1093/poq/nfs038>
- Kenski, K., & Stroud, N. J. (2006). Connections Between Internet Use and Political Efficacy, Knowledge, and Participation. *Journal of Broadcasting & Electronic Media*, 50(2), 173–192.
- Klofstad, C. A. (2009). Civic Talk and Civic Participation: The Moderating Effect of Individual Predispositions. *American Politics Research*, 37(5), 856–878.
- Klofstad, C. A., Sokhey, A. E., & McClurg, S. D. (2013). Disagreeing about Disagreement: How Conflict in Social Networks Affects Political Behavior. *American Journal of Political Science*, 57(1), 120–134.
- Krasodomski-Jones, A. (2017). *Talking To Ourselves? Political Debate Online and the Echo Chamber Effect*. London, UK. Retrieved from www.demos.co.uk
- Krosnick, J. A., Boninger, D. S., Chuang, Y. C., Berent, M. K., & et al. (1993). Attitude strength: One construct or many related constructs? *Journal of Personality and Social Psychology*, 65(6), 1132–1151. <https://doi.org/10.1037/0022-3514.65.6.1132>
- Kuklinski, J. H., Quirk, P. J., Jerit, J., & Rich, R. F. (2001). The Political Environment and Citizen Competence. *American Journal of Political Science*, 45(2), 410–424. <https://doi.org/10.2307/2669349>
- Lauglo, J. (2016). Does political socialization at home boost adolescents' expectation of higher education? Analysis of 8 th grade students in 35 countries students in 35

- countries. *Comparative Education Review*, 60(August).
- Lauglo, J., & Oia, T. (2008). Education and Civic Engagement among Norwegian Youth. *Policy Futures in Education*, 6(2). <https://doi.org/10.1016/B978-0-08-044894-7.01228-8>
- Lee, N. J., Shah, D. V., & McLeod, J. M. (2013). Processes of Political Socialization: A Communication Mediation Approach to Youth Civic Engagement. *Communication Research*, 40(5), 669–697. <https://doi.org/10.1177/0093650212436712>
- Lelkes, Y. (2016). The polls-review: Mass polarization: Manifestations and measurements. *Public Opinion Quarterly*, 80(Specialissue1), 392–410. <https://doi.org/10.1093/poq/nfw005>
- Levendusky, M. S., Druckman, J. N., & McLain, A. (2016). How group discussions create strong attitudes and strong partisans. *Research & Politics*, 3(2), 205316801664513. <https://doi.org/10.1177/2053168016645137>
- Lim, M. (2012). Clicks, Cabs, and Coffee Houses: Social Media and Oppositional Movements in Egypt, 2004-2011. *Journal of Communication*, 62(2), 231–248. <https://doi.org/10.1111/j.1460-2466.2012.01628.x>
- Lin, N. (1999). Building a Network Theory of Social Capital. *Connections*, 22(1), 28–51. <https://doi.org/10.1108/14691930410550381>
- Lindberg, S. I. (2006). The Surprising Significance of African Elections. *Journal of Democracy*, 17(1), 139–151. <https://doi.org/10.1353/jod.2006.0011>
- Lipset, S. M. (1959). Some Social Requisites of Democracy : Economic Development and Political Legitimacy. *The American Political Science Review*, 53(1), 69–105.
- Lipset, S. M. (1960). *Political Man: The Social Bases of Politics*. Baltimore: The John Hopkins University Press.
- Loader, B. D., Vromen, A., & Xenos, M. a. (2014). The networked young citizen: social media, political participation and civic engagement. *Information, Communication & Society*, 17(2), 143–150. <https://doi.org/10.1080/1369118X.2013.871571>
- McCauley, C., & Moskalenko, S. (2008). Mechanisms of Political Radicalization: Pathways Toward Terrorism. *Terrorism and Political Violence*, 20(3), 415–433. <https://doi.org/10.1080/09546550802073367>
- Mesquita, B. B. de, & Smith, A. (2011). *The Dictator's Handbook: Why Bad Behavior is Almost Always Good Politics*. New York: Public Affairs. <https://doi.org/10.1017/CBO9781107415324.004>
- Milbrath, L. W., & Goel, M. L. (1977). *Political Participation: How and Why Do People*

Get Involved in Politics? (Second). Chicago: Rand McNally College Publishing Company.

- Mitra, D., Bergmark, U., Kostenius, C., Brezicha, K., Maithreyi, R., & Serriere, S. (2016). Ironies of democracy : Purposes of education and the construction of citizens in Sweden, India and the United States. *Citizenship Teaching and Learning*, 11(2), 191–210. <https://doi.org/10.1386/ctl.11.2.191>
- Morris, D. S., & Morris, J. S. (2013). Digital Inequality and Participation in the Political Process: Real or Imagined? *Social Science Computer Review*, 31(5), 589–600. <https://doi.org/10.1177/0894439313489259>
- Moscovici, S., & Zavalloni, M. (1969). The Group as a Polarizer of Attitudes. *Journal of Personality and Social Psychology*, 12(2), 125–135. <https://doi.org/10.1037/h0027568>
- Muller, E. (1977). Mass Politics: Focus on Participation. *American Behavioral Scientist*, 21(1), 63–86.
- Muller, E. (1982). An Explanatory Model for Differing Types of Participation. *European Journal of Political Research*, 10(1), 1–16. <https://doi.org/10.1111/j.1475-6765.1982.tb00001.x>
- Munger, K. (2017). Don't @ Me: Experimentally Reducing Partisan Incivility on Twitter, 1–31. Retrieved from <http://cess.nyu.edu/wp-content/uploads/2017/02/Dont-@-Me.pdf>
- Mutz, D. C. (2002). Cross-Cutting Social Networks: Testing Democratic Theory in Practice. *The American Political Science Review*, 96(1), 111–126.
- Mutz, D. C. (2006). *Hearing the other side : deliberative versus participatory democracy*. Cambridge ; New York : Cambridge University Press, 2006. Retrieved from <http://proxy-remote.galib.uga.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cab06564a&AN=uga.9932165593902959&site=eds-live>
- Mutz, D. C., & Martin, P. S. (2001). Facilitating Communication across Lines of Political Difference : The Role of Mass Media. *American Political Science Review*, 95(1), 97–114.
- Myers, D. G. (1975). Discussion Based Attitude Polarization. *Human Relations*, 28(8).
- Newman, B. J., Johnson, J., & Lown, P. L. (2014). The “Daily Grind”: Work, Commuting, and Their Impact on Political Participation. *American Politics Research*, 42(1), 141–170. <https://doi.org/10.1177/1532673X13498265>
- Newman, N., Fletcher, R., Kalogeropoulos, A., Levy, D., & Nielsen, R. K. (2017). Digital

News Report 2017.

- Nie, N. H., Junn, J., & Stehlik-Barry, K. (1996). *Education and Democratic Citizenship in America*. Chicago: The University of Chicago Press. <https://doi.org/10.1086/231199>
- Nie, N. H., Powell, G. B., & Prewitt, K. (1969). Social Structure and Political Participation: Developmental Relationships, Part I. *The American Political Science Review*, 63(2), 361–378.
- Nie, N. H., Verba, S., & Jae-on, K. (1974). Political Participation and the Life Cycle. *Comparative Politics*, 6(3), 319–340.
<https://doi.org/papers2://publication/uuid/FD06B48D-3E47-42F2-9D1C-E3ED933D7AA6>
- Niemi, R. G., & Hepburn, M. A. (1995). The Rebirth of Political Socialization. *Perspectives on Political Science*, 24(1).
- Niemi, R. G., & Junn, J. (2005). *Civic Education: What Makes Students Learn*. Retrieved from http://books.google.co.in/books/about/Civic_Education.html?id=mQwOx8KWzk8C&pgis=1
- Norrander, B., & Grofman, B. (1988). A rational choice model of citizen participation in high and low commitment electoral activities. *Public Choice*, 57(2), 187–192.
<https://doi.org/10.1007/BF00052406>
- Opp, K.-D., Burow-Auffarth, K., & Heinrichs, U. (1981). Conditions for Conventional and Unconventional Political Participation: An Empirical Test of Economic and Sociological Hypotheses. *European Journal of Political Research*, 9, 147–168.
- Oremus, W. (2016). Who Controls Your Facebook Feed. Slate. Retrieved from http://www.slate.com/articles/technology/cover_story/2016/01/how_facebook_s_news_feed_algorithm_works.html
- Palfrey, T. R., & Poole, K. T. (1987). The Relationship between Information, Ideology, and Voting Behavior. *American Journal of Political Science*, 31(3), 511–530.
- Papacharissi, Z. (2004). Democracy online: civility, politeness, and the democratic potential of online political discussion groups. *New Media & Society*, 6(2), 259–283.
<https://doi.org/10.1177/1461444804041444>
- Persson, M. (2012). Does Type of Education Affect Political Participation? Results from a Panel Survey of Swedish Adolescents. *Scandinavian Political Studies*, 35(3), 198–221. <https://doi.org/10.1111/j.1467-9477.2012.00286.x>
- Persson, M., & Oscarsson, H. (2008). *The Effects of Education Reform on Democratic Citizenship* (Quality of Government Working Paper Series No. 14). Goteborg.

- Pew Research Center. (2017). *How “Drop-Off” Voters Differ from Consistent Voters and Nonvoters*.
- Preotiuc-Pietro, D., Hopkins, D. J., Liu, Y., & Ungar, L. (2017). Beyond binary labels: Political ideology prediction of twitter users. *ACL 2017 - 55th Annual Meeting of the Association for Computational Linguistics, Proceedings of the Conference (Long Papers)*, 1. <https://doi.org/10.18653/v1/P17-1068>
- Pruitt, D. G. (1971). Choice Shifts in Group Discussion: An Introductory Review. *Journal of Personality and Social Psychology*, 20(3), 339–360. <https://doi.org/10.1037/h0031922>
- Putnam, R. D. (2000). *Bowling alone : the collapse and revival of American community*. New York : Simon & Schuster, ©2000. Retrieved from <http://proxy-remote.galib.uga.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=cat06564a&AN=uga.9925415143902959&site=eds-live>
- Quattrociocchi, W., Scala, A., & Sunstein, C. R. (2016). *Echo Chambers on Facebook* (Harvard John M. Olin Discussion Paper Series No. 877).
- Ravitch, D. (2001). Education and Democracy. In D. Ravitch & J. P. Viteritti (Eds.), *Making Good Citizens: Education and civil Society* (pp. 15–57). New Haven, CT, US: Yale University Press.
- Robison, J., Leeper, T. J., & Druckman, J. N. (2018). Do Disagreeable Political Discussion Networks Undermine Attitude Strength? *Political Psychology*, 39(2), 479–494. <https://doi.org/10.1111/pops.12374>
- Rogers, R. (2013). *Digital Methods*. Cambridge, Massachusetts: The MIT Press. Retrieved from <http://proxy-remote.galib.uga.edu/login?url=http://search.ebscohost.com/login.aspx?direct=true&db=nlebk&AN=601408&site=eds-live>
- Rosner, L., Winter, S., & Kramer, N. C. (2016). Dangerous minds? Effects of uncivil online comments on aggressive cognitions, emotions, and behavior. *Computers in Human Behavior*, 58. <https://doi.org/10.1016/j.chb.2016.01.022>
- Sabucedo, J. M., & Arce, C. (1991). Types of political participation: A multidimensional analysis. *European Journal of Political Research*, 20(1), 93–102. <https://doi.org/10.1111/j.1475-6765.1991.tb00257.x>
- Schlozman, K. L., Verba, S., & Brady, H. E. (2010). Weapon of the strong? Participatory inequality and the internet. *Perspectives on Politics*, 8(2), 487–509. <https://doi.org/10.1017/S1537592710001210>
- Schmitter, P. C., & Karl, T. L. (1991). What Democracy Is. . . and Is Not. *Journal of*

- Democracy*, 2(3), 75–88. <https://doi.org/10.1353/jod.1991.0033>
- Shah, D. V., Cho, J., Eveland Jr., W. P., & Kwak, N. (2005). *Information and Expression in a Digital Age: Modeling Internet Effects on Civic Participation*. *Communication Research* (Vol. 32). <https://doi.org/10.1177/0093650205279209>
- Sherrod, L., Torney-Purta, J., Lehmann, R., Oswald, H., & Schulz, W. (2001). Citizenship and Education in Twenty-Eight Countries: Civic Knowledge and Engagement at Age Fourteen. *International Association for the Evaluation of Educational Achievement (IEA)*, 23(5), 583–587. [https://doi.org/10.1016/S0193-3973\(02\)00143-0](https://doi.org/10.1016/S0193-3973(02)00143-0)
- Smith-Spark, L. (2012). Pope Benedict sends first personal tweet. CNN. Retrieved from <http://www.cnn.com/2012/12/12/world/europe/vatican-pope-twitter/index.html>
- Social media as a platform for tomorrow's teaching*. (2017). Retrieved from https://site.qudwa.com/uploads/media_center_white_papers/b/f/bff77b06e1c0337252c79c09ca64037791878684.pdf
- Social Media Fact Sheet*. (2018). Retrieved from <http://www.pewinternet.org/fact-sheet/social-media/>
- Solt, F. (2008). Economic Inequality and Democratic Political Engagement. *American Journal of Political Science*, 52(1), 48–60. <https://doi.org/10.1111/j.1540-5907.2007.00298.x>
- Stephenson, L. B., & Crête, J. (2010). Studying political behavior: A comparison of internet and telephone surveys. *International Journal of Public Opinion Research*, 23(1), 24–55. <https://doi.org/10.1093/ijpor/edq025>
- Stromer-Galley, J. (2002). New Voices in the Public Sphere: A Comparative Analysis of Interpersonal and Online Political Talk. *Journal of the European Institute for Communication and Culture*, 9(2). <https://doi.org/10.1080/13183222.2002.11008798>
- Stromer-Galley, J. (2003). Diversity of Political Conversation on the Internet: Users' Perspectives. *Journal of Computer-Mediated Communication*, 8(3), 1–17. <https://doi.org/10.1111/j.1083>
- Suhay, E., Bello-Pardo, E., & Maurer, B. (2018). The Polarizing Effects of Online Partisan Criticism: Evidence from Two Experiments. *International Journal of Press/Politics*, 23(1), 95–115. <https://doi.org/10.1177/1940161217740697>
- Sunstein, C. (2008). The Law of Group Polarization. *Debating Deliberative Democracy*, 10(2), 80–101. <https://doi.org/10.1002/9780470690734.ch4>

- Theocharis, Y., Barberá, P., Fazekas, Z., Popa, S. A., & Parnet, O. (2016). A Bad Workman Blames His Tweets: The Consequences of Citizens' Uncivil Twitter Use When Interacting With Party Candidates. *Journal of Communication*, 66(6), 1007–1031. <https://doi.org/10.1111/jcom.12259>
- Timpone, R. J. (1998). Structure, behavior, and voter turnout in the United States. *The American Political Science Review*.
- Tucker, J. A., Guess, A., Barbera, P., Vaccari, C., Nyhan, B., Seigel, A., ... Stukal, D. (n.d.). *Social Media, Political Polarization, and Political Disinformation: A Review of the Scientific Literature 1*.
- Tucker, J. A., Theocharis, Y., Roberts, M. E., Barberá, P., Tucker, J. A., Theocharis, Y., & Roberts, M. E. (2017). From Liberation to Turmoil: Social Media And Democracy. *Journal of Democracy*, 28(4), 46–59.
- van Stekelenburg, J. (2014). Going all the way: Politicizing, polarizing, and radicalizing identity offline and online. *Sociology Compass*, 8(5), 540–555. <https://doi.org/10.1111/soc4.12157>
- Vargas, J. A. (2012, February 17). Spring Awakening: How an Egyptian Revolution Began on Facebook. *New York Times*.
- Vaske, J. J., Beaman, J., & Sponarski, C. C. (2017). Rethinking Internal Consistency in Cronbach's Alpha. *Leisure Sciences*, 39(2), 163–173. <https://doi.org/10.1080/01490400.2015.1127189>
- Verba, S., & Nie, N. H. (1972). *Participation in America: Political Democracy and Social Equality*. New York: Harper & Row, Publishers.
- Verba, S., Schlozman, K. L., Brady, H., & Nie, N. H. (1993). Citizen Activity: Who Participates? What Do They Who Say? *The American Political Science Review*, 87(2), 303–318.
- Vicario, M. Del, Vivaldo, G., Bessi, A., Zollo, F., & Scala, A. (2016). Echo Chambers: Emotional Contagion and Group Polarization on Facebook. *Nature Publishing Group*, 1–13. <https://doi.org/10.1038/srep37825>
- Voting in America: A Look at the 2016 Presidential Election. (2017). Washington, D.C. Retrieved from <https://census.gov/data/tables/time-series/demo/voting-and-registration/p20-580.html>
- Weeks, B. E. (2015). Emotions, Partisanship, and Misperceptions: How Anger and Anxiety Moderate the Effect of Partisan Bias on Susceptibility to Political Misinformation. *Journal of Communication*, 65(4), 699–719. <https://doi.org/10.1111/jcom.12164>

- Whiteley, P. F. (1995). Rational Choice and Political Participation: Evaluating the Debate. *Political Research Quarterly*, 48(1), 211–233.
- Wojcieszak, M. E., & Mutz, D. C. (2009). Online groups and political discourse: Do online discussion spaces facilitate exposure to political disagreement? *Journal of Communication*, 59(1), 40–56. <https://doi.org/10.1111/j.1460-2466.2008.01403.x>
- Wolfinger, R. E., & Rosenstone, S. J. (1980). *Who Votes?* New Haven: Yale University Press.
- Wyatt, R. O., Katz, E., & Kim, J. (2000). Bridging the Spheres: Political and Personal Conversation in Public and Private Spaces. *Journal of Communication*, 71–92.
- Xenos, M., Vromen, A., & Loader, B. D. (2014). The great equalizer? Patterns of social media use and youth political engagement in three advanced democracies. *Information Communication and Society*, 17(2), 151–167. <https://doi.org/10.1080/1369118X.2013.871318>

Appendix A: Full Survey and Codebook

Variable names are italicized before the question. Numbers next to response options indicate how the response was coded for analysis.

consent Do you agree to participate in the study as discussed above?

- 1 I agree
- 0 I do not agree

age_id What is your age?

- 0 Under 18
- 1 18-24
- 2 25-34
- 3 35-44
- 4 45-54
- 5 55 or older

race_id Please select your ethnicity or race

- White/Caucasian
- Hispanic or Latino
- Black or African American
- Native American or American Indian
- Asian/Pacific Islander
- Other (please specify below)

You selected "Other" for your race/ethnicity. Please specify the race/ethnicity you most identify as.

gender_id How do you identify?

- Male
- Female
- Non-binary

education What is the highest level of education you have attained?

- 1 No schooling completed
- 2 Nursery school/pre-school to 8th Grade
- 3 Some high school, no diploma
- 4 High school graduate, diploma or the equivalent
- 5 Some college credit, no degree
- 6 Trade/vocational/technical training
- 7 Associate's Degree
- 8 Bachelor's Degree
- 9 Master's Degree
- 10 Professional Degree
- 11 Doctorate Degree

US_cit Are you a US Citizen?

- 1 Yes
- 0 No

self_pol_ID How do you identify politically?

- 3 Extremely conservative
- 2 Moderately conservative
- 1 Somewhat conservative
- 0 Independent
- 1 Somewhat liberal
- 2 Moderately liberal
- 3 Extremely liberal

Corp_profit Select the statement that most closely matches your opinion, even if it does not match your opinion exactly

- 1 Business corporations make too much profit
- 1 Most corporations make a fair and reasonable amount of profit

US_involvement_INTL Select the statement that most closely matches your opinion, even if it does not match your opinion exactly

- 1 Problems in the world would be even worse without US involvement
- 1 US efforts to solve problems around the world usually end up making things worse

fed_HC Do you think it is the responsibility of the federal government to make sure all Americans have health care coverage?

- 1 Yes
- 1 No

LGBT_marry Do you strongly favor, favor, oppose, or strongly oppose allowing gays and lesbians to marry legally?

- 2 Strongly Favor
- 1 Favor
- 1 Oppose
- 2 Strongly Oppose

govt_involve Select the statement that most closely matches your opinion, even if it does not match your opinion exactly

- 1 Government is doing too many things that would be better left to businesses and individuals
- 1 Government should do more to solve problems

undoc_imm Which comes closer to your view about how to handle undocumented immigrants who are now living in the US?

- 1 Should not be allowed to stay here legally
- 1 Should be allowed to stay here legally

env_protect Select the statement that most closely matches your opinion, even if it does not match your opinion exactly

- 1 This country has gone too far in its efforts to protect the environment
- 1 The country should do whatever it takes to protect the environment

abort Do you think abortion should be....

- 2 Legal in all cases
- 1 Legal in most cases
- 1 Illegal in most cases
- 2 Illegal in all cases

terror_prevent Which of the following comes closer to your view about the federal government's efforts to prevent terrorism?

- 1 Muslims living in the US should be subject to more scrutiny than people in other religious groups
- 1 Muslims living in the US should NOT be subject to additional scrutiny solely because of their religion

US_diverse Having an increasing number of people of different races, ethnic groups and nationalities in the US makes this country a...

- 1 Better place to live
- 1 Worse place to live
- 0 Doesn't make much difference either way

econ_sys_fair Select the statement that most closely matches your opinion, even if it does not match your opinion exactly

- 1 The economic system in this country is generally fair to most Americans
- 1 The economic system in this country unfairly favors powerful interests

group_memb Are you a member of a politically oriented Facebook Group?

- 1 Yes
- 0 No

pol_disc_FB Have you ever engaged in a political discussion, made a political post, or otherwise shared a political statement on Facebook?

- 1 Yes
- 0 No

pol_disc_lik_FB How likely are you to engage in political discussions through Facebook?

- 2 Very likely
- 1 Somewhat likely
- 1 Somewhat unlikely
- 2 Very unlikely

Please explain your answer to the previous question. Why are you likely or unlikely to engage in political discussions on Facebook?

pol_op_maj_FB How would you describe the political opinions of the majority of your friend group on Facebook?

- 2 Almost entirely conservative
- 1 Mostly conservative but with many liberals
- 0 Equal parts liberal and conservative
- 1 Mostly liberal but with many conservatives

-2 Almost entirely liberal

The following questions were only asked of members of political groups.

group_ID What politically oriented Facebook group are you a member of? (If you are in more than one politically oriented Facebook group, please answer the following questions by focusing on the group you are most active in)

group_pol_ID How does this group identify politically?

- 1 Republican
- 1 Democrat
- 0 Independent
- 99 Other

memb_length How long have you been a member of this group?

- 1 Less than 3 months
- 2 3 months or more but less than 6
- 3 6 months or more but less than 12 months
- 4 More than 12 months/1 year but less than 2 years
- 5 More than 2 years

Why did you decide to join this group?

Please indicate your agreement with the following statements.

- 2 Strongly Agree
- 1 Agree
- 1 Disagree
- 2 Strongly Disagree

group_made_friends I have made friends in or through this group (even if I have not met them offline)

group_news_update I get news and updates on current events through this group

group_op_form I look to this group for help in forming my political opinions

group_pol_disc I have engaged in political discussions with other members of this group

group_supp_confront This group has given me the support and/or courage to confront friends and family members over differences in political opinion

group_op_strength I believe my political opinions have strengthened as a result of being in this group

group_pol_knowl I know more about politics as a part of this group

<i>group_willing_confront</i>	I have become more willing to confront others about their political beliefs after joining this group
<i>group_att_protest</i>	I am more likely to attend a protest as a result of being in this group
<i>group_vote</i>	I am more likely to vote as a result of being in this group
<i>group_run_office</i>	I am more likely to run for office as a result of being in this group
<i>group_donate</i>	I am more likely to donate to a political campaign or cause as a result of being in this group
<i>group_friends_disagree</i>	I have friends who would disagree with many of the main messages of this group
<i>group_extreme</i>	Most of the members of this group hold more extreme views than I do
<i>group_friends_maj_disagree</i>	Many of my Facebook friends outside of this group would disagree with the discussions and posts in this group

The following questions were only asked of non-members of political groups.

Please indicate your agreement with the following statements.

- 2 Strongly Agree
- 1 Agree
- 1 Disagree
- 2 Strongly Disagree

<i>friend_news_update</i>	I get news and updates on current events through my friends on Facebook
<i>friend_op_form</i>	I look to my friends on Facebook for help in forming my political opinions
<i>friend_pol_disc</i>	I have engaged in political discussions through Facebook
<i>friend_supp_confront</i>	My friends on Facebook have given me the support and/or courage to confront friends and family members over differences in political opinion
<i>pol_op_strength</i>	I believe my political opinions have strengthened as a result of political interactions on Facebook
<i>friend_pol_knowl</i>	I know more about politics because of my Facebook friends
<i>friend_att_protest</i>	I am more likely to attend a protest as a result of my Facebook friends

<i>friend_vote</i>	My Facebook friends encourage me to vote
<i>friend_run_office</i>	I am more likely to run for office as a result of my Facebook friends
<i>friend_donate</i>	I am more likely to donate to a political campaign or cause as a result of my Facebook friends
<i>friend_op_similar</i>	The majority of my friends on Facebook hold political opinions similar to my own
<i>friend_op_diff</i>	I have friends on Facebook with political opinions different from my own

The following questions were only asked of members of political groups.

Please select all that apply

<i>met_group_memb</i>	I have met members of this group offline or “in real life”
<i>group_off_event</i>	I have participated in offline events (political or otherwise) coordinated through or by this group
<i>group_pol_post</i>	I have made political posts or commented on political posts in this group
<i>group_confr</i>	I have been encouraged by members of this group to confront friends and/or family over differences in political opinion
<i>vote_l</i>	I have voted in a local election
<i>vote_s</i>	I have voted in a state election
<i>vote_n</i>	I have voted in a national/federal election
<i>donate</i>	I have donated to a political campaign or cause
<i>volunteer</i>	I have volunteered for a political campaign or cause
<i>att_pol_ev</i>	I have attended political events, rallies, or protests
<i>pol_post_wall</i>	I have made political posts to my Facebook wall
<i>group_op_change</i>	Do you think being a member of this group has changed your political views?
1	Yes
-1	No

If you answered yes to the previous question, please explain. How have your political views changed since being a member of this group?

The following questions were only asked of non-members of political groups.

Please select all that apply

<i>pol_post</i>	I have made political posts or commented on political posts on Facebook
<i>enc_confr</i>	I have been encouraged by Facebook friends to confront friends and/or family over differences in political opinion
<i>vote_l1</i>	I have voted in a local election
<i>vote_s1</i>	I have voted in a state election

vote_n1
donate1
volunteer1
att_pol_ev1

I have voted in a national/federal election
I have donated to a political campaign or cause
I have volunteered for a political campaign or cause
I have attended political events, rallies, or protests

Appendix B: Instructions to Pilot-Testers

Instructions for Pilot-Testers: Using the link below, please go to and complete the survey on Political Participation and Facebook. Your responses will be anonymized, and I will have no way of connecting responses with names, so please answer each question honestly. It is important that you answer honestly in order to create a benchmark for how the survey “performs”. **While taking this survey please: 1) keep track of how long the survey took to complete and 2) make note of any questions that are confusing or poorly worded.** If possible, indicate what was confusing about a specific question or answer choice, and how it can be improved. Following the completion of the survey, please answer the questions below.

Pilot Survey Link: <https://skjema.uio.no/89210>

Questions for Pilot-Testers

1. How long did this survey take you? Did you find yourself losing interest at any points in the survey? If so, where?
2. Where any questions or answer choices that were confusing to you? Please indicate which questions.
3. Were there any parts of this survey that made you uncomfortable? If so, which parts?
4. Do you have any suggestions for how to improve this survey?

Appendix C: Facebook Groups included in Pilot-testing

Liberals & Conservatives

Young Democrats of UGA/ACC

UGA College Republicans

Appendix D: Scale Construction and Reliability/Validity of Measures and Questions

Partisan ID Scale

The Partisan ID scale was constructed to give more accurate and nuanced data on respondents' political ideology, as well as to serve as a way to check the reliability and validity of the primary measure of respondents' political ideology. The scale is constructed from responses to 11 questions developed by the Pew Research Center to accurately measure American political ideology. Responses were converted onto a scale of -1 to +1, with negative values reflecting views generally held by liberals and positive values reflecting views generally held by conservatives. Once responses were coded to the same range, the responses to all 11 questions were averaged, to give a Partisan ID score for each respondent, ranging from -1 to +1.

Following the construction of the scale, reliability and validity tests were conducted. Cronbach's Alpha for the scale is .8, indicating that the scale is a reliable measure of political ideology. Political ID was then correlated with how respondents self-identify politically, producing a strong positive correlation ($r = .8$, $p = .001$). This indicates that self-identification is a valid measure of political ideology and can be relied upon in analyses that include respondents' political ideologies.

Participation Score

The Participation Score was constructed to provide a single measure of how politically active a respondent is. This was done by counting the political activities a respondent has taken part in, producing a seven-point scale of political activity. Activities included in the scale are: participating in political discussions on Facebook; voting in a local, state, or national election; donating to a campaign or political cause; volunteering for a campaign; and attending a rally or protest. These activities were chosen because they require different levels of commitment to participation and it is expected that participating in different activities will adequately discriminate levels of political participation. After constructing the scale, a reliability test showed that the scale is a reliable measure of political participation ($\alpha = .8$). It was not possible to directly test the validity of the measure. Since the scale aims to measure the level of political

participation by counting past political activities respondents took part in, it can be assumed that the scale has high face validity.

Measures of Opinion Change

The main hypothesis of this study argues that changes to respondents' political opinions drive changes to political behavior. Two questions to measure opinion change were included in the survey, one asking respondents if their opinions strengthened²⁹, and the other asking if respondents' opinions had changed³⁰. The two questions were intended to measure similar phenomenon, but an insignificant chi-square between responses to the two questions indicates that one or both questions are not valid measures of opinion change.

Upon analysis of the wording of the questions and with renewed focus on the underlying constructs, I determined that although the questions do address similar phenomenon, the specific constructs they seek to measure are different. Many different aspects of opinions can be measured and quantified, including extremity, importance, certainty, and intensity, among others (Krosnick, Boninger, Chuang, Berent, & et al, 1993). Asking respondents if they experienced opinion change was simply too broad of a question, as it could be interpreted in varying ways, depending on what respondents assumed the survey was most interested in. In contrast, asking respondents about changes in opinion strength is a more specific measure of one type of opinion change. The strength of an opinion determines how much of an effect a specific opinion has on an individual's cognition and behavior. (Robison et al., 2018). Since opinion strength affects behavior, it was determined that the data collected on opinion strength was the most interesting to this study. Additionally, studies have shown that asking respondents to self-report the strength of an opinion, or changes to the strength of an opinion, is an accurate measure of opinion strength (Krosnick et al., 1993). With this in mind, the variable measuring changes to opinion strength, `group_op_strength`, is used as the primary indicator of opinion change amongst group members.

In addition to the two variables measuring opinion change in group members, one variable measures opinion change in non-group members. Specifically, the variable

²⁹ See Appendix A: Full Survey and Codebook, `group_op_strength`

³⁰ See Appendix A: Full Survey and Codebook, `group_op_change`

measures changes to opinion strength, so the same construct is measured in group and non-group members. As a result, the data can be compiled from the two questions, group_op_strength and pol_op_strength, to give a single variable measuring opinion change for all respondents. This allowed for analysis of opinion change in the entire sample, as well as opinion change in each of the two subsamples.

Appendix E: Ethical Approval from NSD



Per Hetland
Postboks 1092 Blindern
0317 OSLO

Vår dato: 22.09.2017

Vår ref: 55602 / 3 / LH

Deres dato:

Deres ref:

Tilbakemelding på melding om behandling av personopplysninger

Vi viser til melding om behandling av personopplysninger, mottatt 31.08.2017.

Meldingen gjelder prosjektet:

<i>55602</i>	<i>The Effects of Political Participation through Social Media</i>
<i>Behandlingsansvarlig</i>	<i>Universitetet i Oslo, ved institusjonens øverste leder</i>
<i>Daglig ansvarlig</i>	<i>Per Hetland</i>
<i>Student</i>	<i>Benjamin Leigh</i>

Personvernombudet har vurdert prosjektet, og finner at behandlingen av personopplysninger vil være regulert av § 7-27 i personopplysningsforskriften. Personvernombudet tilrår at prosjektet gjennomføres.

Personvernombudets tilråding forutsetter at prosjektet gjennomføres i tråd med opplysningene gitt i meldeskjemaet, korrespondanse med ombudet, ombudets kommentarer samt personopplysningsloven og helseregisterloven med forskrifter. Behandlingen av personopplysninger kan settes i gang.

Det gjøres oppmerksom på at det skal gis ny melding dersom behandlingen endres i forhold til de opplysninger som ligger til grunn for personvernombudets vurdering. Endringsmeldinger gis via et eget [skjema](#). Det skal også gis melding etter tre år dersom prosjektet fortsatt pågår. Meldinger skal skje skriftlig til ombudet.

Personvernombudet har lagt ut opplysninger om prosjektet i en [offentlig database](#).

Personvernombudet vil ved prosjektets avslutning, 01.06.2018, rette en henvendelse angående status for behandlingen av personopplysninger.

Dersom noe er uklart ta gjerne kontakt over telefon.

Vennlig hilsen

Dokumentet er elektronisk produsert og godkjent ved NSDs rutiner for elektronisk godkjenning.

NSD – Norsk senter for forskningsdata AS
NSD – Norwegian Centre for Research Data

Harald Hårfagres gate 29
NO-5007 Bergen, NORWAY

Tel: +47-55 58 21 17
Faks: +47-55 58 96 50

nsd@nsd.no
www.nsd.no

Org.nr. 985 321 884

