Online to Offline Civic Engagement: The Effects of Social Media on Offline Civic Engagement

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Dissertation submitted to the faculty of Virginia Polytechnic Institute & State University in partial fulfillment of the requirements for the degree of

Doctor of Philosophy

In

Sociology

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November 16, 2015
Blacksburg, VA

Keywords: social media, traditional internet, social capital, civic engagement

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Online to Offline Civic Engagement: The Penetrating Effects of Social Media on Offline Civic Engagement

Kumbirai Madondo

ABSTRACT

The effects of traditional internet (e.g. email and web browsing) and social media (e.g. Facebook, Google +, Twitter etc.) remain a valuable area of study among scholars seeking to understand civic engagement (e.g. volunteering, attending political rallies, protesting about local issues etc.). Building off the work of previous researchers who sought to identify connections between traditional internet, social media and civic engagement, this study adds to that body of knowledge by examining whether social media has independent effects on offline civic engagement beyond those of traditional internet. In addition to this, because age is an important factor in the use of traditional internet or social media, this study also investigated whether social media use is reducing the traditional age effect in civic engagement. Lastly, the study also examined the relationship among several dimensions of social capital including group membership, discussion networks, trust and norms of reciprocity which have been linked to offline civic engagement by some scholars, although, some scholars have questioned how some of these social capital measures (e.g. trust, norms of reciprocity) affect online civic engagement.

I tested several hypotheses about these relationships using data collected from a 2012 survey of residents in the geographic area of Blacksburg and Montgomery County, VA. The statistical analyses entailed building a series of structural equation models and regression models to predict the civic engagement of these residents. The results provide evidence that: 1) social media has additional effects on offline civic engagement beyond those of traditional internet. 2) That social media was a strong mediator of the relationship between group membership and
offline civic engagement; and 3) discussion networks and offline civic engagement. The study did not find any relationship between trust, social media and offline civic engagement. Nonetheless, compared to all other forms of engagement, the study was able to demonstrate that social media may represent a breakthrough in our understanding of how developments in information and technology are shaping and influencing young adults’ civic engagement.
DEDICATION

Dedicated to my true love: My grandmother, whom I owe everything to. You gave me your name, your drive for success, support and love throughout my life. In my happiest and toughest moments it is you I think of. I would not be me without you. Your heart is pure as gold and I love you so much.

I also dedicate this to my love Tinashe. Thank you for supporting me throughout these past months. I love you so much.
ACKNOWLEDGEMENT

I am grateful for the support from my committee members, family, and friends. I would like to express my deepest gratitude to my co-chair Dr. Wornie Reed. When I decided to do my PhD, naturally I came to do a tour of the department and from the moment we interacted I knew I wanted to work with you. Not only did you provide me with guidance during my prelim exams and dissertation but you were the most supportive advisor anyone could have asked for. The life lessons I also learned from you are something I will forever be indebted to. Beyond just being an advisor, thank you for being a lifelong friend too. I also want to thank Dr. Kavanaugh and Dr. Tedesco. Without selecting me to join the VTS project, this dissertation would have been nonexistent. I enjoyed the three years we thought through the project together, worked together and wrote together. Thank you for the friendship as well. Lastly I want to thank Dr. Hawdon and Ryan for being supportive. You have always shone me support and encouraged me to finish early, thank you.

I want to thank my friends and family as well for their never-ending support, patience throughout this process and love. Thank you and I love you.
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CHAPTER ONE
INTRODUCTION

This study investigates whether social media (e.g. Facebook, Google+, Twitter, YouTube) has independent effects on offline civic engagement (e.g. volunteering, attending community meeting, protesting, voting, etc.) beyond that of traditional internet usage only (e.g. email and web browsing). Offline civic engagement refers to work that is done individually or collectively as a community (Chung and Probert, 2011). This work, typically involves acts such as political activism (e.g. demonstrating, voting, signing petitions); volunteer work (e.g. food drives, helping at an elderly community or orphanage) or actions such as joining community organizations (Pasque, 2008 & Sherrod et al., 2010). Common usage of the term civic engagement thus encompasses political involvement, collective action, social change, social capital, citizenship, and social relationships to name just a few (Beyer, 2003). The terms “engagement” and “participation” are also understood to have a similar meaning in other research (Jugert et al., 2012) and are therefore be used interchangeably in this study.

There are many factors that motivate and socialize people towards civic engagement. Traditionally, socialization to citizenship tended to be motivated by association with different agents such as peers, schools, news media, and parents (McLeod, 2000; Uslaner, 2003). In fact, for decades parents and family members were very influential as evidenced by the fact that parents who were involved in their communities through volunteering, social activism, and political activities tended to have children who were more likely to be involved in these kinds of activities, as well (Pancer, 2015). Pancer argues that this is because parents influence their children’s civic activities in a number of ways: through direct social influence, by transmitting values and norms to their children, by linking them to community organizations, and by
supporting their children’s involvements. Likewise, he also observed that peers and friends had 
and still have similarly powerful impact on people’s civic engagement through many of the same 
mechanisms. According to him, they provide direct social influence, serve as models of 
behavior, transmit values and norms, and provide support for an individual’s civic activities 
(Pancer, 2015).

In addition to friends and family, the internet and social media have become important 
avenues for civic engagement. Some scholars argue that in large part; at least part of the interest 
in civic engagement has been fueled by the increased usage of traditional internet (e.g. email and 
internet browsing) and social media (e.g. Facebook, Twitter, Google + etc.) especially among 
young American adults (Gordon, Baldwin-Phillip & Balestra, 2013). As such, several factors 
have been proposed to explain why the internet and social media yield civically redeeming 
effects among their users. For example, chatrooms, political email correspondence and online 
news exposure are some of the factors identified that attract online civic citizens to the internet 
(Mossberger et al., 2008). The internet and especially social media are attractive to users because 
of their ability to foster real time information exchange about civic or political information (Shah 
et al., 2001). With each election cycle, researchers have found that more people turn to the 
internet for political information (Laricy, Tinkham and Sweetser 2011; Pew 2008, 2012; Smith 
and Raine 2012). Research has also shown that there has been a major increase in the proportion 
of users of Social Network Sites (SNS) who post political news, who friend or follow candidates, 
and who join SNS groups organized around political or social issues. Further, a report by Pew in 
2014 showed that there has been a notable share of SNS users who say their activity on these 
sites has prompted them to learn more about social or political issues and to take action around 
these issues (Smith, 2013).
Other scholars argue conversely that both the internet and social media do not always have a positive effect on civic engagement. Technology is capable of fostering shallower relationships and distracting people from public affairs and thus deepening their civic disengagement (Putman, 2007; Hodgkinson, 2008). According to earlier work by Putman (2000), the internet tends to displace face-face engagement as individuals become engrossed in the entertainment aspect of the internet such that they end up being isolated from the civic activities in their community. There is no evidence to suggest that the internet increases civic engagement, especially among those who are disenfranchised by race or socio-economic status (SES) [Davis & Kamarck, 2002; Margolis & Resnick, 2000; Elin & Reeher, 2002; Uslaner, 2004; Chadwick, 2006]. Research indicates that the majority of internet users who are less educated are also less civically involved in their communities (Pew, 2012).

Given the nature of this debate between technology optimists and technology pessimists, and the different traditions involved in the discussion, more research is still needed in this area. The specific questions that still remain in the literature that will be answered in this study: Does social media beyond just email and web browsing (traditional internet) contribute more to society by allowing community members to become informed, find common causes and participate more in civic activities? How does civic engagement change with the advent of social media? Can it be that participation in social media has become a form of civic activism? How do people who are civically engaged and those who are not civically engaged use the internet compared to social media? How are online and offline civic engagement related? What are the characteristics, behavior and interests of people who experience increased levels of social participation and community involvement since using the internet or social media? Do traditional internet (e.g.
email and web browsing) and social media (e.g. Facebook, Twitter, Instagram etc.) have the same effect on offline civic engagement?

This study builds on the works of Kavanaugh and colleagues (2005) who demonstrated that traditional internet use (i.e., email and web browsing) for civic and political purposes can be predicted by education, extroversion, age (middle age), community group membership, collective efficacy and activism (volunteering, protesting, attending community meetings). Extending on this work, Kavanaugh, Tedesco and Madondo (2014) also found that in addition to education, extroversion, age (middle age), community group membership, collective efficacy and activism (volunteering, protesting, attending community meetings), both traditional internet and social media use (i.e. Facebook, Google+, My Space) can be predicted by discussion networks and staying informed with the local and international news.

However, what Kavanaugh and colleagues (2005, 2014) did not test, and therefore remains unclear in the literature is to examine whether social media has independent effects on offline civic engagement. Social Media expert Robert French (2013) argues that “social media is slowly starting to become the channel of first choice for particular demographics. It is not only raising political engagement but also encouraging civic engagement and volunteerism, it can be assumed that there is a possibility that it is overtaking all other channels used for civic involvement.” As such, this study examines whether social media has independent effects on civic engagement beyond those of traditional internet usage.

While Kavanaugh, Tedesco and Madondo (2014) were solely concerned with online civic engagement and used online civic engagement as their dependent variables, this study goes a step further by including offline civic engagement as a dependent variable. This is important as it
contributes to the current ongoing debate among scholars about the relationship between online and offline civic engagement.

Given that some studies have found that age is an important factor in the use of traditional internet and social media (Kavanaugh et al, 2005; Smith 2009; Kavanaugh, Tedesco, Madondo, 2014) this study also investigates whether social media use is reducing the traditional age effect on civic engagement. In 2000 only 14% of older adults aged 65+ used social networking sites, but in 2014 the percentage had jumped to 59% (Pew, 2014). Whereas in 2005 only 6% of older adults indicated that they used social networking sites, by 2014 the number had leaped to 51%. Given these encouraging numbers, it is also important to investigate whether this increased use of social media has also led to increased use of the technology for civic purposes by older adults. If this is the case, then this important finding may help other researchers to incorporate older adults in research dealing with technology and civic engagement. There has been a tendency in most of the literature to quickly dismiss older adults when it comes to studying technology and civic or political engagement.

Several measures tested in prior research such as group membership, discussion networks, trust and norms of reciprocity are also used as measures of social capital. Social capital is the combination of several factors such as group membership, discussion networks, trust and norms of reciprocity which bind society and make people civically engaged (Bourdieu, 1986); Coleman, 1988; Porte, 1998; Jack, & Jordan 1999; Montgomery, 2000; Putnam, 2000; Fine, 200). Although there has been debate in the literature on how to define and measure social capital (discussed in more detail in the literature review section), this study argues that certain measures of social capital have positive associations with offline civic engagement. For example, being a member of a group (Uslaner, 2004; Chadwick, 2006; Shane, 2006; Kavanaugh et al.,
2005, 2007; Kim, 2009; Kavanaugh, Tedesco, & Madondo, 2014) and being interested in local
and global news (Berelson, Lazarsfeld, & McPhee 1954; Almond & Verba, 1963; Habermas,
1979; Lazarsfeld, Berelson, & Gaudet, 1944; Norris, 2000; Putnam, 1995, 2000; Shah et al.,
2005; Kim, Hsu, & de Zuniga 2013) have positive associations with civic engagement. This is
because through news consumption (reading newspapers or following the news) whether online
or offline citizens acquire information and awareness about the civic activities in their
communities and the different ways that they can participate (McLeod et al., 1996; Katz & Rice,
2002). Reading or following the news provides the knowledge and incentives people need to
become full citizens (Macleod et al., 1999).

Other social capital measures such as trust and discussion networks have been found to
have positive relationships with use of the internet for civic engagement (Sotirovic & McLeod,
2001; Shah et al., 2007; Cho et al, 2009; Jun, Kim, & Gil de Zúñiga, 2011). Particular
personality traits such as trust in others (Sotirovic & McLeod, 2001) and being part of discussion
networks (i.e. political talk within social networks; Gil Zuniga 2004) leads to increased use of
internet forums (e.g. email; Shah et al., 2005). These online avenues to discuss political and civic
issues spur offline civic engagement (Scheufele, Nisbet, Brossard, & Nisbet, 2004). The
connection between these social capital dimensions (trust; discussion networks) and traditional
internet for civic purposes (e.g. email and web browsing) is established by these studies. This
study investigates their effects on social media use for civic purposes. The capabilities of
horizontal interpersonal communication embedded in social media platforms such as Facebook,
Twitter, YouTube facilitate citizens’ abilities to rebroadcast and annotate content (e.g., news)
by adding personal commentaries, thus enhancing the capacity for discussion and civic

Despite some of these mentioned positive associations between social capital measures (discussion networks; group membership) and civic engagement, what remains unclear to most scholars is the question of how to measure these social capital variables. Should trust, reciprocity, discussion networks and membership in a group be combined into one index, or should each one of these dimensions be treated as single indicators of social capital? Is social trust a precursor of group membership or is it built within networks? Are these dimensions correlated? Given that some of these questions remain unanswered, it is therefore the intention of this study to test the relationship between these differing measures of social capital. Lastly, established demographic variables (age, gender and education) and personality traits (extroversion) are also be utilized in this study as control variables.

Main Research Questions

Research Question 1
Do social media have independent effects on civic engagement beyond those of traditional internet usage?

Previous studies have found positive relationships between traditional internet (e.g. email and web browsing) and civic engagement (Shah et al., 2005; Zamaria & Fletcher, 2007; Kavanaugh et al., 2005, 2006, 2007) and between social media (e.g. Facebook, Twitter, Google + etc) and civic engagement (Xenos & Moy, 2007; Boulianee, 2009; Gil de Zúñiga, et al., 2009; Gil de Zúñiga, et al., 2012; Lee, et al., 2013; Kavanaugh, Tedesco, & Madondo 2014. None of these studies have simultaneously analyzed the difference between traditional internet and social
media for offline civic engagement (e.g. volunteering, attending community meeting, protesting, and voting) in one model. It is unknown whether social media has independent effects on civic engagement beyond that of traditional internet.

**Research Question 2**

*Controlling for education, gender, extroversion and news consumption, does social media mediate or moderate relationship between social capital variables and offline civic engagement?*

This question examines whether when one controls for established predictors of civic engagement, social media still mediates or moderates the relationship between social capital variables (group membership, discussion networks, trust and norms of reciprocity) and civic engagement. A number of studies have shown that offline civic engagement can be predicted by socio-demographic factors (age, gender, ethnicity, socio-economic status). There has also been evidence in the literature of the link between some of the social capital dimensions (trust, group membership and discussion networks) and civic engagement (see Norris and Jones, 1998; Shah, Kwak et al., 2001; Shah, McLeod et al., 2001; Krueger, 2002; Tidwell, &Walthers, 2002; Williams, 2007; Ellison et al., 2011, Gil de Zuniga & Valenzuela, 2011). However, much is still needed to see whether social media mediates these links.

**Research Question 3**

*Is social media reducing the traditional age effect in civic engagement?*

The literature reveals that older adults are more likely to vote and tend to be more civically engaged than younger adults (Dennis, 1991; Verbal et al., 1995, Gimpel & Schuknecht, 2003). However, since the popularity of the internet and social networking sites (SNS),
researchers have also seen an increase in younger adults using social network sites such as Facebook, YouTube and Twitter to participate in civic activities (e.g. the 2008 presidential elections) [Pew 2014]. The same study also found that there has been an increase in older adults (65+) use of social networking sites (from 13% in early 2009 to 43% in 2013). We do not know whether or how much this use of SNS (to connect with friends and family) has translated into use of social media for civic engagement for other age groups beyond those aged 18-29 years.

Secondary Research Questions

1. What are the different relationships among the many dimensions of social capital (trust, group membership, reciprocity and discussion networks)?

While the concept of social capital continues to be of major interest, its definitions and operationalization remain contested (see Loury, 1977; Bourdieu, 1986, 1988; Coleman, 1988; Porte, 1998; Putman, 2000; Fields, 2003). Diverse measures of social capital (e.g. group memberships, social networks, trust, norms of reciprocity, social cohesion, political participation, civic participation, and social solidarity) have made it harder to determine whether these measures can be classified as one indicator of social capital or separate independent indicators. However, in this study I use Putman’s (2000) definition and focus on measures such as groups, discussion networks, norms of reciprocity, and trust.

This study is also interested in examining the individual and collective predictive power of these social capital measures on online and offline civic engagement. This leads to my secondary research question:

2. What are the differing relationships between the many dimensions of social capital (trust, group membership, reciprocity and discussion networks) and civic engagement?
In order to address these research questions, this study uses survey data that was collected during the time I was part of the Virtual Town Square project (VTS) in the Computer Science Department. The data were collected in 2013 in the Blacksburg, Christiansburg and Montgomery County through purposeful sampling. The data is part of a series of cross-sectional data that Kavanaugh and colleagues have been collecting and analyzing for almost two decades (1993-2012) in Blacksburg and surrounding areas.

Significance of the Study: Expected Contributions

One of the biggest contributions of this study is that it will add to the sociology literature in technology and civic engagement. While sociologists have traditionally been interested in what Morton et al. (2010) calls the “civic engagement movement,” today, with the increased popularity of the internet, online civic engagement has quickly shifted from margin to center as key building blocks for sociology’s understanding of public sociology. While some sociologists have demonstrated how factors such as age, education, socio-economic status, social capital and interaction with fellow citizens causes individuals to lead to offline civic engagement (Dawes, van de Kragt and Orbell 1990; Putnam 1995, 2000), however, not much prior research has focused on how these factors have an effect on younger adults’ use of social media for civic purposes. This study seeks to fill this gap in the literature.

Besides gaining a deeper understanding of how people use social media for civic engagement, this study adds to the debate about whether social networking sites are also increasing interest in civic participation. Whereas past communities existed primarily in physical locations where individuals including far-flung social networks could connect with one another via mail, face-face or the telephone (Wellman 1999), it appears today that the advent of social
media has allowed for the possibility of widespread interpersonal interactions that take place in non-physical locations (Wellman & Gulia 1999; Wellman 1999; Boyd 2006). Others have argued that this interconnection has made it possible for people to create social networks online which are vital for keeping people up to date with activities happening in their communities (Wellman 1999). Hence the argument that social media has great potential to use the power of a community to participate in democratic processes such as holding online meetings via Facebook or voting for community issues using SNS sites (Ornstein & Schenkenberg 1999; Nader 1999; Putman, & Feldstein 2004).

From a civic perspective there are practical advantages to studying the effects of different factors such as age, gender, education, group membership, news consumption, political discussion networks, traditional internet and social media and their effect on civic engagement. A better understanding of which factors predict civic engagement especially among different age groups is useful as it can help community leaders determine the different methods to use in order to encourage different age groups in their community to become more civically engaged. For example, politically-oriented groups that use social media as deliberative spaces to discuss and encourage civic participation can use this study to gain a better understanding of how ordinary citizens use technology to enhance their civic participation. It may be the case that these political groups may need to decide whether to use social networking sites such as Facebook or Twitter when targeting younger adults versus for example, visiting community groups when targeting older adults (Gil de Zuniga, Jun, & Valenzuela, 2012). Therefore this study extends the debate to SNS, exploring whether the affordances SNS tools provide give users more opportunities to be exposed to a greater variety of civic and political information and opportunities.
Overview of Dissertation

The dissertation begins with an introduction which states the purpose of the study, followed by the research questions. Chapter 2 reviews the literature that guides this study. I begin with definitions of the key concepts, offline civic engagement, traditional internet use and social media. Drawing on the works of Bourdieu (1986); Coleman (1988); Porte (1998) and Putman (2000), Chapter 2 defines social capital theory, measures of social capital and how they relate to the current study. Chapter 2 also demonstrates why social media use may be providing increased exposure to civic activities happening online and the possible impact for participatory behaviors beyond those provided by traditional internet use (e.g. email and web browsing).

Chapter 3 describes the methods used to collect the data; the final sample used; and explains the operationalization of the main variables and some of the literature that justifies the methodologies used. The chapter also shows the conceptualized models that were tested and the statistical analyses and software used.

Chapter 4 presents the results from the statistical analyses. Chapter 5 discusses the results, what the results mean, and what we learned from these results. The Chapter ends with the conclusion drawn from the results, some limitations of the study, what researchers can draw from this study and some of the future research questions that can be explored.
CHAPTER TWO
LITERATURE REVIEW

This chapter begins by reviewing the definitions of offline civic engagement. It also defines traditional internet and social media and their relationship to offline civic engagement. The chapter highlights the different ways that these concepts have been measured in the literature.

The second part of the chapter examines the main theoretical framework guiding this study—social capital theory. It discusses the various definitions of social capital and the various ways that social capital has been measured. These social capital measures include, trust, reciprocity, group membership and discussion networks. The section also discusses how these measures are related to online and offline civic participation. The third part of the chapter examines the literature on age and social capital and the relationships between age, social capital and online and offline civic engagement.

Lastly, the chapter presents the conceptualized model and discusses some of the established control variables in the literature used in this study which include; education, gender, extroversion and news consumption. Gender, which has not always been found to significant in prior studies, however some research that shows its influence on civic engagement (Carpini, & Keeter 1996, 2000; Enns et al., 2008; Cicognani et al., 2012). Thus, using the literature, this study systematically shows the links connecting the control variables to the measures of social capital, online civic engagement; and to the outcome variable (offline civic engagement).
Offline Civic Engagement

For decades, beginning in 1835 when de Tocqueville outlined the challenges facing American democracy, scholars continue to be interested in civic engagement and how it affects individual or collective action. According to Brensinger, Gullan and Chakars (2014) prior use of the term “civic engagement” has encompassed political involvement, collective action, social change, social capital, citizenship, and social relationships to name just a few. A broader definition is also given by Michael Delli Carpini (2008) who defined civic engagement as:

… Individual and collective actions designed to identify and address issues of public concern. Civic engagement can take many forms, from individual voluntarism to organizational involvement to electoral participation. It can include efforts to directly address an issue, work with others in a community to solve a problem, or interact with the institutions of representative democracy. Civic engagement encompasses a range of specific activities such as working in a soup kitchen, serving on a neighborhood association, writing a letter to an elected official or voting.

Put simply, this means that civic engagement can include a variety of forms of political and nonpolitical activities, although most scholars agree that broader conventional forms of civic engagement should include: voting; working in election campaigns for political parties; contributing to political causes and candidates; contacting public officials; attending public meetings, political rallies; protests or speeches; signing petitions; serving local organizations; and writing articles for mass media (Verba, Scholzman, & Brady 1995; Putnam, 2000; Ramakrishnan, & Baldassare 2004; Weissberg, 2005). In fact, Putman (2000) concluded that to be a good citizen means that one takes part in community activities, be it civic or political.
In spite of this broad definition, Levinson (2010) argues that one problem with this definition is that it is increasingly outdated and unrepresentative of a range of actions and behaviors that have since emerged as a result of the growing popularity of the internet. Thus, the author notes that the definition fails to take into account that there are some activities that are happening on the internet that can be considered good citizenship. For example, he notes that internet activities such as uploading a video to You Tube and interacting through social networking sites such as Facebook to organizing community activities are also examples of what can be considered good citizenship. Hence, current evidence in the literature suggests that the internet not only provides an avenue for civic participation but has the potential to revive civic participation especially among individuals marginalized from mainstream civic participation such as the less educated or racial minority groups (Smith & Raine, 2009; Watkins, 2014). For example, though digital divides still exists today, a Pew Government Online study (2010) found that 31% African-Americans and 33% Latinos reported that they found SNS tools to be helpful in keeping them up to date with political and civic activities they would otherwise have missed through offline media tools. Further, they reported that the reason they found SNS tools to be helpful in increasing their civic participation was because they could easily access the internet through their phone or computer. Sociologist Berry Wellman (2010) concluded that social networking sites like Facebook, Twitter, My Space, and Meetup are becoming the new vanguards for public engagement as they build communities of similar interests, and try to galvanize people around common causes.
Traditional Internet

The term traditional internet is widely attributed to Smith (2009) and Smith and Rainie (2012) who use the term 'traditional internet' to distinguish social media from the use of email and web-browsing on the internet. Kavanaugh, Tedesco and Madondo (2014) adopted this definition for their questionnaire and analyses of 2012-13 survey data. I adopt the same definition in the current study.

Traditional Internet Use and Offline Civic Engagement

Robert Putman (2000) once argued that one of the greatest barriers to greater civic participation in society was the ever increasing technology consumption by society. His argument being that technology was causing people to be isolated and unbothered about what was happening in their communities. Other scholars seemed to echo the same sentiments, particularly blaming the internet as the next big thing to hamper the gains of democracy. For example Kraut et al.’s (1998) longitudinal study on the effects of the Internet on social involvement and psychological well-being became one of the first well known studies to show the negative effect of the internet. In their study, the researchers observed that greater use of the internet was significantly associated with decreased communication within the family, a decreased local social network, and increased loneliness and depression which prevented individuals from partaking in community civic activities. Similarly, Rusciano (2001) blamed the internet for the degradation in social capital, arguing that the internet led people to lose sight of their ability to share and form physical relationships with each other. He argued that the more people are online, the less likely they are to be engaged in traditional physical spaces that
promote intimacy—whether at a parent-teacher meeting association or a baseball game. Thus he maintained that traditional internet was a hindrance to civic engagement.

Olken (2009) in his study of U.S teens and civic engagement made the same argument when he observed that the internet absorbed a lot of teenagers’ attention thus derailing them from civic participation. He argued that the internet made them substitute real-world interaction with solitary entertainment in the virtual world. Contrary to this finding, a 2008 Pew study on American Teens, Social Media, Video Games and Civic Engagement found the very opposite. No evidence was found to support that the internet, particularly video games led to social isolation. Instead, the authors found that the most avid, frequent gamers are just as communicative and socially engaged as less-active gamers and that daily gamers are just as likely as teens who game less frequently to use other methods to communicate with friends (landlines, cell phone, IM, email, and social network messaging) and to spend time with friends face-to-face. Concerning civic engagement, the Pew study found that although neither the frequency of game play nor the amount of time teens spend playing games is significantly related to most online civic participation, they did find that there were no statistical mean differences in teens who play games every day and teens who play less than once a week (after controlling for demographics and parents’ civic engagement) and their offline civic engagement. Some scholars suggest that this therefore means that there is little evidence to support the concern that playing games on the internet or on social media platforms promotes behaviors or attitudes that undermine civic commitments and behaviors (Keane, 2008; Olken 2009).

In terms of traditional internet use (e.g. web browsing and email) for civic purposes, an international study by Statistics Canada also found that even though internet users do sacrifice a small amount of face-to-face time with family and friends, overall, there is little to suggest that
the internet negatively affects personal relationships or citizen activism. This is because the study found that heavy internet users spend slightly more time with family and friends than other groups because they are more likely to use their email or to install email apps on their phone which helps them to frequently stay in touch with both their strong and weak ties. Further, the report noted that, Canadian heavy internet users who had an email app on their phone also reported that email helped them to stay in touch with any political or civic activities happening in their communities. Slightly similar, another study by Zamaria and Fletcher (2007) on the effects of the internet on civic engagement found that internet users aged 15-25 years old reported belonging to more clubs and community organizations than non-users. In fact, these 15-25 year olds reported that the internet was extremely helpful and a part of their everyday life because it helped them to find more community groups to join online.

Early research by Kavanaugh and colleagues (2005) demonstrated that the strongest predictors of traditional internet use (email and web browsing) for civic and political purposes are education, staying informed (reading local and international news) and activism (volunteering, protesting, attending community meetings, etc.). Their “Civic Effects” model (figure 1) showed a strong link between online civic participation and community involvement (measured by a question which asked respondents whether since using the internet they had become more involved in local issues that interested them).
Despite these findings, Park and Perry (2008) note that pessimists of the internet overwhelmingly argue that the internet reinforces power relations and patterns of political participation. They argue that the internet tends to be dominated by those who are better educated, younger, affluent and already in powerful positions. The argument being that the internet only facilitates the civic engagement of people who are already informed and motivated but that it does not increase the involvement of those who are already disenfranchised by race or SES (Norris, 2001). This has led some scholars to suggest that maybe traditional internet may not be the great facilitator of civic engagement as once was thought, especially among the less educated population (Kim, Wyatt, & Katz, 1999; Katz & Rice, 2002; Kavanaugh et al., 2005; Walters, 2012). More recently, scholars have been investigating use of social media social network sites such as Facebook, YouTube, and Twitter for civic engagement (Smith & Raine 2012; Gil de Zuniga, 2013).
This is supported by the weak correlation that Pew finds between education and social media use for civic engagement which implies that social media may be less of a barrier to civic participation among the less educated compared to traditional internet (Smith, 2009; Smith & Raine, 2012). Given these mixed findings on the role of traditional internet and civic engagement, part of this study examine the role of traditional internet on civic engagement and to determine whether its effects on civic engagement are different to those of social media.

My study will build on the work of Kavanaugh, Tedesco, Madondo (2014) who developed and tested two separate models to compare the effects of traditional internet versus social media use on civic engagement (see figures 2 and 3 below).

**Figure 2. Model explaining Traditional Internet Use for Civic Purposes**
These models indicated differences between use of traditional internet for civic purpose and social media use for civic purposes such as the indirect effect of education being greater for traditional Internet use than for social media use for civic purposes. Extroversion (outgoing and talkative) were also found to be less important in explaining the use of social media for civic purposes. However, what these models did not test and therefore remains unclear in the literature is whether social media has independent effects on offline civic engagement.

Social Media

Social media is shaping up to be a growing force in the study of civic engagement. According to Kaplan and Haenlein (2010) who provided one of the first definitions of social media found in scientific journals, social media refers to “to a group of internet-based applications that build on the ideological and technological foundations of Web 2.0, and that allow for the creation and exchange of User Generated Content.” Social media differs from traditional internet (web browsing and email) in that social media centers around easy-to-use platforms that allow users to generate content and to share it with others, often those within their
social networks. Further, social media links people to diverse networks for example, Facebook has group pages that connect people to different people from anywhere in the world in real time.

In fact, such is the popularity of social media that Alexa a company that tracks web traffic, reported that as of 2014 the most popular social networking sites were Facebook with over 900 million users, only seconded by Twitter with 310 million, while LinkedIn, a website catering to professional workers, quadrupled its size to more than 25 million members in 2008 alone, and as of March 2014, it had reached 225 million users (LinkedIn, 2012). Meanwhile, YouTube announced that as of 2014 over 6 billion videos were viewed per day up from 4 billion in 2012 and that in 2014 more than 1 billion unique users visited per month up from 800 million in 2012. In terms of demographics, a 2014 Pew report found that more women (76%) compared to men (72%) use SNS, while younger adults aged 18-29 years (89%) used SNS more than older adults aged 65+ (49%) and while those with some college (78%) tended to use SNS more compared to those with less than high school (72) and those with college degrees (73%). Hence, as a result, this growing popularity of SNS has evoked a new debate: Do these SNS contribute to society by allowing community members to become informed, find common causes and participate more in civic activities (e.g. Bennett, 2007, 2008; Gil de Zúñiga, Jung, & Valenzuela 2012), or do they foster shallower relationships, distract people from the civic and political happenings in their communities, leading to zero offline civic participation (e.g., Hodgkinson 2008).
**Social Media Use and Offline Civic Engagement**

Optimists of SNS argue that there is evidence that points to SNS having a prosocial effect. For example, most scholars would agree that in 2008, Facebook without a doubt revolutionized the way politicians conduct their campaigns as then U.S. presidential candidate Barack Obama’s campaign successfully created an online network site, my.barackobama.com which managed to recruit a wide range of campaign volunteers from across the country (Dickinson, 2008). In fact, a report by Pew observed that Obama’s use of social media was so effective to the extent that of the 83 percent of 18-24 year-olds who had social networking accounts in 2008, two-thirds of them were using these sites for political activity at the time (Pew, 2008). Moreso, an updated 2012 report by Pew indicated that engagement through social networking sites and Twitter has become a marked feature of political and civic life for a significant number of Americans such that during the 2012 presidential elections, Pew found that of the 69% and 16% SNS and Twitter users, at least of 38% of these respondents had used social media tools to like or promote political or civic material that others have posted; to encourage others to vote (35%); to post their own thoughts and comments about a political or civic issue (34%); to encourage others to take action on a political or civic issue that is important to them (31%); and to post links to political or civic issues (28%). Therefore, Rainie and Smith (2012) in another report by Pew on *Politics on Social Networking Sites* claimed that the use of SNS sites sometimes even impacts political views and involvement as 25% of SNS users they surveyed reported that they had become more active in political issues after discussing or reading political posts on SNS. At least 16% of SNS users said that that since using SNS, their views about certain political issues had changed.
Twitter has also been shown to have political potential. Scholars who studied the role of Twitter during the Arab uprisings observed that in conjunction with other social networking sites, such as Facebook and Youtube, Twitter became an avenue of great importance for the Arab Spring protesters (Kavanaugh et al., 2013). Research by the University of Washington in 2011 which analyzed YouTube, Facebook and Twitter data found that conversations on Twitter about the revolutions in these countries often preceded major events. In fact, during the week before Egyptian president Hosni Mubarak resigned, the researchers found that the total rate of tweets from Egypt and around the world about the political protests ballooned from 2,300 a day to 230,000 a day. Videos featuring protest and political commentary went viral with the top 23 videos receiving nearly 5.5 million views (O'Donnell 2011). Similarly, in another study, Burns and Eltham (2009) also observed that Iranians in 2007 turned to twitter as a means of expressing their opinions about the 2007 presidential election.

As a result, it is not surprising that today some scholars argue that social media can lead to a further increase in offline political and civic engagement even among citizens who are already civically engaged. For example Valenzuela, Park and Lee (2009) using data from a web-based survey conducted in fall 2007 at two large public universities in the southwestern U.S. state of Texas found support for their hypothesis that intensity of Facebook use had strong positive relationships with both offline political and civic engagement, as well as students' life satisfaction and social trust. Likewise, Zhang et al. (2010) using a telephone survey of 998 Southwest residents to examine the impact of SNS sites such as Facebook, Myspace and YouTube on citizens civic and political citizenship also found support that SNS sites help promote further civic participation among both online and offline civic citizens. Thus using hierarchal regression analysis, they found that while SNS was not a strong predictor of political
engagement, however, reliance on SNS was a strong predictor of civic participation, leading the authors to suggest that there might be a strong difference between civic and political engagement (Zhang et al., 2010). This is supported by Postelnicu and Cozma’s 2008 study which provided mixed support for the notion that social networking sites influence political attitudes. Thus, the researchers found that while their respondents reported high levels of political efficacy (4.6 on a 5-point scale) and campaign interest (3.96 on a 5-point scale) they failed to acknowledge that this was influenced by their use of social networking sites. Further, they found that relying on social networking sites for information seeking did not predict any of their political measures which included political efficacy, ideology, and political interest. Hence, the authors concluded that perhaps the relationship between SNS and political attitudes is not always a direct one.

Skeptics of social media go as far as to argue that social media use does not lead to either offline civic or political participation. For example, Baumgartner and Morris (2009) in their study of the impact of Facebook and Myspace on civic and political engagement among young adults during the beginning of the 2008 presidential primary season found no evidence to support that people who use social media use it for civic and political purposes. They argued that contrary to most belief, political news shared on SNS are reactionary and generally uninformative and that users are "no more inclined to participate in politics than users of other media" (Baumgartner & Morris, 2010:24). In their conclusion, they argued that online political participation is fleeting and not necessarily indicative of offline participation since SNS users more likely to have meaningful participation online than offline. Similar conclusions were also made by Park and Valenzuela (2009) in their study of SNS and civic engagement when they observed that although social network users report higher levels of civic engagement than non-users but they argued that this is because these social network users are already offline civic
participants. Also, they found no evidence suggesting that SNS use adds to additional political or civic engagement among already civically-engaged citizens. This study disagrees with these findings since other scholars have found a positive association between social media and civic engagement (Xenos & Moy, 2007; Boulianne, 2009; Gil de Zúñiga, et al., 2009; Gil de Zúñiga, et al., 2012; Lee, et al., 2013; Kavanaugh, Tedesco, & Madondo, 2014). Thus, similar to these studies, this study started by first examining whether social media is positively associated with civic engagement, but went beyond this by investigating whether social media has additional effects on offline civic engagement beyond those of traditional internet.

Additionally, examined whether social media has managed to decrease some of the digital divide (education) that is prominently reported with traditional internet use. A few scholars have explored this question (e.g. Smith, 2009; Kavanaugh, Tedesco, & Madondo 2014). These researchers found that although age and household income strongly correlate with use of SNS for civic engagement, they found that the correlation between education and social media use is slightly weaker. This is an important finding because it suggests that social media may lead to increased civic involvement among the less educated individuals who traditionally, have not been as involved in local issues compared to those well-educated. However, what remains unknown, and is key to this study, is whether social media has independent effects on offline civic engagement beyond that of traditional internet usage.

**Social Capital Theory and Civic Engagement**

*Definitions*

The concept of social capital has attracted the attention of many scholars in different fields, including sociologists (Bourdieu, 1986; Coleman, 1988; Portes, 1998; Lin, 1999); political
scientists (Putnam, 2000), and economists (Knack, & Keefer, 1997; Hauser, Tappenier et al., 2007). The term itself was originally used to describe the benefits associated with having personal ties which were thought to be useful for personal development in social organizations (Jacobs, 1961; Loury, 1977). However, earliest changes to this definition were proposed by Pierre Bourdieu in the mid-80s. For him, social capital was an “aggregate of the actual or potential resources which are linked to possession of a durable network” (Bourdieu, 1986: 248). This means that the volume of social capital one possesses is not only dependent on the size of the network that one has but also on the volume of the capital that one has and those that he is connected to, be it, economic, cultural or symbolic (Bourdieu, 1986). He argued that the possession of social capital “did not necessarily run alongside that of economic capital, but that it still was, in his view, an attribute of elites, a means by which particular networks hold onto power” (Tzanikis, 2013). Thus he concluded that social capital generally served to hide the “naked-profit seeking of its holders – the elite” (Bourdieu, 1988). His theory however, has been criticized as reductionist because of its tendency to privilege economic capital as the “ultimate source and eventual exchange form of all other capitals” (Jenkins, 1992; Alexander, 1996; Tzanikis 2013).

Nonetheless, the most developed definition of social capital can be found in the works of sociologist James Coleman. For him social capital “consisted of some aspect of social structure, that facilitates certain actions of actors whether persons or corporate actors-within the structure” (Coleman, 1988 p.98). In fact, he argued that there are three forms of social capital: 1). obligations and expectations (which depend on trustworthiness of the social environment); 2). information-flow (capability of the social structure); and 3) norms of reciprocity accompanied by sanctions. Stockwell (1999) in his thorough review of Coleman argues that, of these three
forms of social capital, Coleman seemed to put trustworthiness at a higher pedestal. Thus, Coleman argued that trustworthiness is necessary because the higher the degree of trustworthiness the higher the degree of social capital. However, with information flow, Coleman seemed to believe that if individuals in a community have accurate information, they will act accordingly. For example, if individuals have access to information about community events, he argued, they then will likely participate in community events. Similarly, Dasgupta and Serageldin (2014) noted that even in cases where community members are not interested in current events happening in their communities, but information flow is still important because there is a possibility that these disinterested individuals could still pass on the information to their friends and family who might choose to attend civic or political events.

Lastly on norms and sanctions, Coleman (1994, p. 86) had this to say:

A prescriptive norm within a collectivity that constitutes an especially important form of social capital is the norm that one should forgo self-interest and act in the interests of the collectivity.

According to Coleman (1988) norms are therefore necessary in society because they serve to encourage positive behavior and limit negative behavior. Likewise, he also argued that sanctions serve the important role of guiding behavior. Thus, Coleman concluded that effective norms can only be implemented because individuals know that sanctions (consequences) may be imposed if norms are violated.

In addition to the above, Coleman also strongly believed that certain kinds of social structures such as closure of social networks are also key to facilitating some forms of social capital. Thus in his updated 1994 definition of social capital, Coleman noted that the key idea is that “networks with closure- that is to say, networks in which everyone is connected such that no
one can escape the notice of others, which in operational terms usually means a dense network-are the sources of social capital.” In other words, what Coleman was saying here was that communities operate effectively and for the good of society if its members are in closed networks where elected members can ensure that everyone is adhering to the norms of that community. Therefore, Dasgupta and Serageldin (2001) argued that this suggests that effective norms of reciprocity operating in closed networks constitute a powerful form of social capital.

However, no other scholar has generated so much interest in social capital than political scientist, Robert Putman, whose work in this field was built while studying institutional performance in Italy where he was exploring the differences between regional administration in the north and south of the country. Thus when analyzing why Northern Italy seemed to prosper better than the South; Putman (1993) concluded that it was mainly due to a florescence of "civic community," which he termed social capital. Thus he defined this social capital as “features of social organizations, such as trust, norms and networks that can improve the efficiency of society by facilitating coordinated actions” (Putnam, 1993:167). Two years later, while studying American civil society, he improved upon this definition when he redefined social capital as “features of social life—networks, norms, and trust—that enable participants to act together more effectively to pursue shared objectives” (Putnam, 1995: 664-665). Thus unlike his earlier definition, he identified “participants” rather than society as the main beneficiaries of social capital. Further improvements were made in 2000 in his most famous book to date, Bowling Alone, where he stated that social capital refers to “connections among individuals – social networks and the norms of reciprocity and trustworthiness that arise from them. Essentially, he noted that social capital is “closely related to what some have called “civic virtue.” (Putman
2000:19), meaning that social capital is important because it allows people to work together, to socialize, and to establish communities in which they live together communally.

More importantly, Putman in his definition seemed to regard trust as one of the most important component of social capital. While he maintained that “effective collaborative institutions require interpersonal skills and trust,” however, he argued that collaborations do not make sense if individuals do not trust each other. As such, he argued that effective civic participation was most effective when individuals trust each other. Evidence of this importance of trust in social capital has since been seen in other scholars’ definitions of social capital. For example, Woolcock (1998:153) defined social capital as “the information, trust, and norms of reciprocity inhering in one’s social networks.” Sirianni and Friedland (1998) also defined social capital as “those stocks of social trust, norms and networks that people can draw upon to solve common problems.” Similarly, Fukuyama (1999:16) also defined social capital as “the existence of a certain set of informal values or norms shared among members of a group that permit cooperation and trust among them.”

Given these varied definitions of social capital, Gullen, Coromina and Saris (2011) argue that it is hard to determine whether social capital should be viewed as mainly a personality trait (Bourdieu, 1986; Coleman 1990) or as a community characteristics (Portes, 1998; Fukuyama, 1999; Putman, 2000), or how to measure it (Williams 2014). While this study may not resolve all of these questions; however, by investigating how we can measure social capital, perhaps this study may help resolve some of the unclear definitions of social capital found in the literature.
Operationalization of Social Capital in the literature

Although the concept of social capital remains popular, one of its greatest weaknesses remains its inability to have a consensus agreement among scholars on how to measure it. For example, the literature has seen scholars like Coleman (1994) and Putman (2000) mention trust, reciprocity and networks as measure of social capital, while Bourdieu (1986) emphasized group membership and networks, and Appel et al.,( 2014) seemed to place great importance on civic participation, social support, and social cohesion as measures of social capital.

However, there is a number of research that has attempted to create social capital constructs e.g., The Index of National Civic Health, USA (1996) [political engagement + trust + associational membership + security + crime +family stability and integrity]; Onyx and Bullen (1997) [participation in local community; proactivity in social context; feelings of trust and safety; neighborhood connections; family and friends connections; tolerance of diversity; value of life; and work connections] and World Value Survey (group membership and trust). While many have not been successful in creating one construct, there still remains a need to find some commonality in how to measure social capital especially with the emerging social media. Thus the current study will examine four measures of social capital (group membership, networks, trust and norms of reciprocity) and assess how they operate as individual items or as a construct, with the eventual goal of seeing how the items/construct affect online and offline civic engagement.

Currently, a number of well-known social surveys such as the US General Social Survey (GSS) and the European Social Survey (ESS) include organizational membership as part of their measure of social capital. One question commonly asked is “Are you currently a member of any kinds of organization?” This is such an important measure because membership in groups is
seen as encouraging its members to work together for the common good of the community and is therefore essential in building social capital (Robinson & Levy, 1986; Fishkin, 1991; Delli Carpini, & Keeter, 1997; Gastil & Dillard, 1999). Robert Putnam (2000) using a somewhat similar method to GSS also proposed a method of measuring social capital which advocated for the counting of civil groups in society, through using a number \( n \) to track the size of membership in different groups such as bowling leagues, literary societies, sports clubs, political clubs and others as they change over time and across different regions.

Nonetheless, Fuyakima (2010) and other current scholars (Gil Zinuga, 2013) argue that the ever increasing change in technology makes it hard to apply Putman’s group measure because as Fuyakima states “how do we account for the proliferation of on-line discussion groups, chat rooms, and e-mail conversations that have exploded with the spread of personal computers since the 1990s” (p. 20). Hence it is easy to see why today’s scholars lean towards the GSS measure which asks respondents to state the number of groups that they are involved with whether online or offline (Norris, & Jones, 1998; Shah, Kwak et al., 2001; Shah, McLeod, et al., 2001; Krueger, 2002; Tidwell, & Walthers, 2002; Williams, 2007; Ellison et al., 2011, Gil de Zuniga and Valenzuela, 2011)

While membership in a group is important on its own, other scholars have argued that group membership is not enough if it is not linked to the values found within social networks. Thus scholars like Bourdieu were adamant that among the most important dimensions of social capital: group membership and social network should rank higher. He noted that “the volume of social capital possessed by a given agent ... depends on the size of the network of connections that he can effectively mobilize” (Bourdieu, 1986: 248), and that “it is a quality produced by the totality of the relationships between actors, rather than merely a common “quality” of the group
(Bourdieu, 1986: 249). Tzanikis (2013) notes that this means that involvement in the social networks developing within these groups can be very valuable.

A good example of the value of social networks is given by Portes (1998) who notes that while group memberships are important but the social networks created within these groups plays a vital role among ethnic business enclaves. Thus he noted that enclaves (dense concentrations of immigrant firms) have been instrumental in employing a significant proportion of their co-ethnic fellow men through network connections. Similar findings have also been observed: New York’s Chinatown (Zhou, 1992); Miami’s Little Havana (Portes, 1987) and Los Angeles Korea town (Nee at al., 1992).

In addition to this, other scholars have also found interactions within networks to be positively associated with both political and civic participation. For example, a number of researchers have found a positive relationship between political discussion networks and civic engagement (Putman, 2000; Mutz, 2006; Mossberger, Tolbert, &McNeal, 2007; Park, Kee, & Valenzuela, 2009; Kaufhold, Valenzuela, & Gil de Zuniga, 2010; Gil de Zu’n`iga & Valenzuela, 2011). While others have seen a positive relationship with levels of political knowledge (e.g., Eveland & Hively, 2009), and vote preferences (e.g., Huckfeldt & Sprague 1995). Valenzuela, Kim and Gil de Zuniga (2010) while examining the role of discussion networks on online political participation, even found that people with a larger interpersonal network of discussants tended to be more engaged in online political activities, signifying the importance of networks as a measure of social capital.

However, while group membership and social networks are key components associated with social capital, some scholars have argued that these components cannot function independent of trust and feelings of norms of reciprocity among members of groups or networks.
Putnam’s conception of the relationship is straightforward. He notes that “the theory of social capital presumes that, generally speaking, the more we connect with other people, the more we trust them, and vice versa” (Putnam, 1995, p. 665). Further, he theorized that interpersonal trust encourages individuals to join groups or networks, and even stated that “a society that relies on generalized reciprocity is more efficient than a distrustful society, for the same reason that money is more efficient than barter. Honesty and trust lubricate the inevitable frictions of social life” (2000, p. 135). Cailbourn and Martin (2002) also remind us that it is conceivable that distrust in others in society could also encourage people to join groups. Thus, the General Social Survey since its inception in 1972 has consistently used trust as one of its important measures of social capital. Halpern (2005) even argued that trust should be widely referred to and even used as the single indicator of social capital.

While this may be true, Häuberer (2009) argued that Halpern (2005) should not be quick to declare trust the single most important measure of social capital as he stressed that norms of reciprocity should not be underrated, his argument being that norms of reciprocity are undeniably important for facilitating and reinforcing relationships among citizens. For Fu (2004), norms of reciprocity are thought to be based on the assumption that extending goodwill to others will be repaid in the future. According to Gouldner (1960), the norm of reciprocity is a “social rule that maintains, among other things, that people should return favors and other acts of kindness.” As such, he argued that compliance to this rule allows for smooth and fair social exchanges. Häuberer (2009) notes that reciprocity can take two forms, that is, balanced or generalized. Balanced reciprocity he argued “indicates the exchange of goods of the same value at the same time”, while generalized reciprocity indicates “exchange relations containing a misbalance in the value of exchanged goods in every moment. “Generalized reciprocity means
that a person will help another one without expecting an immediate service in return. Thus he argued that norms of generalized reciprocity lead to a trusting behavior in situations people do not normally do so.

Putman (1993) further notes that, each individual act in a system of reciprocity is usually characterized by a combination of “short-term altruism (benefiting others at a cost to the altruist)” and “long-term self-interest (making every participant better off) (p. 172).” He believed that reciprocity can resolve problems of collective action and reconcile self-interest and solidarity. Likewise, Portes (1998) viewed social capital as “primarily the accumulation of obligations from others according to the norms of reciprocity” (p. 7). Accordingly, Portes (1998) divided reciprocity into “consummatory motivation that is bounded by the limits of specific community and instrumental motivations” that emphasize reciprocal exchanges. Thus in conclusion, Newton (1997) noted that reciprocity can bind the community via shared interests, and that it can create an environment that encourages voluntary collective behavior. As a result, Newton strongly advocated for the use of norms of reciprocity as a measure of social capital.

Nonetheless, while I have discussed in length these different dimensions of social capital (groups, discussion networks, trust and reciprocity), what still seems to be missing from the literature is a consensus on how to measure these dimensions. That is, should trust, reciprocity, discussion networks and group membership be combined into one index, or should each one of these dimensions be treated as single indicators of social capital? Or is social trust a precursor of group membership or is it built within networks? Are these dimensions correlated? Given that some of these questions remain unanswered, it is therefore the intention of this study to test the relationship between these differing measures of social capital. Based on the literature reviewed, the study will begin by testing the model that norms of reciprocity and trust lead to joining
groups and that joining groups can lead to political discussions within networks. Although, it might be the case that trust and group membership will have a reciprocal relationship as others have found (Coleman, 19994; Putnam, 2000; Halpern, 2005).

Social capital dimensions and their relationship to online and offline civic engagement

Group Membership and Civic Engagement

Membership in groups is seen as encouraging its members to work together for the common good of the community (Robinson & Levy, 1986; Fishkin, 1991; Delli Carpini & Keeter, 1997; Gastil & Dillard, 1999;) and that group membership is also seen as providing an opportunity for its members to discuss politics (Conroy, Feezell & Guerrero 2012). Thus, discussion is thought to evoke feelings of efficacy among citizens, leading to higher rates of political activity (Delli Carpini, Cook, & Jacobs, 2004; Andersen, & Hansen, 2007; Cho et al., 2009). In fact, some scholars go so far as arguing that being in a group encourages democratic values, and the development of important political skills (McFarland & Thomas, 2006). In addition to this, it is also argued that belonging to a group provides the necessary motivation and incentive needed for one to become politically informed (Coleman, 1988; Fishkin, 1991). Some scholars have even gone further to argue that individuals should even be encouraged to belong to a group from a young age. Evidence indicates that individuals who are active in school organizations from a young age (except sport organizations) usually end up being disproportionately more involved in community activities as adults even when the impact of later influences in life such as marriage, children, jobs, spouses etc are accounted for (Verba et al., 1995; Youniss et al., 1997; Sax &Avalos, 1999; Wilson, 2000; Flanagan & Faison, 2001; Andolina et al., 2003).
Today, there has also been a shift from offline group membership to online group membership (see Rich, 1999; Klein, 1999; Uslaner, 2002; Hampton & Wellman, 2001; Shah et al., 2005; Bimber, Flanagan, & Stohl, 2005; Kavanaugh et al., 2007). Kavanaugh et al. (2006) even argue that the internet has become an avenue for encouraging groups to express their political views as individuals get to share information online. In fact, in one of their earlier studies of the impact of the internet and civic engagement, Kavanaugh et al. (2005) noted that community group communication via the internet such as email or list servers is crucial in increasing group participation, involvement in issues of interest and civic participation. Byoung-Kim (2009) using telephone data from a random sample of Blacksburg and Montgomery residents also found that the effects of local group level factors (such as group internet use and group political interest) were significantly related to individual citizens’ perceptions of the helpfulness of internet use for civic engagement and political participation. Additionally, due to the popularity of social networking sites such as Facebook, Google +, Instagram etc, some scholars have begun to argue that social media groups are just as important as offline civic groups in promoting civic engagement (Xenos & Moy 2007; Boulianne, 2009; Gil de Zúñiga, et al., 2009; Pew 2009, 2012, 2013; Gil de Zúñiga, et al., 2012; Lee, et al., 2013).

Political Discussion Networks and Civic Engagement

Existing literature indicates that discussion networks play a crucial role in the democratic process because they enable citizens to engage in political talk with their friends, families and even strangers (Lazarsfeld et al., 1968; Habermas 1989; Zuckerman, 2005; Mutz, 2006). It has also been argued that political discussion networks exposes people to diverse viewpoints which helps individuals to “comprehend the rationale and motivation of different perspectives, which in
turn increases political understanding and tolerance” (Mutz 2000; Price & Capella, 2002; Kim, Hsu & de Zuniga 2013). Moreso, Gonzalez-Bailon, Kaltenbrunner and Banchs (2010) argue that in addition to tolerance, these diverse viewpoints even lead to trust in those who hold different views.

Concerning civic engagement, some scholars have found a positive relationship between political discussion networks and offline civic engagement (Putman, 2000; Mutz, 2006; Mossberger, Tolbert, & McNeal, 2007; Park, Kee, & Valenzuela, 2009; Kaufhold, Valenzuela, & Gil de Zúñiga, 2010; Gil de Zúñiga & Valenzuela, 2011). While others have seen a positive relationship with levels of political knowledge (e.g., Eveland & Hively, 2009), and vote preferences (e.g., Huckfeldt & Sprague, 1995). Others have even attributed discussion networks as one of the major contributors to youth civic engagement. For example, Verba, Schlozman, and Brady (1995) in their study of youth civic engagement came to the conclusion that people who grow up in households in which they discuss current events with their parents and saw their parents volunteering for civic activities, were on average more likely to follow in those footsteps once they became adults themselves. Similarly, Perry et al. (2002) in their study of political and civic engagement among 1,500 American youths nationwide aged 15-25 years found that youth political discussion networks with parents was the strongest predictor of several important civic measures including volunteering and registering to vote. Further support of these findings can also be seen in Andolina et al. (2003) study of youths aged 18-25 years who observed that young adults who grow up in families in which politics is commonly discussed with their parents, tended to vote, volunteer and be more civically engaged than other youth who did not experience these types of political discussions in their homes, indicating a positive relationship between political discussions and offline civic engagement. Also, most the studies in this area have found that
youth discuss politics more often with parents than peers (Galston, 2001; Hahn, 1998; Niemi, Hepburn, & Chapman, 2000; Richardson & Amadeo, 2002; Waldman, 2001). Turning to the internet, current studies have found the positive relationship between discussion networks and civic participation to still be true online (e.g. Price, & Cappella, 2002; Min, 2007; Ho, & McLeod, 2008; Kavanaugh, Tedesco, & Madondo, 2014). Most of the positive relationships have been found with traditional internet (e.g. web browsing and email) [Kavanaugh, Carroll, Rosson, Zin, & Reese, 2005; Hampton & Wellman, 2001.] For example, Shah et al. (2005; 2007) found that frequent political communication online was a significant predictor of participatory behaviors offline, even after controlling for news use, and exposure to campaign advertisements. Further, Valenzuela, Kim and Gil de Zuniga (2010) while examining the role of political discussion for online political participation, found that people with a larger interpersonal network of discussants tended to be more engaged in online political activities. Similarly, Pew (2012), also reports that social media users who talk about politics on a regular basis are the most likely to use social media for civic or political purposes.

**Trust and Civic engagement**

Contemporary literature on social capital and political behavior has consistently linked trust to civic engagement. Four decades ago, Verba (1963, p.285) proclaimed that “the belief that people are generally cooperative, trustworthy, and helpful is frequent, and has political consequences. Belief in the benignity of one’s fellow citizen is directly related to one’s propensity to join with others in political activity.” Similarly, Putman (2000) widely claimed that there is an undeniable close association between generalized social trust (a ‘yes’ to the statement ‘In general, most people can be trusted’) and civic
engagement (which is measured by membership and activity in voluntary associations).

Empirical evidence of this relationship exists (see Hetherington & Nugent, 2001; Pattie et al., 2003; Bélanger & Nadeau, 2005). In fact some scholars argue that building trust first is essentially important for civic citizenship because failure to do so may result in individuals being less trusting of other community members, leading these individuals to feel less motivated to join community groups, or to attend community meetings or volunteering activities (Choudhary et al., 2012). Ali (2011) even suggests that the success of any civic or political event depends on trust. Such an outcome, Ali argues, would indirectly foster social capital.

Nonetheless, most researchers seem to argue that the relationship between trust and civic engagement is not one-directional. For example, Stolle (2000) in her study of volunteerism among group members in Germany, Sweden and United States found that long-term participation in a voluntary group led to greater trust among fellow members, while trust in these voluntary groups also led members joining the groups in the first place. As such, Robert Putman (2000) was quick to point out that while civic engagement stems from trust, however, civic engagement itself can also lead to trust. He further argued that “civic engagement and trust are mutually reinforcing” and “the causal arrows among civic involvement, reciprocity, honesty, and social trust are as tangled as well-tossed spaghetti” (2000: 137). This means that while Putman acknowledged that trust has a positive relationship to civic engagement activities such as volunteering: civic engagement itself promotes trust. Thus, Bakers (2011) contended that both selection and causation seem to be central in producing the relationship between trust and civic engagement. By selection he meant the effects of trust on civic engagement, and by causation, he meant the socialization effect of civic engagement on trust. All in all, it appears that, the general argument here is that there is a reciprocal relationship between trust and civic engagement, that
is, civic engagement leads people to be more trusting and that more trusting people are those who become more involved in civic life.

Concerning the relationship between online civic engagement and trust, earlier studies seemed to accuse the internet of having a negative effect on trust and civic engagement. This emanated from Putman’s (2000) claim that technology, especially television was straying people away from socializing. Thus he noted that watching a lot of television was keeping people inside of their homes and away from civic organization and social events that generate trust. However, given that Putman’s arguments were in 2000, this claim has since been refuted (see Yang, 2009; Pew, 2009; Hoffmann, 2011; Pearce 2014). Thus, as younger generations become more comfortable with evolving technology, it is only reasonable to expect that trust has some positive effect on online civic engagement since people who use the internet have to have some level of trust of the civic and political groups they join online. Hence, Clark (2009) notes that since the increased use of the internet, more people have become more trusting of the internet. Therefore, this study hypothesizes that trust will be positively related to both online and offline civic engagement especially among younger adults.

Norms of Reciprocity and Civic Engagement

While not much is written in the literature on norms of reciprocity as an independent predictor of civic engagement, Putman (1993, p. 89) considered this variable to be equally important. Thus he noted that norms of reciprocity ‘are embodied in, and reinforced by, distinctive social structures and practices.’ In his definition of social capital, Putman is quoted as saying that “norms of reciprocity and networks of civic engagement" as well as trust, are important concepts that "can improve the efficiency of society by facilitating coordinated
actions” (p. 167). Because trust and norms of reciprocity are so intermingled, some scholars like Häuberer (2009) argue that norms of generalized reciprocity tend to lead to trusting behaviors among community members which in turn allows members to act together more effectively for the common good of their society. For example, Hauberer (2009) in his study of social capital found norms of reciprocity and trust to be positively associated with civic activities such as building a playground in the neighborhood. Put simply, the argument here is that, the more people trust each other, the more they are likely to help each other or cooperate with others.

Nonetheless, despite the fact that there are hardly any studies that examine the relationship between norms of reciprocity and online civic engagement, this study will assume that there is a possibility that Putman’s positive association between norms of reciprocity, trust and offline civic engagement might hold for online civic engagement.

**Hypothesizing the relationships between Social Capital Variables and Civic Engagement**

Although the reviewed literature above seems to offer no consensus on whether social capital leads to civic engagement this study takes the position that certain dimensions of social capital predict civic engagement. These dimensions are; group membership, discussion networks, trust and norms of reciprocity. As such, this study builds and tests three models:

**Model 1:** The predictive power of social capital variables (trust, reciprocity, group membership and discussion networks) on traditional internet use for civic participation.

**Model 2:** The predictive power of social capital variables (trust, reciprocity, group membership and discussion networks) on social media use for civic participation.

**Model 3:** The predictive power of social capital variables (trust, reciprocity, group membership and discussion networks) on offline civic participation.
Age, Social Capital Dimensions and Civic Engagement

While some researchers suggest that social capital increases with age and others argue the opposite, it has generally been well established in the literature that younger people are less likely to be civically or politically engaged in their communities than their older counterparts (Verba et al., 1995; Putman, 2000, 2007; Wattenberg, 2006; Kavanaugh et al., 2005, 2006, 2012; Bauerlein, 2008; Kim, 2015). In fact, Flanagan and Levine (2010) argue that they lag behind in most of the important characteristics of citizenship which include: 1) belonging to at least one group, 2) attending religious services at least monthly, 3) belonging to a union, 4) reading newspapers at least once a week, 5) voting, being contacted by a political party, 6) working on a community project, 7) attending club meetings, 8) and believing that people are trustworthy. The only exceptions they noted is volunteering, which they attribute to schools, colleges and community groups since these organizations encourage youth volunteerism (Flanagan & Levine 2010). According to Uslaner (2003) two of the main reasons that explain why younger adults continue to lag behind is that they do not stay in the same area for long, making it hard to reach them with civic or political messages; and that they generally make less money than older adults which makes their stake in politics less.

However, while it appears that younger adults might be lagging behind in offline civic engagement than older adults, the same cannot be said of online civic engagement. For example, results from a 2013 Pew report on Offline and Online Civic Engagement in America showed that older adults predominately participate in civic or political activities offline while younger adults predominately participated in online civic engagement. Thus the authors found that 55 to 65 year olds (49%) and 35-44 year olds (39%) had the highest percentages in terms of offline civic engagement compared to other age groups. Yet, when it came to online civic engagement the 55-
65 year olds (22%) had the lowest percentage compared to the 18-22 year olds (44%) who had the highest percentage compared to all the other age groups. Similarly, other scholars have also found that younger adults are more likely than their elders to watch political video clips online and to use social networking sites for political purposes, and to express their opinions in online forums (e.g. Smith and Raine 2008). Thus it is not surprising that during the 2008 presidential elections, Pew found that compared to other age groups, younger adults reported that they got most of their election news online and that they learned more about Obama’s campaign online than any other source.

More importantly, Pew also found that political engagement on social networking sites is especially commonplace among the youngest Americans, as two-thirds (67%) of all 18-24 year olds (and nearly three quarters of those young adults who use social networking sites) engage in some sort of social network-related political activity in the 12 months preceding Pew’s survey. Although the report also noted that while older adults tend to be fairly politically active on social networking sites to the extent that they use them, but they found that only nearly six in ten social network-using seniors are politically active on these sites, which only works out to just 13% of all Americans in the 65+ age group. Others have even gone further to argue that social capital dimensions such as networks, trust and group memberships may also be major contributing factors as to why younger adults are gravitating towards online civic participation, especially social media compared to older adults (Dupre, 2007; Willson et al., 2007), Hao, Wen and George (2014) even concluded that there is no doubt that young citizens seem to show greater enthusiasm about online political participation than older adults. They argued that this is because the internet is enriched with interactive, visual-intensive, and chatrooms which attract younger citizens, than could any other traditional news source. Given all these findings, this study makes
it a priority to examine whether social media reduces the traditional age effect in civic
engagement that used to be found with offline civic engagement, even when controlling for
social capital (group membership, discussion networks, trust and norms of reciprocity).

**Control Variables**

*Education*

Of all the variables that predict civic and political participation, education has always
been found to play an important role. Such is the importance of education that Converse
(1972:324) commented that:

> whether one is dealing with cognitive matters such as level of factual information about
> politics or conceptual sophistication in its assessment; or such motivational matters as
degree of attention paid to politics and emotional involvement in political affairs; or
questions of actual behavior, such as engagement in any of a variety of political activities
from party work to vote turnout itself: education is everywhere the universal solvent, and
the relationship is always in the same direction. The higher the education, the greater the
‘good’ values of the variable. The educated citizen is attentive, knowledgeable, and
participatory and the uneducated citizen is not.

In fact, writing over 18 years ago, sociologist Pierre Bourdieu noted that while social
capital may be important for society, social capital may have an exclusionary force, as
individuals with higher education as well as cultural capital tended to benefit the most
(Bourdieu 1986). Since then, other scholars have also reported the same findings (Niemi &Junn,
1998; Niemi, Hepburn, & Chapman, 1999). Likewise, other scholars have also found that those
highly educated are more likely to vote (Rosenstone & Hansen, 1993). Additionally, the higher
educated in society have also been found to be more likely to volunteer (Uslaner, 2003; Baum,
just as they are more likely to give to charity and to attend local and political meetings (Uslaner, 2010). In addition to this, Verba et al. (1995) also observed that those highly educated usually get jobs that enable them to gain skills that make for future civic or political activists. Nonetheless, while it is well documented that education has a positive relationship to offline civic engagement, some researchers have argued that education may not be strongly correlated with social media. For example, Smith in a 2009 Pew report observed that while people from high-income households and those with undergraduate degrees or higher are more likely to be politically active offline than the poorer and less educated citizens, however, the authors also observed that the effects are slightly less pronounced in political engagement on social media. This implies that the use of social media (e.g. social network sites like Facebook, Google +) for civic purposes might not be not as strongly associated with socio-economic status (SES) as measured by education. Given this, I also hypothesize in this study that education will likely have a weaker association to use of social media for civic engagement compared to traditional internet (e.g. email and web browsing).

**Gender**

A central issue in the extant literature today is whether gender differences in civic engagement still exit. For decades it was widely believed that women participate less in all spheres of civic life or social capital (Schlozman et al., 1999; Verba et al., 1995, 1997; Norris, 2002). In addition to this, it was also argued that women participate less in issues related to politics (Bimber, 1999,2000; Schlozman et al., 1999; Norris, 2002) and that they are less likely to participate in collective action (Coffe & Bozendahl, 2010). The traditional explanations for these gender difference seemed to center around the role of structural social factors such as
education, work status, marital and parental roles which affect women’s access to opportunities and resources which enable civic or political participation (Burns, Schlozman, & Verba, 2001; Cicognani et al., 2008). For example, Verba and colleagues (1997) in their study when comparing civically active men and women noted that economic resources were the most important factors hindering women’s civic and political participation. They even came to the conclusion that if women were well-endowed with financial resources their overall levels of political and civic activity would be equal or closer to that of men.

From a psychosocial perspective, Cicognani et al. (2008) also argues that gender stereotypes may be one of the most powerful processes influencing gender differentiation when it comes to civic or political activism. Thus the authors argue that there is a tendency in society to ascribe typical characteristics to men and women. For example, while women are expected to cook, clean and look after the house, their husbands are expected to look for employment outside the home. According to Delli Carpini and Ketter (2002) these household roles expected of women are a disadvantage because employment outside the home has been linked to political activism as research indicates that most political discussions outside the home, take place at work. Consequently, Sapiro (1983) observed that women were less exposed to political or civic activity.

Nonetheless, today’s scholars challenge these findings, which is only logical considering that women’s roles in society have since changed significantly. Jugert et al. (2012) argue that any gender differences that might have been present in the past decades may not be all applicable today because of the women’s movement and the increasing norms of gender equality. Jenkins (2005) for example observed that whereas in the past, women were disadvantaged in education (which is associated with civic engagement), today record levels of young women
outpace men in college attendance with women making up 57% of college graduates while men make up 43% (Census, 2012). Importantly, the Higher Education Research Institute (HERI) surveys also finds that unlike previous decades where men dominated civic engagement, today female college students spend more time than male students on volunteer service and value helping others in need more than men. In fact, the authors found that that in college 54% of women vs. 47.2 men are more likely to take a course that involves community service, and that after college, women are more likely to volunteer for service programs like AmeriCorps and Teach for America compared to men (Kawashima-Ginsberg, & Thomas, 2013).

While the above evidence seems to indicate that women are currently just as involved in civic participation as men, the gender gap theory regarding political participation remains less clear. For example, some studies find young men showing more interest in political participation than girls (e.g. Norris, 2002; Briggs 2008), while others indicate that young women are just as interested in political activities just as men and in other cases surpassing men (Carpini & Keeter 1996, 2000; Enns et al., 2008; Cicognani et al., 2012). Similarly, the results for gender differences in online civic engagement also remain inconclusive. For example Cicognani et al.’s (2012) study found that men are more likely to use the internet for civic purposes than women. Contrarily, a 2013 Pew study by Smith found that 42% of women who use the internet were more politically active on social networking sites such as Facebook compared to 36% of men. However, despite the unclear direction of this gender variable, this variable is also included in this study because it remains to be seen how gender affects some of the dimensions of social capital (trust, group membership and networks) and online and offline civic engagement.
News Consumption

Media use has long been considered a key determinant in civic and political participation with some scholars arguing that news consumption can directly or indirectly increase civic or political interest (Berelson, Lazarsfeld, & McPhee 1954; Almond & Verba, 1963; Habermas, 1979; Lazarsfeld, Berelson, & Gaudet, 1944; Norris 2000; Putnam, 1995, 2000; Shah et al., 2005; Kim, Hsu, & de Gil Zuniga, 2013). Bachman et al. (2010) noted that individuals who keep up to date with what is happening in their community through reading local news and watching or listening to local channels tend to be more politically and civically engaged than their counterparts who do not. For example, McLeod et al. (1996, 2009) in their two studies observed that individuals who read the newspaper and viewed local channels were more likely to use the information they acquired to reflect and deliberate about local issues happening in their communities. Likewise, Orlowski (2007) using the 2006 Civic and Political Health of the National Survey data which had 1,700 respondents found that increasing amounts of news watching through the television was directly correlated with campaign contributions (which he assumed could be because individuals who watch television are likely to watch campaign advertisements, prompting them to donate). However, in this same study he did acknowledge that television consumption was negatively correlated with civic engagement especially for young adults aged 15-25 years, seemingly supporting Putman’s (2000) assertion that television was eroding social capital.

Nonetheless, other scholars have observed that while the role of television and civic engagement has been less consistent (Jung et al., 2011; Kim et al., 2011; Quintelier & Hooghe, 2011; Zhang & Chia, 2006), however it appears that reading the news has been more consistent. For example Emig (1995) found that people who read newspapers to follow what is happening in
their local community responded more positively to questions which asked them if there were registered voters and whether they voted in the last local elections. Most of them indicated that other than discussion with friends and family, they used the information that they read in the newspapers to follow the election campaigns of candidates. Similarly, Hoplamazian & Feaster’s (2009) study among college students found positive correlations between campus newspaper readership among college students and various campus ties and activities. A 2008 report by the Newspaper Association also came to the conclusion that school programs that encourage children to read newspapers also facilitates their civic engagement 10 to 15 years later.

Of course, while there appears to be a strong link between newspaper consumption and offline civic engagement, current research also seems to indicate that there has been a decline in traditional newspaper consumption (Mindich, 2005; Graybeal, Dennis and Sindik 2010). Some scholars have attributed this to the shift from traditional news consumption to internet news consumption (Shah, McLeod, et al., 2001; Norris, 2002; Gil de Zúñiga, Eulalia, & Rojas, 2009; Gil de Zúñiga & Valenzuela, 2011). Bachmann et al. (2010) argues that this is because the “internet has multiplied both the amount and variety of content available, and citizens in general can take advantage of a growing number of options for finding information about politics and engaging in public affairs.” Thus it appears that not only is the information diverse and easy to access but that, “it is no longer an expensive commodity” (Bimber, 2000). As such, it is not surprising that current research indicates that younger adults (under 30) are more likely to use the internet to read news and are also more likely to use the internet to seek political information online (Bachmann et al., 2010). Also, overall, most scholars have found that news obtained online whether it is through traditional internet (e.g. email and webbrowsing) or social media (e.g. Facebook, Twitter etc.) provides new and meaningful ways of getting engaged in the community.
(see Sha et al., 2005; Xenos & Moy, 2007; Gil de Zúñiga, 2009; Kavanaugh et al. 2007; Kavanaugh, Tedesco, & Madondo 2014), therefore the inclusion of news consumption, as a control variable in this study.

*Extroversion*

The idea that personality traits such as extraversion in part shape political participation has long been be traced back to *The American Voter* (Campbell et al., 1960). However, there has since been a new generation of scholars who have begun to do research in this area (Kavanaugh et al. 2005; Denny & Doyle, 2008; Mondak & Halpern, 2008; Vecchione & Caprara, 2009; Gallego & Oberski 2012). Mondak & Halperin (2008) theorize that since social interaction (a social capital dimension) is essential for many political and civic acts, one’s general predisposition towards interacting and engaging with others should influence their willingness to participate in civic and political activities. Likewise, others have argued that since extraverts are more likely to be embedded in large social networks they have a higher propensity to engage in political and civic participation (Russo & Amna 2013). Indeed, Gallego and Oberski (2012) found that extraversion has an indirect effect on protest activities through the mediation of interpersonal discussions. Moreover, by virtue of their optimistic and confident character, Dawes (2014) argues that extraverts typically are at the forefront during activities such as attending rallies, speaking at town hall meetings, signing petitions and participating in political discussions with others. For example, a study by Mondak et al. (2010) data from a 2006 U.S. survey, with supplemental tests introducing data from Uruguay and Venezuela found a strong and significant relationship between the personality trait extraversion, which is marked by being outgoing, talkative and eagerness to engage with others, and contacting elected officials, attending public
meetings, volunteering and attending election rallies. Similarly, Gerberet al. (2009) also reported extraversion to be significantly related to acts such as attending and speaking at political and civic meetings, but mixed and mostly insignificant for acts such as posting yard signs and contributing money to candidates.

Concerning the internet, overwhelming evidence has also found a strong and positive relationship between extraversion and internet usage (Lampe, Ellison, & Steinfeld, 2006; Wilson et al., 2010; Ryan & Xenos, 2011). For example, Kavanaugh, Carroll, Rosson, Reese, and Zin (2005) argued that in addition to extroverts being directly linked to online civic engagement, they also noted that extroverted, well-educated, informed individuals with several group memberships (what they termed, opinion leaders) were more likely to be involved in local community issues online. Some scholars note that this is because extravert people are more likely to find the internet an intriguing place to advocate and voice their political and civic opinions (Quintelier & Theocharis, 2013). As a result, social networking sites such as Facebook and Twitter which offer exposure to broader social networks, choice of anonymity, and chat boards are increasingly being utilized by extroverts to participate in online forms of engagement such as signing online petitions, expressing political opinions online and positing civic and political information for others (Lampe, Ellison, & Steinfeld 2006; Doherty & Dowling 2011; Quintelier &Theocharis, 2013). These results indicate that extroversion is a highly relevant factor in influencing online behavior and civic participation, and therefore, the inclusion of extroversion in this study.
Summarizing the literature

The main model in this study sought to determine whether social media (e.g. Facebook, Twitter, YouTube etc.) has independent effects on offline civic engagement (e.g. volunteering, attending community meeting, protesting, voting, etc.) beyond traditional internet (e.g. email and web browsing) usage only. Previous studies have elucidated the relationship between traditional internet and civic engagement (Sha et al., 2005; Zamaria and Fletcher 2007; Kavanaugh et al. 2005, 2006, 2007) and social media and civic engagement (Xenos and Moy 2007; Boulianne, 2009; Gil de Zúñiga, et al., 2009; Kavanaugh, Tedesco and Madondo 2007; Gil de Zúñiga, et al., 2012; Lee, et al., 2013). However, few have simultaneously considered analyzing the difference between traditional internet and social media for offline civic engagement. While Kavanaugh, Tedesco and Madondo (2014) compare traditional internet and social media models, however this study adds to that body of literature by investigating whether social media (e.g. Facebook, Twitter, YouTube etc) has independent effects on offline civic engagement (e.g. volunteering, attending community meeting, protesting, voting, etc.) beyond that of traditional internet (e.g. email and web browsing) usage only while controlling for the effects of group membership, discussion network, trust and norms of reciprocity.

I hypothesize that: 1) education, gender, extroversion and age will have a positive association with trust, norms of reciprocity and group membership (social capital measures), and that, older adults will belong to more groups than younger adults. 2) People who trust other community members are more likely to belong to groups, to discuss politics with friends and family and to follow local and national news. This logic is based on a sizeable body of research that stresses the importance of trust in discussion networks and trust in both offline and online news sources (see Lazarsfeld et al., 1968; Zuckerman, 2005; Mutz, 2006; Shah et al., 2005;
Kim, Hsu & de Zuniga 2013). I also expect that 3) informational use of local and national news will directly influence interpersonal discussion networks, which in turn will shape levels of offline civic engagement through the mediation of either traditional internet or social media. The link assumed is that news information will lead consumers to discuss civic and political issues with other community members. This in turn, is expected have a number of positive consequences for online civic participation through traditional internet or social media. These online civic activities are expected to translate to offline civic engagement. Halper (2013) notes that although some scholars have expressed that use of social media may not necessarily lead to offline civic engagement, it is also possible to argue that because social media (e.g. Facebook, Twitter and Google +) has the potential to brings millions of people together on one platform to have a debate on local or national issues in real time unlike traditional internet (e.g. email and web browsing), it has the potential to encourage participation in a manner that even exceeds that of traditional internet (e.g. email and web browsing)
CHAPTER THREE
METHODODOLOGY

Sample

Data used in this study belongs to the Virtual Town Square (VTS) project that I was a part of in the Computer Science Department from August 2011 to August 2014. The project was funded by the National Science Foundation and includes completed surveys from participants who were at least 18 years of age. The data was collected in fall 2013 through purposeful sampling in order to be demographically representative of the population of Blacksburg and surrounding Montgomery County, Virginia. The town of Blacksburg is home to most Virginia Tech students, faculty and staff who make up at least three quarters of the town population. Hence, in order to be representative of the general population in the surrounding area several recruitment efforts were put in place and data was collected from the following samples:

- A random sample of Montgomery County residents who had taken the first wave of the survey in 2012 (n) = 25;
- A random sample of Virginia Tech students who had taken the first wave of the survey in 2012 (n) = 70;
- Members of community groups listed on the Blacksburg Electronic Village (BEV) website who had taken the survey in 2012 (n)= 35
  (the BEV is the community computer network that established internet access for the public in this geographic area in 1993).

Email invitations to partake in this survey were sent out to the respondents in September and October of 2013. This was followed up with 2 reminder emails sent to each sample.
In order to boost the final sample size, the researchers also contacted the Virginia Tech Center for Survey Research to recruit new random participants from Virginia Tech and Montgomery county residents. Email invites were sent out to these new random samples in mid-October and November 2013 with follow up reminder emails sent two weeks after initial survey email invitations. These samples yielded the following (N)’s

- The new 2013 Montgomery county random sample (n) = 160
- Virginia Tech 2013 new random sample of students (n) = 170
- There were also 5 completed surveys from the Literacy Volunteer Survey which boosted our less educated sample.
- Further, in order to improve the racial profile so that it might be representative of the Montgomery County, 3 Asian students were recruited from a survey that was sent out to a communication class taught by one of our research investigators on the project.

The final (N) from the first wave and second wave survey yielded a final N of 468, used in this study.

**Measures**

**Variables and Constructs**

Survey questions asked respondents about their interests and activities, attitudes and psychological attributes, affiliation with community groups, traditional internet and social media use, and demographic factors. This survey drew upon validated and reliable questions from prior studies, such as the HomeNet study (Kraut et al., 2002), from a decade of prior survey research in Blacksburg and environs headed by Andrea Kavanaugh in the Computer Science Department at Virginia Tech. The survey questions were also drawn from relevant civic and community
studies that incorporate questions about known indicators of social and civic participation (Edwards & Booth, 1973; Verba et al., 1995; Brady, 1999; Putnam, 2000; Shah, Kwak, & Holbert, 2001; Gil de Zúñiga et al., 2010; Pew 2009, 2012).

Dependent Variable

*Offline Civic Engagement.* This construct was based on Delli Carpino’s 2000 definition of civic engagement in which he stated that civic engagement can take many forms. That is, from individual voluntarism to organizational involvement to electoral participation. Thus according to him, civic engagement can encompass a range of specific activities such as working in a soup kitchen, serving on a neighborhood association, writing a letter to an elected official or voting. As such, my construct will be based on 9 items which measured both respondents’ political and civic activities offline. Some of the items for this scale asked respondents’ whether in the last two years they had engaged in political activities that involved writing a letter or email to a newspaper editor; protesting about a local issue; calling or emailing a local radio station and working locally for a political campaign. Other item questions asked respondents whether in the last six months they had attended a public meeting; performed volunteer work; attended a neighborhood meeting and; contacted a local public school official about an issue of concern to them. Exploratory factor analysis was employed to explore possible sub-dimensions within the items. The reliability of this summed up scale was moderately high (α=0.71).
Endogenous Variables

*Group Membership.* Group membership was measured by a single question which asked respondents to state the number of local groups they are involved with even if that number is 0 (M=2.57, SD= 2.40).

*Trust.* This variable was measured by a single item which asked respondents to indicate on a 4-point scale ranging from (4) Very Much to (1) Not at all, to what extent they think most people in their local area can be trusted.

*Norms of reciprocity.* This variable was measured by a question which asked respondents to what extent they think most people in the local area are inclined to help others. The values ranged from a 4-point scale ranging from (4) Very Much to (1) Not at all, to what extent they think most people in their local area are inclined to help others.

*Interpersonal Discussion Networks.* Drawing from previous research (Putman, 2000; Mutz, 2006; Mossberger, Tolbert & McNeal, 2007; Kavanaugh, Tedesco, & Madondo, 2014) 5 items using a 7-point scale related to interpersonal discussion networks was averaged to create the construct. These items included questions which asked respondents how often in the last six months they had 1) discussed politics; 2) talked to family members about local issues or concerns; 3) talked to family members about national or global news issues or problems; 4) talked to people outside the family about local issues or concerns and; 5) talked to people outside the family about national or global news issues or problems (M=3.6, SD=1.3, α=0.7).

*Traditional Internet Use for Civic Activities.* This construct comprised of frequency scale items that ranged from (1) Never to (7) Several times a day. Items measured respondent’s civic
activities on the internet. The questions asked respondents how often in the past six months they used the internet for the following purposes: (1) to look for information on the Town of Blacksburg website; (2) to look for information on the Montgomery website; (3) to look for information on BEV website; (4) to post factual information for other citizens; (5) to express opinion in online forums or group discussions; (6) to communicate with other residents about local concerns or issues that interest you; (7) to get national or global news; and (8) to get local news. The alpha coefficient for this factor scored scale is a respectable 0.77.

Social Media Use for Civic Activities. This construct was measured using an instrument adapted from a set of questions developed and used by the Pew Internet Study- Social Media and Political Engagement (2012). Participants responded to four questions that asked them if they used the social media to receive community news or to be civically active in a group (liking or disliking a civic group, making comments about a group, and joining a community group). The measures used Likert scales that captured respondent’s agreement on frequency scale that ranged from strongly disagree to strongly agree. The items hold well together (α=0.85).

Exogenous Variables

Education. Since education has traditionally been considered the main predictor of SES (Verba et al. 1995) participants were asked to select the highest level of education they had completed ranging from (1) Eighth Grade to (7) Completed Graduated School. (M=4, SD=1.3)
Age. Respondents were asked to state the year they were born, and based on this, I calculated the age for each respondent. The average age is 37 and the standard deviation is 18.7.

Gender. A simple question asking respondent’s gender will be used in this survey. Women made up more than half the respondents, and this is not surprising given that several other studies find that women respond to surveys more than men (Curtin et al., 2000; Moore & Tarnai, 2002; Singer et al., 2000).

Extroversion. This construct was measured by Likert-scale items of agreement regarding self-reported psychological and behavioral attributes, such as: being talkative and outgoing. These items have a fairly high reliability alpha of 0.88.

News Consumption. This variable was measured using a 7-item scale which asked respondents whether in the last six months they had read local or international newspapers. Respondents were also asked how closely they followed international affairs, national affairs, state affairs and local affairs. I created Z-scores for all six items and a summed scale based on these items had an alpha coefficient of 0.88. None of the correlation coefficients among the items were less than 0.3.
Table 1. Constructs

<table>
<thead>
<tr>
<th>Constructs</th>
<th>Alpha</th>
<th>Examples of variables in construct</th>
</tr>
</thead>
<tbody>
<tr>
<td>Discussion Networks (PDN)</td>
<td>.85</td>
<td>In the past six months: discussed politics; talked to family and people outside family about: a) local issues or concerns, b) about national or global issues or problems.</td>
</tr>
<tr>
<td>Offline Civic Engagement</td>
<td>.71</td>
<td>Email officials; obtain political information, volunteer, attend neighborhood meeting.</td>
</tr>
<tr>
<td>Extroversion</td>
<td>.88</td>
<td>Talkative; Outgoing</td>
</tr>
<tr>
<td>News Consumption</td>
<td>.88</td>
<td>Get local and global news; closely follow international, national, state and local affairs</td>
</tr>
<tr>
<td>Traditional Internet Use for Civic Purposes</td>
<td>.77</td>
<td>Post information online; express opinions online; get national or global news online; seek local information online.</td>
</tr>
<tr>
<td>Social Media Use for Civic Purposes</td>
<td>.85</td>
<td>Use social network site to: a) like or dislike a civic group, b) make a comment regarding a civic group, c) join a community group, and d) receive community news.</td>
</tr>
</tbody>
</table>

Other measures that are included in the study are: Membership (number of local groups involved with); Age (in years) and Education (highest level obtained).

Data Analysis

First the data were examined for missing values (see Appendix A) and because the item missing responses were few, multiple imputation procedures generated through the Statistical Package for the Social Sciences (SPSS 21.0) were used to replace the missing cases. This is because multiple imputations is considered by many scholars to be a superior approach to dealing with missing cases (e.g., Schalfer & Olsen, 1998; Allison, 2000; King et al., 2001) and good general reviews on this procedure have been published (see Graham & Schaffer, 1999; Sinharay, Stern, & Russell, 2001; Graham, Hoffer, & Piccinin, 2001). Simply, Rubin’s (1977) multiple imputation procedure replaces the missing values by using existing values from other
variables. The software repeats this process multiple times, producing multiple imputed data sets, hence the term “multiple imputations.”

Next I also ran a series of univariate analyses to examine the frequency and distribution of study variables calculating the mean and standard deviation, range, frequency and percentage as appropriate. In addition to this, I also ran a series of factor analyses on the constructs to examine if there are any sub-constructs that can be created and tested in the study or future research.

Before examining the relationships between dimensions of social capital and online and offline civic engagement, I first had answer my first Secondary Research, Question 1 which is the first necessary step to build the full model

What are the different relationships among the many dimensions of social capital (trust, group membership, reciprocity and discussion network)?

A confirmatory SEM model (figure 4) was tested using Amos.

Figure 4. Modelling Social Capital Measures
To answer my secondary research **Question 2**

*What are the differing relationships between the many dimensions of social capital (trust, group membership, reciprocity and discussion networks and civic engagement?*

Path analysis was used to test the following models:

**Model 1:** The predictive power of social capital variables (trust, reciprocity, group membership and discussion networks) on traditional internet use for civic participation (see Figure 5 below).

**Figure 5. Social Capital Measures and Traditional Internet Use**

**Model 2:** The predictive power of social capital variables (trust, reciprocity, group membership and discussion networks) on social media use for civic participation (see Figure 6 below).
**Figure 6. Social Capital Measures and Social Media use**

**Model 3**: The predictive power of social capital variables (trust, reciprocity, group membership and discussion networks on offline civic participation (see Figure 7 below).

**Figure 7. Social Capital Measures and Offline civic participation**

This leads to my Main research Questions:
1) Do social media have independent effects on offline civic engagement beyond that of traditional internet usage only?

In order to test whether social media has independent effects on offline civic engagement beyond that of traditional internet usage only, the last model included both traditional internet and social media use in the same model with offline civic engagement as the dependent variable (see Figure 8 below).

**Figure 8. Social Capital Measures and Offline civic participation**

To answer **Question 2**

2) Controlling for education, gender, extroversion and news consumption, does social media mediate or moderate relationship between social capital variables and offline civic engagement.

I used simple linear regression to test this question (see Figure 9)
Finally to answer the last **Question 3**

**3) Is social media reducing the traditional age effect in civic engagement?**

I used Hierarchical Linear Regression where I controlled for established constructs—education, extroversion, gender, and news consumption. I then add age and age squared into the model which includes the social capital constructs, traditional internet and social media constructs. The outcome variable in this model was offline civic engagement.

**Justification of chosen analyses**
In the first questions where I used SEM, this method was chosen because of its ability to test the predictive power of the individual endogenous variables on the dependent variable. Additionally, SEM combines confirmatory factor analysis (CFA) and path analysis which enables the researcher to determine the extent to which correlations between the depended variable) and the independent variables are consistent with those predicted in my path model. Valluzzi et al. (2003: 4345) also note that one of the reasons why it is better to use SEM over standard regression techniques is that “standard statistical procedures do not typically offer a convenient way to differentiate between observed and latent variables. SEM, however, provides a method of distinguishing between observed indicators and latent variables that accounts for the imperfect reliability and validity of measures.” Therefore, SEM has the advantage over standard regressions in that with SEM, both the observed indicators, and the errors associated with the measurement of the indicators, are identified in constructing latent variables.

Additionally, another advantage with using SEM is that it has a set of good fit statistics that can be used to compare the relative performance of tested models across several measures: (a) the Normed Fit Index (NFI), (b) the Comparative Fit Index (CFI), (c) the Root mean Square Error of Approximation (RMSEA), and (d) the ratio of the chi-squared statistics to the degrees of freedom for the model. The CFI and NFI are both used because they both show that a value between .90 and .95 is considered marginal, above .95 is good; below .90 is considered to be a poor fitting model. Also, RMSEA as measures of relative fit with lower values are also taken as good model performances (Shah, Cho, Eveland, & Kwak, 2005).

However, SEM has its own disadvantages that are important to consider such as the fact that because products of normally distributed observed and latent variables are themselves not normally distributed, standard errors and estimates of fit might not be accurate (see Tomakern &
Waller, 2005). Consequently, this will create worse problems because the latent exogenous variable used to form the product term may end up being highly correlated. Hence my use of hierarchical regression analysis to answer the last question, because instead of entering the latent predictors which may be highly correlated into the SEM model, I ran several hierarchical regression analyses as a complementary approach. Halpern (2013) notes that adopting such an approach is reasonable because hierarchical regression analyses would not alter the model fit or affect the measurement part of the model since its main role would be to help the researcher get a more clear interpretation of the extra amount of variance accounted for each dependent variable. This is a widely accepted approach that has been used by other scholars in this field (see Kim, 2009; Gil de Zuniga et al., 2009; Halpern 2013).
CHAPTER FOUR
RESULTS

This chapter is organized to accurately link the findings to the research questions. The chapter begins with a brief summary of the demographics and the correlations among the key study variables. Next, the chapter presents results from the research questions which sought to examine the relationships among the various dimensions of social capital (trust, norms of reciprocity, membership in a group and discussion networks). Key models built from these questions are presented that sought to examine the effects of dimensions of social capital on online and offline civic engagement. Mostly importantly, the chapter details the key findings related to the purpose of the study, which was to determine whether social media had independent effects on offline civic engagement beyond that of traditional internet.

Demographics and Use of Internet and Social Media

Demographically, survey respondents were generally representative of the Blacksburg and surrounding Montgomery County (Census Report, 2010). Table 2 shows that the average education was college graduate; median income was $31-$50,000. The overwhelming majority of respondents (84%) were white; older and more than half were female. Regarding use of the Internet and social media, the vast majority of respondents reported using the Internet (96%) and a similar majority also said they use social media (90%). However, compared to national statistics (87% for internet and 74% for social media users) this sample was younger and more educated than the typical internet and social media user in the US based on 2014 statistics from studies by the Pew Internet & American Life Project. This is important considering how demographic variables correlate with civic participation and Internet or social media use.
### Table 2. Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>Mean</th>
<th>SD</th>
<th>N</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Location (Blacksburg)</td>
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<td>70</td>
<td>443</td>
<td>70</td>
</tr>
<tr>
<td>Gender (Male)^1</td>
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<td>40</td>
<td>443</td>
<td>40</td>
</tr>
<tr>
<td>Age in Years (Recorded)^2</td>
<td>36.95</td>
<td>19.533</td>
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<tr>
<td>Last Grade Completed^3</td>
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<tr>
<td>Marital status (Married)^4</td>
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<td>443</td>
<td>84</td>
</tr>
<tr>
<td>Race (White)^5</td>
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<td>96</td>
<td>443</td>
<td>47</td>
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<tr>
<td>Income (&lt; $50,000)^6</td>
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<td>78</td>
<td>443</td>
<td>78</td>
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<tr>
<td>Years lived in Community^7</td>
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<td>15.470</td>
<td>467</td>
<td>47</td>
</tr>
<tr>
<td>Number of Local Groups^8</td>
<td>2.37</td>
<td>2.485</td>
<td>467</td>
<td>96</td>
</tr>
<tr>
<td>Use Internet^9</td>
<td>454</td>
<td>90</td>
<td>467</td>
<td>90</td>
</tr>
<tr>
<td>Years Using Internet^10</td>
<td>14.20</td>
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<td>90</td>
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<tr>
<td>Use SN Site^11</td>
<td>427</td>
<td>90</td>
<td>467</td>
<td>90</td>
</tr>
</tbody>
</table>

Table 1: All variables shown have been rounded (except SD) and coded so that higher numbers indicate more of the variables. ^1Dichotomous variable (0/1); ^2Converted from DOB, Range 19-88; ^3Seven Categories Elementary to Completed Graduate work; ^4Frequency from Relationship Status categories; ^5Race categories ranged from Whites, Blacks, Asian, Hispanics and Native Americans. ^6Dichotomous variable (0/1 for below/above $50K), ^7Range 0-88 years. ^8Number of local groups or group membership; ^9Dichotomous variable (0/1); ^10Range 1-33 years; ^11Seven Categories Never to Several times a day.

### Correlations

Results from table 3 showed that education was positively correlated with traditional internet use for civic purposes \((r = 0.16, p < 0.01)\), and offline civic engagement \((r = 0.25, p < 0.01)\) but not social media use for civic purposes. There was a significant negative correlation between age and visiting social networks sites (e.g. Facebook, Myspace, Google+, LinkedIn) \([r = -0.47, p < 0.01]\), but no association was found between age and use of social media for civic purposes. There were small to moderate positive relationships between extroversion, local group membership, and the use of both traditional Internet and social media for civic purposes.

Among the social capital dimensions, there were significant positive associations between trust and norms of reciprocity \((r = 0.49, p < 0.01)\); group membership and discussion.
networks ($r = 0.25, p < 0.01$). The association between group membership and norms of reciprocity were small but significant ($r = 0.11, p < 0.05$). Respondents who were older ($r = 0.34, p < 0.01$), more educated ($r = 0.35, p < 0.01$) belonged to more groups ($r = -0.25, p < .01$), stayed informed through the news ($r = -0.61, p < 0.01$) had higher measures on political discussion networks. Respondents who reported using both traditional internet for civic purposes ($r = -0.58, p < 0.01$) and social media for civic purposes ($r = -0.45, p < 0.01$) were found to be more likely to engage in offline civic activities (see Table 3, next page).
<table>
<thead>
<tr>
<th></th>
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<th>2</th>
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<th>4</th>
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<th>10</th>
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<td>3. Age</td>
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<td>4. Gender</td>
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<td>5. Discussion Network</td>
<td>.35**</td>
<td>13**</td>
<td>.34**</td>
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<td>6. Membership</td>
<td>.18**</td>
<td>.14**</td>
<td>.10*</td>
<td>.07</td>
<td>.25**</td>
<td>1</td>
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<td>7. Trust</td>
<td>.06</td>
<td>.06</td>
<td>.07</td>
<td>.11*</td>
<td>.04</td>
<td>.07</td>
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<tr>
<td>8. Reciprocity</td>
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<td>.06</td>
<td>-.02</td>
<td>.14**</td>
<td>-.01</td>
<td>.11*</td>
<td>.49**</td>
<td>1</td>
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<td>9. News consumption</td>
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<td>.04</td>
<td>.57**</td>
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<td>.61**</td>
<td>.19**</td>
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<td>10. Visit SNS</td>
<td>-.28**</td>
<td>.22**</td>
<td>-.47**</td>
<td>.10*</td>
<td>-.14**</td>
<td>.02</td>
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<td>.06</td>
<td>-.26**</td>
<td>1</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>11. Traditional Internet Use for Civic Purposes</td>
<td>.16*</td>
<td>.14**</td>
<td>.15**</td>
<td>-.08</td>
<td>.44**</td>
<td>.25**</td>
<td>-.05</td>
<td>-.16*</td>
<td>.32**</td>
<td>.11*</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Social media Use for Civic Purposes</td>
<td>.01</td>
<td>.16**</td>
<td>-.08</td>
<td>.09</td>
<td>.35**</td>
<td>.20**</td>
<td>-.04</td>
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<td>.21**</td>
<td>.32**</td>
<td>.56**</td>
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<tr>
<td>13. Offline civic engagement</td>
<td>.25**</td>
<td>.22**</td>
<td>.26**</td>
<td>.00</td>
<td>.51**</td>
<td>.49**</td>
<td>.01</td>
<td>-.05</td>
<td>.44**</td>
<td>-.07</td>
<td>.58**</td>
<td>.45**</td>
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</tr>
</tbody>
</table>

*p < .05. **p < .01. ***p < .001
Research Questions

In order to fully understand the relationships between dimensions of social capital, online and offline civic engagement, this study started off by testing the relationships among the various dimensions of social capital. After doing so, models were built that tested these dimensions of social capital with the various forms of civic engagement (i.e. traditional internet use for civic engagement, social media use for civic engagement and offline civic engagement). Once this was done, I was able to build my full model which sought to examine whether social media use had additional effects on offline civic engagement beyond those of traditional internet. Additional models also sought to examine the mediating or moderating role of social media use; and whether social media use reduced the traditional age effect in civic engagement.

As such, the section begins by reporting results from the secondary research questions (baseline models) which examined the relationships among the various dimensions of social capital. Following this, results from the main research questions are reported which showcase the full models tested.

Results testing dimensions of social capital

In order to build the baseline model, the first step performed was to test the following secondary-research question: What are the different relationships among the many dimensions of social capital (trust, group membership, reciprocity and discussion networks)?

In the first phase of the data analysis, an Exploratory Factor Analysis (EFA) was conducted on the theorized relationships between 7 items measuring dimensions of social capital (trust, reciprocity, group membership and whether in the past six months respondents had discussed politics; talked to family and people outside family about: a) local issues or concerns,
b) national or global issues). Four latent constructs (dimensions of social capital) were produced by the EFA and were entered into AMOS as a structural model to explore existing relationships among the latent variables (see Figure 10).

The overall fit statistics for the saturated model (Table 4) was decent, yielding a chi-square value of 2.50 with 3 degrees of freedom (RMSEA=.082, CFI=.95, NFI=.90) for the social capital dimensions.

Table 4. Fit Indices for Social Dimensions Model

<table>
<thead>
<tr>
<th>Measure of Fit</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Chi-square test of minimum sample discrepancy:</td>
<td></td>
</tr>
<tr>
<td>Chi-square/df</td>
<td>2.495</td>
</tr>
<tr>
<td>p-value (df)</td>
<td>&lt;.001 (df=3)</td>
</tr>
<tr>
<td>2. Normed Fit Index</td>
<td>.98</td>
</tr>
<tr>
<td>3. Comparative Fit Index</td>
<td>.99</td>
</tr>
<tr>
<td>4. Root Mean Squared Error Approximation</td>
<td>.082</td>
</tr>
</tbody>
</table>

As shown in Figure 10, all the item indicators for discussion networks loaded significantly onto their associated discussion network latent construct (which supported the operationalization of discussion networks in final model after the earlier EFA test). Trust had a strong positive direct effect on reciprocity ($\beta=.49$, $p<.001$), while reciprocity was also positively associated with group membership ($\beta=.13$, $p<.01$) and membership with discussion networks ($\beta=.24$, $p<.05$). Contrary to earlier hypothesis, in this study, there were no associations between trust and membership; trust and discussion networks; and reciprocity and discussion networks.
Figure 10. Social Dimension Measures

*\(p<0.05\); **\(p<0.01\); ***\(p<0.001\)

**Dimensions of Social Capital and Civic Engagement**

After determining the relationships among the many dimensions of social capital (trust, group membership, reciprocity and discussion networks), the study then examined the relationship between these dimensions of social capital and online and offline civic engagement. Thus, using Amos, the study first sought to examine:

- The predictive power of social capital variables (trust, reciprocity, group membership and discussion networks) on traditional internet use for civic participation
Table 5 Fit Indices for Social Capital and Traditional Internet use

<table>
<thead>
<tr>
<th>Dimensions of Social Capital and Traditional Internet</th>
<th>Comparison X²/df</th>
<th>CFI</th>
<th>NFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>13.349 (5)</td>
<td>.95</td>
<td>.97</td>
<td>.06</td>
</tr>
</tbody>
</table>

Overall, results in table 5 above showed an excellent fit for the tested model ($\chi^2 = 13.35$, df = 5, p = .020; CFI = .95; NFI = .97; RMSEA = .06). As for the model itself, figure 11 below showed that the positive paths found for the social capital dimensions in figure 10 (previous page) were similar to those found in figure 11, with the beta values also constant. There was a stronger association from discussion networks to use of traditional internet for civic engagement ($\beta=.49$, p<.001) compared from group membership to use of traditional internet for civic engagement ($\beta=.18$, p<.001). However, contrary to what was expected, the direct effect of reciprocity on traditional internet was negative ($\beta=-.14$, p<.001). A linear combination of reciprocity, membership and discussion networks explained 24% of the variance in the use of traditional Internet for civic engagement.

Figure 11. Traditional Internet Model

*p<0.05; **p<0.01; ***p<0.001
I also stratified the traditional internet use model (Figure 11) by age (younger adults versus older adults) to see if there would be any significant differences among the age groups. No differences were found.

Following this, for comparison purposes with the traditional internet use model, I examined the predictive power of social capital variables (trust, reciprocity, group membership and discussion networks on social media use for civic participation).

The results presented in Table 6 indicate that there was an acceptable level of fit in the data ($\chi^2 = 4.234$, df = 5, $p = .502$; CFI = .99; NFI = .98; RMSEA = .080).

<table>
<thead>
<tr>
<th>Dimensions of Social Capital and Social Media Use</th>
<th>Comparison $\chi^2/df$</th>
<th>CFI</th>
<th>NFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.234 (5)</td>
<td>.99</td>
<td>.97</td>
<td>.080</td>
</tr>
</tbody>
</table>

Unlike the previous model with traditional internet use, in this model with social media use (Figure 12, next page) there was no significant path from norms of reciprocity to the outcome variable. Also, the beta values from the endogenous variables to the outcome variables were larger for the traditional internet model (Figure 11) compared to the social media use model (Figure 12). In Figure 12 the direct association from membership to use of social media for civic engagement was modest ($\beta = .14$, $p < .001$) compared to discussion networks to social media use for civic engagement ($\beta = .29$, $p < .001$). A linear combination of reciprocity, membership and discussion networks explained only 12% of the variance in the use of social media for civic engagement.
Similar to the model with traditional internet use, I also stratified the social media model above by age to examine if there were any statistical differences among older adults and younger adults (see Appendix B for fit statistics). Differences were found with results in Figure 13 (next page) being consistent with the literature that older adults tend to value trust and norms of reciprocity more compared to younger adults. Thus the beta value for trust to reciprocity was large ($\beta = .50$, $p<.001$). Norms of reciprocity was significantly associated with membership ($\beta = .29$, $p<.001$). As expected, older adults who belonged to many groups were more likely to have larger discussion networks ($\beta = .39$, $p<.001$). However, norms of reciprocity was negatively associated with use of social media for civic engagement ($\beta = -.12$, $p<.001$). The total indirect effect from norms of reciprocity to membership and social media for civic engagement was $\beta = .06$, $p<.001$. A linear combination of all the variables explained 12% of the variance in use of social media for civic engagement, while trust, reciprocity and membership explained 15% of the variance in discussion networks.
Contrary to the above model which included older adults only, findings from the social media model below (figure 14, next page) with just younger adults (18-29 years) showed drastically different results.
In this model with only younger adults (Figure 14, previous page) while discussion networks ($\beta=.43, p<.001$) was the strongest predictor of use of social media for civic engagement among younger adults, trust and norms of reciprocity were not significant predictors of use social media for civic engagement and are therefore not included in the model. Moreover, for younger adults compared to older adults, membership in group mattered more ($\beta=.22, p<.001$). Lastly, membership in a group and discussion networks explained the largest variance in use of social media use for civic engagement (21%) compared to previous models - 12% for both figures 12 and 13.

Finally, the last model in this series tested the predictive power of social capital variables (trust, reciprocity, group membership and discussion networks on offline civic participation. Results from table 7 showed good fit statistics ($\chi^2 = 4.330, df = 5, p = .866; CFI = .99; NFI = .98; RMSEA = .026$).

### Table 7. Fit Indices for Social Capital Dimensions and Offline Civic Engagement

<table>
<thead>
<tr>
<th>Comparison</th>
<th>$\chi^2/df$</th>
<th>CFI</th>
<th>NFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 3. Dimensions of Social Capital and Offline Civic Engagement</td>
<td>3.968 (10)</td>
<td>.99</td>
<td>.98</td>
<td>.026</td>
</tr>
</tbody>
</table>

Results from figure 15 with offline civic engagement showed that trust had a strong positive direct effect on reciprocity ($\beta=.49, p<.001$), while reciprocity was also positively associated with group membership ($\beta=.13, p<.01$) and membership with discussion networks ($\beta=.24, p<.05$). Of the mediating variables (discussion networks and membership) discussion networks was found to be a stronger predictor of offline civic engagement ($\beta=.41, p<.01$). A linear combination of all the variables in the models explained 31 % of the variance in offline civic engagement.
Main Research Question 1

In order to answer the question on whether social media had independent effects on offline civic engagement beyond that of traditional internet usage only, I built a full model which included both traditional internet and social media usage in the same model with offline civic engagement as the dependent variable. Table 8 showed good fit statistics ($\chi^2 = 4.330$, df = 5, $p = .866$; CFI = .99; NFI = .98; RMSEA = .030).

<table>
<thead>
<tr>
<th>Table 8. Fit Indices for Full Model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Comparison</strong></td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001*
The results from Figure 16 (below) indicated that there was support for the hypothesis that social media use had additional independent effects on offline civic engagement beyond those of traditional internet usage. The direct path from social media to offline civic engagement was ($\beta=.14$, $p<.01$) while the direct path from traditional internet use to offline civic engagement was ($\beta=.32$, $p<.01$). However while social media had independent effects on offline civic engagement beyond those of traditional internet, the effects were much smaller than the traditional internet effect. Hence, the total indirect effect of traditional internet was ($\beta=.11$) compared to ($\beta=.05$) for social media.

Compared to the other dimensions of social capital, discussion networks was also a strong predictor of both online and offline civic engagement, with the strongest path being to traditional internet use ($\beta=.39$, $p<.01$), then offline civic engagement ($\beta=.24$, $p<.01$) and lastly social media use ($\beta=.09$, $p<.02$). A linear combination of all the variables in the models explained 44% of the variance in offline civic engagement.

**Figure 16. Results of full Model**
Research Question 2

After testing to see whether social media had independent effects on offline civic engagement beyond that of traditional, the next step involved examining whether after controlling for education, gender, age, extroversion and news consumption, social media mediated or moderated the relationship between social capital variables and offline civic engagement. Results from table 9 (next page) showed that even after controlling for some of the demographic and social variables, social media use had a mediating effect on only two variables (i.e. discussion networks and group membership) and not trust and norms of reciprocity which are not reported below.

In addition, results from Table 9 also clearly showed that when discussion networks was regressed on offline civic engagement, discussion networks was significant ($\beta=.28$, $p<.001$). However, in the second regression, when social media was entered into the model discussion networks was no longer significant, indicating the mediating role of social media. In the third regression, even after controlling for demographic variables (age, education and gender) and extroversion and news consumption, discussion networks was still found not to be a significant predictor of offline civic engagement. A follow up Sobel test using PROCESS also confirmed the mediating role of social media use ($z = 4.57$, $p = .001$). Thus, it was found that social media use for civic purposes fully mediated the relationship between discussion networks and offline civic engagement.
Table 9: Hierarchical Regression: Social Media, Membership and Discussion Networks

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Regression 1</th>
<th>Regression 2</th>
<th>Regression 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Discussion Networks</td>
<td>.282***</td>
<td>.020</td>
<td>.032</td>
</tr>
<tr>
<td>Mediating variable Social Media</td>
<td>.230***</td>
<td>.251***</td>
<td>32%</td>
</tr>
<tr>
<td>Control Variables:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td></td>
<td>.044*</td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td></td>
<td>.048***</td>
<td></td>
</tr>
<tr>
<td>Gender (1 = female)</td>
<td></td>
<td>-.047</td>
<td></td>
</tr>
<tr>
<td>Extroversion</td>
<td></td>
<td>.068***</td>
<td></td>
</tr>
<tr>
<td>News consumption</td>
<td></td>
<td>.038</td>
<td></td>
</tr>
<tr>
<td>ΔR2 (%)</td>
<td></td>
<td>39%</td>
<td></td>
</tr>
</tbody>
</table>

| 2. Membership | .102*** | .062 | .082*** |
| Mediating variable Social Media | .270*** | .257*** | 29% |
| Control Variables: | | | |
| Age | | .005** | |
| Education | | .045** | |
| Gender (1 = female) | | -.044 | |
| Extroversion | | .063*** | |
| News consumption | | .107*** | |
| ΔR2 (%) | | 41% | |

*p<0.05; **p<0.01; ***p<0.001

As for group membership, results from Table 9 also show that social media had a mediating effect on the relationship between membership in a group and offline civic engagement. This is because in the first model when group membership was regressed on offline civic engagement, group membership was significant (β=.102, p<.001), however when social media use for civic purposes was added to model 2, group membership was no longer
significant. Interestingly, when control variables were added to model 3, group membership became significant again ($\beta=.082, p<.001$). A Sobel test, nonetheless found mediation in the model ($z = 3.14, p < .001$), meaning that social media use helped explain the relationship between membership in a group and offline civic engagement. With the exception of gender which was consistently not significant in all the models, the other control variables were found to be predictors of civic engagement, particularly extroversion ($\beta=.063, p<.001$) in the model with discussion networks and also significant ($\beta=.068, p<.001$) in the model with group membership. Reading and following local and international news was also found to have a positive association with offline civic engagement ($\beta=.107, p<.001$) especially in the model with group membership.

As for trust and norms of reciprocity, results from Table 10 show that social media use did not have any mediating effects on the relationship between trust and offline civic engagement and reciprocity and offline civic engagement. Also, of all the control variables, gender was the only control variable that was not a predictor of offline civic engagement in any of the models.
Table 10. Hierarchical Regression: Social Media, Trust and Norms of Reciprocity

<table>
<thead>
<tr>
<th>Predictor Variables</th>
<th>Regression 1</th>
<th>Regression 2</th>
<th>Regression 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Trust</td>
<td>.021</td>
<td>.033</td>
<td>-.001</td>
</tr>
<tr>
<td>Mediating variable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Media</td>
<td>.317***</td>
<td>.285***</td>
<td></td>
</tr>
<tr>
<td>ΔR² (%)</td>
<td>20%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Variables:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.005*</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>.060***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (1 = female)</td>
<td>-.040</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extroversion</td>
<td>.075**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>News consumption</td>
<td>.124***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ΔR² (%)</td>
<td>36%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Reciprocity</td>
<td>-.016</td>
<td>-.001</td>
<td>-.008</td>
</tr>
<tr>
<td>Mediating variable</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Social Media</td>
<td>.316***</td>
<td>.300***</td>
<td></td>
</tr>
<tr>
<td>ΔR² (%)</td>
<td>19%</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Control Variables:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>.004**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Education</td>
<td>.061**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender (1 = female)</td>
<td>-.041</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Extroversion</td>
<td>.076***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>News consumption</td>
<td>.125***</td>
<td></td>
<td></td>
</tr>
<tr>
<td>ΔR² (%)</td>
<td>36%</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001

In terms of moderation, using the SPSS add-on PROCESS developed by Andrew F. Hayes which does the centering and creates interaction terms automatically, use of social media for civic purposes was found to have no moderating effects in any of the dimensions of social capital (trust, reciprocity, group membership and discussion networks) and offline civic engagement, see figures 17 to 20 below.
Figure 17. Discussion network by social media

Figure 18. Reciprocity by social media

Figure 19. Membership by social media

Figure 20. Trust by social media
Research Question Three

The last research question sought to examine whether social media was reducing the traditional age effect in civic engagement. Results showed that social media does reduce the traditional effect in offline civic engagement. This is because results from table 11 showed that in the first model, when age was regressed directly on offline civic engagement, age was shown to be strongly related to offline civic engagement, that is the older the person was, the more likely they were to participate in offline civic activities such as voting, attending community meetings etc. (β=.318, p<.001). However, in the second model, when social media use was entered in model 2, the beta value of age dropped (β=.266, p<.001), and further significantly dropped in model 3 (β=.144, p<.001) when I controlled for other known variables such as extroversion and news consumption that have an effect on offline civic engagement. The models showed that to some extent social media partially reduces the traditional age effect in offline civic engagement (see Table 11 below).
Further, when I ran MANOVA analyses comparing age to offline civic engagement and age to social media use for civic engagement, post hoc results showed significant differences between the two dependent variables. For example, results with offline civic engagement as the dependent variable (Table 12) showed that those aged 18-29 years were significantly different from all the age groups with the exception of 30 to 39-year-olds (M = .106, p = .974), meaning that there were huge gaps in offline civic engagement between younger adults and older adults.
Those aged 40 years and older were also more likely to be civically engaged offline than younger adults.

However, the story was different with social media as the dependent variable as results from Table 12 indicated that the only two groups that younger adults were significantly different from were those aged 50 years and older. Thus when it came to social media use, there were not much differences in online civic engagement among most of the age groups, while huge differences among age groups were found when it came to offline civic engagement.

<table>
<thead>
<tr>
<th>Ages</th>
<th>M</th>
<th>p-value</th>
<th>M</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>18-29 year olds</td>
<td>1.54</td>
<td></td>
<td>1.83</td>
<td></td>
</tr>
<tr>
<td>30-39 year olds</td>
<td>1.58</td>
<td>.267</td>
<td>1.94</td>
<td>.974</td>
</tr>
<tr>
<td>40-49 year olds</td>
<td>1.75</td>
<td>.048</td>
<td>1.73</td>
<td>.812</td>
</tr>
<tr>
<td>50-64 year olds</td>
<td>1.73</td>
<td>.007</td>
<td>1.70</td>
<td>.048</td>
</tr>
<tr>
<td>65 years +</td>
<td>1.78</td>
<td>.001</td>
<td>1.59</td>
<td>.023</td>
</tr>
</tbody>
</table>

*p<0.05; **p<0.01; ***p<0.001
Note: scales for both offline civic engagement and social media use ranged from 1 “Never” 2“Minimal” 3“Average” and 4 “High”
CHAPTER FIVE

DISCUSSION

This chapter discusses some of the findings from the study. The chapter begins with a discussion of the findings from the research questions and the deriving implications for social media and offline civic engagement. Finally, the chapter concludes with some of the limitations and success of the study and suggests potential areas for future research in this area.

Discussion

Social Media and Civic Engagement

How do social media compare to traditional internet and do social media have additional effects on offline civic engagement? The data from this study suggested that social media has independent effects on offline civic engagement beyond those of traditional internet. While the effects may not be as large as those of traditional internet; the study still demonstrated that perhaps the multitude of options to communicate electronically, including via e-mail, video and chatrooms afforded by social media may be positively influencing offline civic engagement (Halpern & Lee, 2011; English, 2012; Pew, 2014, Gil de Zúñiga, 2014). This supports the idea
that civic participation through social media can result in an increased likelihood of sustained
civic offline activity (Gil de Zúñiga & Valenzuela, 2010).

An additional interesting finding from this study was that while trust and norms of
reciprocity were significant predictors of social media use among older adults, these factors did
not seem to matter for younger adults. Being in a group and being part of a network that
discusses politics or local and international issues with family members seemed to be of more
importance to younger adults than trusting other community members and helping others. This
confirms what other scholars have been arguing about group membership, that is, social media
has enabled a new reality in which younger people can potentially interchange millions of
messages across international borders via online spaces, such as Facebook groups, bulletin board
systems, and chat rooms that facilitate meet-ups and gatherings (Soon & Cho, 2011). In fact,
Khadaroo (2011) in his study on whether Facebook boosts civic engagement among American
youths found that compared to peers who were not involved in online groups, youths involved in
online groups based on common interests, even if those interests were not political, were more
likely to increase their level of online civic engagement through joining online groups that enable
them to share and express their community interests.
Another important finding from this study related to my second research question on whether “social media mediated the relationship between social capital variables and offline civic engagement” was that social media strongly mediated the relationship between discussion networks and offline civic engagement. While previous research has found that people with a larger interpersonal network of discussants tend to be more engaged in online political activities (Valenzuela, Kim, & Gil de Zuniga, 2010, Kavanaugh, Tedesco, & Madondo, 2014) this study is the first to link social media to political discussion networks and then offline civic engagement. Thus, this study adds to the body of literature by showing that social media accounts for a significant amount of variance in the relationship between discussion networks and offline civic engagement, meaning that use of social media helps explain why individuals who report that they participate in political discussions with friends or family are more likely to report that they engage in offline civic activities such as voting; engaging in civil or political protests; working for a political campaign; and attending neighborhood meetings etc.

Thirdly another objective for this study was to examine “whether social media was reducing the traditional age effect in civic engagement.” Particularly for this sample (consisting of slightly higher educated residents), this study found that compared to offline civic engagement there were not much significant differences among age groups in terms of use of
social media for civic engagement. This was most evident among those aged 18-49 years. This could be because of what Pew (2014) observes that “participation gap between relatively unengaged young and much more engaged middle-aged adults that ordinarily typifies offline political activity is less pronounced when it comes to political participation online” because civic engagement anchored in blogs and social networking sites tend to “alter long-standing civic participation gaps found among younger and older adults.”

Likewise, results from this study are also consistent with what Kavanaugh, Madondo and Tedesco (2014) found that the effects of education are less pronounced with social media than they are with traditional internet. Thus education was found to be not as strongly correlated with the use of social media for civic purposes as it is with the use of traditional Internet for civic purposes and offline civic engagement. This implies that adults who use social media (e.g. social network sites like Facebook, Google +) for civic purposes do not necessarily have to possess a high socio-economic status (SES) background as measured by education.

However, what this study could not find was a relationship between gender and use of social media use for civic purposes. In fact, even when gender was regressed on traditional internet and offline civic engagement, it was still not found to be significant. In retrospective,
this can be considered a positive finding as it indicates that when it comes to online or offline civic engagement, it matters less whether one is male or female.

**Social Capital Variables and Civic Engagement**

I initially predicted that trust and norms of reciprocity would strongly correlate with membership in a group and being part of a discussion network. However, the findings from this study seemed to indicate that trust, reciprocity, discussion networks and group membership should not be combined into one index, and that each of these dimensions should be treated as single indicators of social capital.

Nonetheless, findings from this study showed that trust was not an effective resource that could be utilized in promoting civic engagement. Trusting others in the local area was not related to either joining groups or political discussion networks and most importantly engaging in online or offline civic engagement. In fact, among all the dimensions of social capital variables tested, trust was the least important factor influencing civic engagement among younger adults. This was surprisingly contradictory to social capital theory (Bourdieu, 1986; Granovetter, 1973; Putnam, 2000) which suggests that trust is, among the most important factors that influence offline civic engagement.
As expected, among all the dimensions of social capital variables tested, group membership and discussion networks held strong for both online and offline civic engagement. In all the structural models tested, it was observed that those individuals who are members of a group(s) and discussed politics with friends and family were more likely to be civically active whether online or offline. This confirms what others have found that both group membership and discussion networks play a crucial role in the democratic process because they give citizens the opportunity to join civic or political groups and to engage in political talk, which can result in stronger civic engagement (Lazarsfeld et al., 1968; Zuckerman, 2005; Mutz, 2006).

However, one interesting finding from this study that has yet to be reported in the literature was the negative relationship between norms of reciprocity and online civic engagement. Thus, rather contradictorily, the result of this study found that citizen participation was more likely to be provoked by low levels of reciprocity, not by high levels of reciprocity. For example, it was found that most individuals who thought that most people in their local community were unwilling to help others turned to social media when engaging in online civic activities. It appears that it is possible that when people feel they cannot turn to their neighbors for help (e.g. with information about civic activities) they might turn to social media instead.
Limitations

As with any study, there are some limitations with this study. One such limitation is that this study is based on cross-sectional data instead of time-series data. Compounding the situation was that most of the survey item questions focused on participants’ activities in the last months. For example, questions measuring both online and offline civic engagement asked participants to rate whether in the last six months they had engaged in several civic and political activities. Therefore, a more robust study of civic engagement would entail civic engagement measured over a long period of time (Jennings & Zeitner, 2003; Zaff et al., 2010; Han, Liauw, & Malin, 2014).

Another limitation to this study was the measurement of the social capital variables. While building the models and running factorial analysis, none of these items loaded together into one single construct. Part of the problem could be that three of the variables (trust, norms of reciprocity and group membership) were each measured by one item whereas in other studies, these constructs are measured by several items (see Gastil & Dillard, 1999; Halpern, 2005; Williams, 2007; Ellison et al., 2011). This supports what the World Bank has been arguing for decades, that when measuring social capital one has to be careful about the items that one uses to build social capital constructs.
A third limitation with the study regards the measurement of online and offline civic engagement. The questions about civic engagement might not have encompassed all types of engagement that respondents were involved in (as they related only to the list that was provided). However, this did not seem to have a great effect on the results as most of the civic engagement questions used were adapted from validated instruments and the literature (see Patterson and Kavanaugh, 1994; Kavanaugh and Patterson, 2001; Kraut et al., 2002; Kavanaugh et al., 2005; Kavanaugh, Kim, Pérez-Quiñones, & Schmitz, 2008; Zúñiga et al., 2010; Pew, 2012).

The last limitation with this study is that I am unable to generalize the findings beyond Blacksburg and Montgomery County, VA. Although the sample was quite representative of the Blacksburg community which has a younger and highly educated population, however, this limited distribution of socio-economic status did not allow me to apply these findings to the general U.S. population. Nonetheless, the findings of this study hints at how members of other communities similar to Blacksburg and Montgomery County are using technology to enhance their offline civic engagement.

**Future Research**

Despite the interesting findings found in this dissertation, this study has demonstrated that there is still more room for future study in the area of online and offline civic engagement.

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For example, future research into online and offline civic engagement could benefit from using a survey instrument that asks similar questions for online and offline civic engagement. This type of comparative research may help to increase the external validity of the findings. In addition it may also help to shed light on the similarities and differences between online and offline civic engagement. As was found in this study, there does seem to be differences between different types of traditional internet use, social media use and their influences on different types of offline civic engagement.

Given that the use of social media for civic purpose is still a growing phenomenon; another suggestion would be for future researchers to use longitudinal data especially if they are seeking to conduct a rigorous study on the influence of social media on offline civic engagement. Doing so, would contribute to the understanding of growing evidence that overtime social media might lead to an increase in civic and political participation by citizens. Currently it is still unclear whether use of social media for civic engagement is due to age effect or cohort effect.

Future researchers can also benefit from employing an experimental design, where researchers could compare a treatment group with a control group. This would limit any doubt on whether social media has strong effects on offline civic engagement. This experimental design could also answer the question of whether social media use is truly “transformative.”
Future research into social media may also benefit from comparing multiple populations with different demographic backgrounds, including socio-economic or even cultural differences. This type of comparative research may help shed light on the social factors that play a role in influencing different demographics to become civic citizens.

Lastly, Koniordos (2008) and DiEnnon (2009) warns us to be cautious in our use of social capital because “as it slowly gets co-opted into more disciplines there is a danger in losing clarity of its meaning, reasonable understanding of its application, and acceptable forms of its measure.” Thus, future research can benefit from exploring other measures of social capital that were not tested in this study.
REFERENCES


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APPENDIX A: RESULTS FROM MISSING DATA ANALYSIS

EM Means*

<table>
<thead>
<tr>
<th>education</th>
<th>AGE</th>
<th>EXTROVERT</th>
<th>trust_one</th>
<th>Help_local</th>
<th>TRUST</th>
<th>MEMBER</th>
<th>FALLOWING</th>
<th>POL_DISCUS</th>
<th>ONLINE_COMM</th>
<th>SOC Uncategorized</th>
<th>offline_one</th>
<th>discuss_pol</th>
<th>talk_family_local</th>
<th>talk_family_Jr</th>
<th>talk_FordLocal</th>
<th>talk_FordJr</th>
<th>talk_self_other</th>
<th>edu_back</th>
<th>gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>4.80</td>
<td>38.31</td>
<td>5.34</td>
<td>3.54</td>
<td>3.59</td>
<td>3.52</td>
<td>2.35</td>
<td>0.01</td>
<td>3.65</td>
<td>1.62</td>
<td>1.84</td>
<td>1.52</td>
<td>3.75</td>
<td>3.59</td>
<td>3.51</td>
<td>3.42</td>
<td>4.66</td>
<td>5.61</td>
<td>5.9</td>
</tr>
</tbody>
</table>

a. Little’s MCAR test: Chi-Square = 135.235, DF = 140, Sig = .598

EM Correlations*

<table>
<thead>
<tr>
<th>education</th>
<th>KIE</th>
<th>SUPPORT</th>
<th>ENJOY</th>
<th>HELP</th>
<th>TRUST</th>
<th>MEMBER</th>
<th>FALLOWING</th>
<th>POL_DISCUS</th>
<th>ONLINE_COMM</th>
<th>SOC Uncategorized</th>
<th>offline_one</th>
<th>discuss_pol</th>
<th>talk_family_local</th>
<th>talk_family_Jr</th>
<th>talk_FordLocal</th>
<th>talk_FordJr</th>
<th>talk_self_other</th>
<th>edu_back</th>
<th>gender</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Little’s MCAR test: Chi-Square = 125.228, DF = 140, Sig = .596

122
Table 12. Fit Indices for all Variables

<table>
<thead>
<tr>
<th>Model</th>
<th>Comparison $X^2$/df</th>
<th>CFI</th>
<th>NFI</th>
<th>RMSEA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Model 3. Dimensions of Social Capital and Social Media</td>
<td>1.801 (5)</td>
<td>.99</td>
<td>.98</td>
<td>.053</td>
</tr>
<tr>
<td>Model 4. Dimensions of Social Capital and Social Media with older adults</td>
<td>6.093 (4)</td>
<td>.98</td>
<td>.95</td>
<td>.053</td>
</tr>
<tr>
<td>Model 5. Dimensions of Social Capital and Social Media with younger adults</td>
<td>2.077 (6)</td>
<td>.99</td>
<td>.98</td>
<td>.001</td>
</tr>
</tbody>
</table>
Communic and Information in the Local Community Consent For
Thank you for your willingness to participate in the Communication and Information in the Local Community survey. Before getting to the survey, it is required for participants to read the consent information below and agree to participate. When you click the link at the end of this page, you are providing your consent.

*1. PROJECT TITLE: Communication and Information in the Local Community


I. PURPOSE OF THE STUDY: To understand how citizens of the New River Valley area are getting information about what ’s going on in the local area and communicating with each about local activities and interests.

II. PROCEDURES: As a participant, I am being asked to help the above researchers in a project. My part of this project will be to answer questions in an online survey about my experiences using diverse information sources and communicating with other people in the area. I am giving consent only for answering the survey questions at this time. I understand that I may be contacted in about a year for a second round of the online survey and that I can decline to participate at that time if I decide I do not want to participate.

III. RISKS: There are only minimal risks for me as a participant. I understand that I may stop my participation at any time and for any reason.

IV. BENEFITS: There is a societal benefit for increasing the understanding of
information and communication in local communities.

V. CONFIDENTIALITY: All of my responses will be completely confidential. A code number will be assigned to my answers and only this number will be associated with the data.

VI. COMPENSATION: I will not be compensated for providing my responses.

VII. FREEDOM TO WITHDRAW: I understand that I am not required to answer the questions or participate in any way if I do not want to and no one will treat me badly if I do not participate. I can stop part way through or withdraw at any time, if I choose.

VIII. APPROVAL OF RESEARCH: This research project has been approved, as required, by the Institutional Review Board for Research Involving Human Subjects of Virginia
Polytechnic Institute and State University.

IX. PARTICIPANTS RESPONSIBILITY: I am responsible for answering questions in an online survey about my experiences using diverse information sources and communication with area residents.

X. PARTICIPANT'S CONSENT: I have read and understand the Informed Consent Form and conditions of this project. I have had all my questions answered. I hereby acknowledge the above and give my voluntary consent:

CONTACT: If you have any questions about the interviews, please contact Dr. Andrea Kavanaugh by email at kavan@vt.edu, or by phone (540) 231-1806.

By clicking here, I indicate that I volunteer to participate in the survey.
Introduction

The purpose of this questionnaire is to find out how people in this community are using technology and the Internet in their everyday lives. We also want to learn about community life, including people's opinions about where they live, the people they know, and the groups to which they belong.

Throughout the questionnaire you will be asked to describe yourself, your community, and your social circles. Several questions will focus on your use of technology, and in particular, the Internet and social media. Our research depends on your answering each question as completely and honestly as possible. Even if you are having trouble answering a question, we ask that you make your best guess. The questionnaire should take about 20-25 minutes to complete.

2. Where do you live currently?

   Blacksburg

   Christiansburg

   Montgomery County

   Other (please specify)

3. How many years have you lived there? (If less than one year, please enter 1)

4. Is this the community you identify most closely with or do you identify more closely with another community in the local area?

   I identify most closely with the community where I live

   I identify with another community (Please specify)

5. How many times have you moved in the last five years?

   0

   1

   2

   3

   4

   5 or more times

6. To what extent do you think most people in the local area can be trusted?

   Not at all

   Not Very Much

   Somewhat

   Very Much

   Not at all

   Not Very Much

   Somewhat

   Very Much

128
<table>
<thead>
<tr>
<th>7. To what extent do you think most people in the local area are inclined to help others?</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
</tr>
<tr>
<td>Not at all</td>
</tr>
<tr>
<td>.</td>
</tr>
</tbody>
</table>
In this section we are interested in different local groups you might be involved in, such as religious and charitable groups, civic and political groups, education and professional groups, or social and recreational groups. Again, no responses will identify individuals or be used to make assessments or evaluations of the groups. We are asking this information to better understand group membership, types of memberships, and the local community.

*8. For each of the types of groups below, please indicate how many local groups of this type you belong to. (The drop-down menu provides options)

<table>
<thead>
<tr>
<th>Type of Group</th>
<th>Number of Local Groups</th>
</tr>
</thead>
<tbody>
<tr>
<td>Religious/Charitable groups (e.g., Campus Crusade for Christ, United Way)</td>
<td>6</td>
</tr>
<tr>
<td>Civic/Political groups (e.g., Kiwanas, YMCA)</td>
<td>6</td>
</tr>
<tr>
<td>Educational/Professional groups (e.g., Labor unions, Toastmasters, Business associations)</td>
<td>6</td>
</tr>
<tr>
<td>Social/Recreations (e.g., sports teams, hobby groups like book and garden clubs)</td>
<td>6</td>
</tr>
</tbody>
</table>

Other (please specify other types of local groups you belong to and how many if not included by categories above)

9. How many local groups are you involved with? (Please enter a number even if that number is 0. If you are unsure of the exact number, please provide one number (e.g., 18) that is your best estimate)

10. Thinking of the local groups that you are involved with, what is the name of the group that you are most active in?

Click here if you are not involved with any local groups

If you are involved with local groups, please put the name of the group you are most involved with below:
Local groups

This page asks more information about local groups.

* 11. Are you an official member of this local group?
   jklmn Yes
   jklmn No

* 12. Do you regularly attend meetings for this local group?
   jklmn Yes
   jklmn No

* 13. Do you perform volunteer work for this local group?
   jklmn Yes
   jklmn No

* 14. Do you hold a leadership position in this local group?
   jklmn Yes
   jklmn No

* 15. In what ways do the people in this local group communicate with each other about group activities or business? Check all that apply.
   gfedc Face to Face
   gfedc Online Discussion
   gfedc Telephone
   gfedc Social networking sites like (Facebook, Google+, MySpace, LinkedIn)
   gfedc Postal Mail
   gfedc Email and/or Listserv
   gfedc Twitter
   gfedc None of the above
   Other (please specify)
16. Does this local group have a website, Facebook page, or Twitter account? Please select all answers that apply

- Website
- Twitter account
- Facebook page
- None of the above
- Other (please specify)
17. If you answered "yes" that your local group has a website, Facebook page or Twitter account, please share your attitudes toward the following questions by indicating whether you Strongly Agree, Agree, Disagree, or Strongly Disagree.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>I find this technology helpful for communicating with other group members</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I have been learning how to use this technology from other group members and/or other people I know</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

18. Do the people at the meetings of this local group ever chat informally about civic topics or local affairs?
- Yes
- No

19. Does this local group ever have meetings at which civic topics or local affairs topics are on the agenda or discussed formally?
- Yes
- No

20. Does this local organization ever take a stand on any local or national issue?
- Yes
- No
Other local groups

This page asks a few more questions about additional local groups to which you may belong.

**21. Are you involved in any other local groups?**

jklmn Yes

jklmn No

22. List two other local groups that you are currently actively involved with

<table>
<thead>
<tr>
<th>Group</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>
The following questions are mostly about your attitudes toward politics, government, and civic affairs.

**23. Please indicate your level of agreement with each of the following statements:**

<table>
<thead>
<tr>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neutral/No Opinion</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Generally speaking, I am outgoing and sociable</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>b. I am talkative</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>c. Sometimes local politics and government seem so complicated that persons like me can't truly understand what's going on</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>d. I don't think local public officials care much what people like me think</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>e. There are plenty of ways for people like me to have a say in what our local government does</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>f. I am convinced that we can improve the quality of life in the local community, even when resources are limited</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>nmlkj</td>
</tr>
</tbody>
</table>

**24. In general, how much do you trust your local government in handling local problems?**

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Not very much</th>
<th>Fair amount</th>
<th>Good deal</th>
<th>Great deal</th>
</tr>
</thead>
<tbody>
<tr>
<td>jklmn</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
</tbody>
</table>

**25. In general, how closely would you say you follow international affairs?**

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Not very closely</th>
<th>Somewhat closely</th>
<th>Very closely</th>
</tr>
</thead>
<tbody>
<tr>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
<td>nmlkj</td>
</tr>
</tbody>
</table>
**26. In general, how closely would you say you follow national affairs?**

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Not very closely</th>
<th>Somewhat closely</th>
<th>Very closely</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**27. In general, how closely would you say you follow state affairs?**

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Not very closely</th>
<th>Somewhat closely</th>
<th>Very closely</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**28. In general, how closely would you say you follow local affairs?**

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Not very closely</th>
<th>Somewhat closely</th>
<th>Very closely</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Community Engagement

Questions about Community Engagement ask you to share the frequency in which you complete specific behaviors. The best estimate you can make about the frequency of these activities will help us to understand the amount of time dedicated to civics and local affairs.

**29. On average, please indicate how often in the last SIX MONTHS you did each of the following activities:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Less than once a month</th>
<th>About once monthly</th>
<th>About once a week</th>
<th>Several times a week</th>
<th>About once a day</th>
<th>Several times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Read local news in the newspaper</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>Read national or global news in the newspaper</td>
<td>i</td>
<td>s</td>
<td>s</td>
<td>e</td>
<td>s</td>
<td>s</td>
<td>s</td>
</tr>
<tr>
<td>Listen to radio about local news</td>
<td>s</td>
<td>u</td>
<td>e</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
</tr>
<tr>
<td>Listen to radio about national or global news</td>
<td>s</td>
<td>o</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>e</td>
<td>e</td>
</tr>
<tr>
<td>Attend a religious service</td>
<td>p</td>
<td>r</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td>Attend a public meeting</td>
<td>o</td>
<td>b</td>
<td>o</td>
<td>b</td>
<td>b</td>
<td>b</td>
<td>b</td>
</tr>
<tr>
<td>Attend a local political talk or meeting</td>
<td>l</td>
<td>e</td>
<td>l</td>
<td>e</td>
<td>l</td>
<td>l</td>
<td>l</td>
</tr>
<tr>
<td>Written to or called a local government official</td>
<td>l</td>
<td>e</td>
<td>l</td>
<td>e</td>
<td>l</td>
<td>l</td>
<td>l</td>
</tr>
<tr>
<td>Did volunteer work</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
</tr>
<tr>
<td>Discussed politics</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td>Talked to family members about local issues or concerns</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td>Talked to family members about national or global issues or problem</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
<td>p</td>
</tr>
<tr>
<td>Talked to people outside your family about local issues or problems</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
</tr>
<tr>
<td>Talked to people outside your family about national or global issues</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
<td>s</td>
</tr>
</tbody>
</table>
**30. How often in the last TWO YEARS did you perform the following activities:**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Less than once a month</th>
<th>About once a month</th>
<th>About once a week</th>
<th>Several times a week</th>
<th>About once a day</th>
<th>Several times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attend a neighborhood meeting</td>
<td>jklmn</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Written a letter or email to a local area newspaper editor</td>
<td>jklmn</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Called in or emailed a local radio station</td>
<td>nmlkj</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Circulated or signed a petition for a local candidate or issue</td>
<td>nmlkj</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Watched a local town council or board of supervisors meeting on cable television</td>
<td>nmlkj</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Attended a local Town council meeting</td>
<td>nmlkj</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Worked locally for a political campaign</td>
<td>jklmn</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Contacted a local public school official about an issue of concern to you</td>
<td>nmlkj</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Protested about a local issue</td>
<td>jklmn</td>
<td>jklmn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

31. What do you consider to be the most important issue currently facing the local area? (If you do not consider any issues most important to the local area, click the circle option. If you think there is an important local issue, please tell us what it is in the space provided)

nmlkj I do not think there are any important local issues

In my opinion, the most important issue facing the local community is:
The questions on this page ask you to share information about the local issue you think is most important.

**32.** How many people outside your immediate family do you usually talk to about this issue?

**33.** How do you communicate with these people to discuss this issue? (Check all that apply)

- Face-to-face
- Social network sites (Facebook, MySpace, Google+, LinkedIn)
- Cellphone
- Twitter
- Landline phone
- None of the above

**34.** In general, do the people you discuss this issue with share your point of view about the issue?

- Yes
- No

**35.** In general, do the people you discuss this issue with have about the same level of knowledge about the issue as you?

- Yes
- No

**36.** How likely would you be to attend a public forum on this issue?

- Very unlikely
- Somewhat unlikely
- Somewhat likely
- Very likely

**37.** How likely would you be to speak up at a public forum on this issue?

- Very unlikely
- Somewhat unlikely
- Somewhat likely
- Very likely

**38.** How likely would you be to express an opinion that is different than that of others on this issue at a meeting?

- Very unlikely
- Somewhat unlikely
- Somewhat likely
- Very likely
We aim to understand the role of the Internet in civic life. Thus, the following set of questions asks about your Internet use and the way groups to which you belong use the Internet to communicate about civic issues or public affairs.

*39. Do you use the Internet from any location?

jklmn Yes

jklmn No
Internet Access

*40. Do you know anyone who uses the Internet?
   jklmn Yes
   jklmn No

*41. Have you ever asked someone to send an email message for you?
   jklmn Yes
   jklmn No

*42. Have you ever asked someone to get information online for you?
   jklmn Yes
   jklmn No

*43. Have you ever received information that came from the Internet from someone else?
   jklmn Yes
   jklmn No
Internet Use

In the following section, questions ask about Internet use.

*44. From where do you use the Internet most often? (Check all that apply).

- Work
- At a Neighbor's house
- Home
- WiFi hotspots
- School
- Home of Family or Friend
- Public Library
- My cell phone, iPad, or Tablet PC

Other (please specify)

*45. When accessing the Internet, what other access points do you use? (Check all that apply)

- Work
- Neighbor
- Home
- WiFi hotspots
- School
- Home of Family or Friend
- Public Library
- My cell phone, iPad, or Tablet PC

Other (please specify)

*46. What kind of Internet connection do you have in your home? (Check all that apply).

- Dial up
- Cell phone
- Broadband (cable modem, DSL, etc.)
- N/A
- Satellite dish

Other (please specify)

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* 47. How long have you been using the internet? (In years)

* 48. In a typical day, how many hours do you spend using the Internet from any location?
49. How often in the past SIX MONTHS have you used the Internet for the following purposes:

<table>
<thead>
<tr>
<th>Purpose</th>
<th>Never</th>
<th>Less than once a month</th>
<th>About once monthly</th>
<th>About once a week</th>
<th>Several times a week</th>
<th>About once a day</th>
<th>Several times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>To get national or global news</td>
<td>nmlkj</td>
<td>jklmn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To get local news</td>
<td>jklmn</td>
<td>jklmn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To get information on a local political candidate</td>
<td>jklmn</td>
<td>jklmn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Look for information on the Blacksburg Electronic Village, or BEV, website</td>
<td>jklmn</td>
<td>jklmn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Look for information on the Montgomery County website</td>
<td>nmlkj</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Look for information on the Town of Blacksburg website</td>
<td>nmlkj</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Look for information on the Town of Christianburg website</td>
<td>jklmn</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>To communicate with other residents about local concerns or issues that interest you</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>Post factual information for other citizens</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>Express your opinion in online forums or group discussions</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>Try to influence a politician's view</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>Send email to a local government official</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>Use a photo or video sharing site (e.g., YouTube, Flickr, Picasso)</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>Use twitter or other microblogging services</td>
<td>Read a blog, or an on-line journal</td>
<td>P</td>
<td>t</td>
<td>co</td>
<td>m</td>
<td>en</td>
<td>on</td>
</tr>
<tr>
<td>Activity</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>-------------------------------------------------------------------------</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
<td></td>
</tr>
<tr>
<td>Write in your own blog, or online journal</td>
<td>jklmn</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Search for health-related information</td>
<td>jklmn</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Look for local information on any local websites (e.g. Roanoke Times, WBDJ7)</td>
<td>nmlkj</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Visit a social networking site (e.g., Facebook, MySpace, ...)</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jena</td>
</tr>
</tbody>
</table>
**50. How frequently have you done any of the following on social networking sites like Facebook and MySpace?**

<table>
<thead>
<tr>
<th>Activity</th>
<th>Never</th>
<th>Less than once a month</th>
<th>About once a month</th>
<th>About once a week</th>
<th>Several times a week</th>
<th>About once a day</th>
<th>Several times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received any state or national campaign or candidate information on the site</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>Clicked the &quot;Like&quot; or &quot;Dislike&quot; button of any political group, or a group supporting a cause you like</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
<tr>
<td>Signed up as a &quot;friend&quot; of any political candidate</td>
<td>nmlkj</td>
<td>jklmn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posted political news for friends or others to read</td>
<td>jklmn</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Received any community news or information</td>
<td>jklmn</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Started or joined a community group supporting a cause you like</td>
<td>jklmn</td>
<td>nmlkj</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Clicked the &quot;Like&quot; or &quot;Dislike&quot; button of any community or civic group</td>
<td>jklmn</td>
<td>jklmn</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Posted a comment regarding a community or civic issue</td>
<td>jklmn</td>
<td>jklmn</td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

**51. Have you ever watched online any of Blacksburg's Town Council meetings?**

- jklmn Yes
- jklmn No
**Internet Use**

*52. Please indicate your level of agreement with each of the following statements:*

<table>
<thead>
<tr>
<th>Statement</th>
<th>Strongly Disagree</th>
<th>Disagree</th>
<th>Somewhat Disagree</th>
<th>Neutral/No Opinion</th>
<th>Somewhat Agree</th>
<th>Agree</th>
<th>Strongly Agree</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. The Internet (specifically email and web browsing) has helped me feel more connected with people like myself in the local area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>b. The Internet (specifically email and web browsing) has helped me feel more connected with a diversity of people in the local area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>c. The Internet (specifically email and web browsing) has helped me become more involved in local issues that interest me</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>d. Compared to traditional Internet use (email and web browsing), my use of social media (e.g., Facebook, Google+) has helped me feel more connected to people like myself in the local area</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>e. Compared to traditional Internet use (email and web browsing), my use of social media (Facebook, Google+, etc.) has helped me feel more connected with a diversity of people in the local area.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>f. Compared to traditional Internet use (email and web browsing), my use of</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
53. Overall, to what extent would you say the Internet has improved the way you interact with the elected officials and staff in your local government?

<table>
<thead>
<tr>
<th>Have not had a reason to contact government official</th>
<th>Not at all</th>
<th>Not very much</th>
<th>Somewhat</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td>-</td>
<td>jklmn</td>
<td>nmlkj</td>
<td>jklmn</td>
<td>jklmn</td>
</tr>
</tbody>
</table>

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54. Overall, to what extent would you say the Internet has improved the way you interact with other citizens about issues in the local area?

<table>
<thead>
<tr>
<th>Not at all</th>
<th>Not Very Much</th>
<th>Somewhat</th>
<th>A lot</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

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Individuals learn about breaking issues through a range of sources. Please share with us how you learn about breaking issues or news in the local community.

*55. Do you ever receive announcements or news from Montgomery County or Blacksburg? For example, the Montgomery County Board of Supervisors summary or the Blacksburg Alert? (Check all that apply).

  - [ ] Yes, Montgomery County
  - [ ] Yes, Blacksburg
  - [ ] No, neither

*56. How do you receive the announcements or alerts from Montgomery County or Blacksburg...(Check all that apply)

  - [ ] Email
  - [ ] Twitter or other Microblogging site
  - [ ] Text messages
  - [ ] Facebook
  - [ ] Website
  - [ ] Email
  - [ ] VT Alerts
  - [ ] I do not receive alerts from the County or the Town
  - [ ] None of the above
  - [ ] Other (please specify)

*57. When there is a breaking news story in the area (e.g., campus or community emergency), in what ways are you most likely to learn about the breaking story? (Check all that apply)

  - [ ] Face-to-Face (word of mouth)
  - [ ] TV, radio (mass media)
  - [ ] Website
  - [ ] VT Alerts
  - [ ] Twitter
  - [ ] Facebook
  - [ ] Email
  - [ ] None of the above
  - [ ] Other (please specify)
*58. Please share with us the ways you receive VT alert information.
cdefg Email
gfeced Text to phone
gfeced Phone call (auto recording)
cdefg I do not receive VT alerts
In this next section, we ask about cell phones.

**59. Have you ever used a cell phone?**

Yes
No

**60. Do you own a cell phone now?**

Yes
No
**61. If you do not own a cell phone, do you usually have access to a cell phone?**

- jklmn Yes
- jklmn No
62. Is the cellphone you own, or have access to, considered a smart phone (e.g., iPhone, Android, Blackberry)?

   jklmn Yes
   jklmn No
63. How long have you been using a cell phone (whether yours or someone else's)?

<table>
<thead>
<tr>
<th>Less than a year</th>
<th>About 1-2 years</th>
<th>About 3-5 years</th>
<th>About 6-10 years</th>
<th>More than 10 years</th>
</tr>
</thead>
<tbody>
<tr>
<td>jkmn</td>
<td>jkmn</td>
<td>nmkj</td>
<td>jkmn</td>
<td>jkmn</td>
</tr>
</tbody>
</table>

64. About how often did you use a cell phone in the past year?

<table>
<thead>
<tr>
<th>Never</th>
<th>About once a month</th>
<th>Every few weeks</th>
<th>1-2 days a week</th>
<th>3-5 days a week</th>
<th>About once daily</th>
<th>Several times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>jkmn</td>
<td>jkmn</td>
<td>nmkj</td>
<td>jkmn</td>
<td>jkmn</td>
<td>jkmn</td>
<td>jkmn</td>
</tr>
</tbody>
</table>

* 65. Thinking about your cell phone... do you ever use your cellphone to do any of the following things. (Choose all that apply)

- gfedic Talk to someone
- gfedic Send or receive a text message
- gfedic Take a picture
- gfedic Send a photo or video to someone
- gfedic Play music
- gfedic Record a video
- gfedic I've not used a cell phone for any of the above
- gfedic Play a game

* 66. Please tell me how often you access the internet using your cell phone...

<table>
<thead>
<tr>
<th>jkmn</th>
<th>Never</th>
<th>jkmn</th>
<th>Less than</th>
<th>jkmn</th>
<th>About once a month</th>
<th>jkmn</th>
<th>About once a week</th>
<th>nmkj</th>
<th>Several times a week</th>
<th>jkmn</th>
<th>About once a day</th>
<th>nmkj</th>
<th>Several times a day</th>
</tr>
</thead>
<tbody>
<tr>
<td>jkmn</td>
<td>jkmn</td>
<td>jkmn</td>
<td>jkmn</td>
<td>jkmn</td>
<td>jkmn</td>
<td>jkmn</td>
<td>jkmn</td>
<td>nmkj</td>
<td>jkmn</td>
<td>jkmn</td>
<td>jkmn</td>
<td>nmkj</td>
<td>jkmn</td>
</tr>
</tbody>
</table>

* 67. Have you ever used your cell phone to... (check all the apply)

- gfedic Access a social networking site Facebook, Google+, May Space, LinkedIn.com
- cdefg Access Twitter or another service to share updates about yourself or to see updates about others
- cdefg Play music from an online music service (e.g., Pandora, Grooveshark, Rhapsody etc.)
- cdefg Listen to news or other radio programs

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Play videos on YouTube or other online video sites
Download a software application or "app"
I do not do any of the above with my cellphone
Other (please specify)
This section asks a few voting questions and a range of demographic questions about participants so that responses to the survey can be better understood. These are important to the survey in that they enable grouped analysis (differences between registered/unregistered voters, differences between age groups, gender differences, racial differences, etc.). As a reminder, no responses you provide here can be traced back to you, so we hope you will feel comfortable providing us honest answers about yourself.

*68. Are you currently a registered voter?

nmlkj Yes

nmlkj No

nmlkj I am not sure

*69. For each election type listed below, please indicate by checking all that apply whether you voted in the most recent election of this type. Thus, I voted in the most recent:

gfedc Presidential election

cdefg Local election (e.g., Town Council, Country Board of Supervisors)

cdefg Primary election to select party representative for President, Senate, or other.

gfedc I've not voted in of the recent elections above

70. In what year were you born?

*71. What is your gender?

nmlkj Male

nmlkj Female

nmlkj Prefer not to say

*72. Counting yourself, how many people are currently living in your home?
73. How many of these people are under the age of 18?

74. Do you own or do you rent your current home?

- Own or buying
- Renting
- Prefer not to say
- Other (please specify)
75. What is the highest level of education you have completed?

- Eighth grade or less
- Some high school
- High school grad (or GED)
- Some college/certificate program
- Graduated from college or certificate program
- Some graduate level work
- Completed graduate school/professional school
- Prefer not to say

76. What is your current marital status?

- Married
- Widowed
- Single
- Living with partner
- Divorced
- Prefer not to say
- Separated

Other (please specify):

77. What is your current employment status? (Check all that apply)

- Employed full-time
- Employed part-time
- Self-employed full-time
- Self-employed part-time
- Student
- Unemployed not looking for work
- Retired
- Disabled
- Homemaker
- Prefer not to say
- Unemployed looking for work

78. Please indicate your ethnicity:

- White/Caucasian
Black/African American
Asian American/Pacific Islander
Hispanic/Latino/Latina
Biracial
Multi-racial
Prefer not to say

Other (please specify)
79. Are you a U.S citizen

- Yes
- No
- Prefer not to say

80. What was your estimated total household income before taxes last year?

- Less than $50,000
- $50,000 or more
- Prefer not to say

81. Would you be willing to be contacted in the next few weeks to participate in a paid focus group? (You can decline to participate at any time)

- Yes
- No

If yes, please provide email or phone number:
Once you click "Done" below your responses will be recorded. We know your time is valuable and we appreciate you sharing information with us. Thank you very much!