**Does Online Access Lead to Further Participation? Internet Access and the Typology of Political Participation**

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**ABSTRACT**

The Internet has brought about major changes in the way in which voters communicate with one another. It has also allowed voters to have information at their fingertips that would have otherwise been difficult to gather in the past. This study confirms there is an effect of having home Internet access for those who are politically active; however, the mechanism for how this occurs is still relatively unknown with the data provided in large public datasets. In the conclusion, it is outlined that the process by which the Internet is increasing voter participation is not easily derived from this analysis. This analysis also indicates that the data found in the American National Election Survey (ANES) 2012 time series survey is limited for explaining the phenomenon because of the lack of questions relating to Internet usage. I propose that the questions found are about access, and not about behavior on the Internet, limiting the usefulness of the survey. For further research it is suggested that a new dataset be built to facilitate political inquiry about online behavior in conjunction with political behavior.

**INTRODUCTION**

In the 21st century there has been hyper-technological change, which has become a source of inquiry in both the social and classical sciences (Farrell 2012). The Internet has revolutionized the ways in which individuals can interact with one another, and has created a geographically unbound space where these interactions may occur (Mossberger, Tolbert, and McNeal 2008;Rheingold 1993). For example, people use online forums to discuss their hobbies[[2]](#footnote-2) (Rheingold 1993), separating themselves into communities of like-minded individuals. Further in these communities there are discussions of politics in addition to other topics (Arceneaux, Johnson, and Murphy 2012; Wojcieszak and Mutz 2009). Not only are some of these communities interested in politics, politicians are also using social network sites (SNS) to solicit voters and donors (Golbeck, Grimes, and Rogers 2010). The quantity and diversity of political activities on the Internet is growing and there is little research in the discipline of political science that examines these behaviors with respect to the Internet and offline. Given that the public opinion literature indicates that Americans are generally disinterested in politics, the fact that political activity and messaging are occurring in this space is interesting and makes it worthy of further examination (Converse 1964; Price and Zaller 1993; Wojcieszak and Mutz 2009; Xenos and Moy 2007; Zaller 1992). It may be expected that political behavior with respect to the Internet may also be one of isolation and avoidance of politics, given the possibilities of self-selection of content and social networks (Putnam 2000; Wojcieszak and Mutz 2009)**.** This political paradox of media activity and political behavior has led scholars to investigate the puzzle of Internet and political participation.

In this paper I seek to answer the question of whether the Internet has an impact on the behavior of active political participants. Additionally, I seek to show whether the Internet has led to an increase or decline in political participation as Robert Putnam (2000) has famously suggested over a decade ago. The literature review discusses the effects of the Internet on political participation, and voting behavior. From there, the analysis will show that active political participants intensify their political behavior in the presence of Internet. In conclusion, I will map out further research and survey methods about online behavior and the role of the data from large public data repositories, such as the American National Election Study (ANES).

**LITERATURE REVIEW**

**Media Use and Political Participation**

Media use and political participation has historically been researched within political science and public opinion. Early studies on this topic concluded that there were effects of the media on political behavior and efficacy, found that television does not inform the public adequately[[3]](#footnote-3) (Robinson 1976). Some of the early skepticism surrounding the effect of media on political activity and other variables was based on the quality and delivery of the information from newspapers and other media sources’ effects on knowledge (Mondak 1995; Postman 2006; Price and Zaller 1993; Robinson 1976). Further, the literature then moved into a paradigm where the media has little effect on political participation, knowledge, et al., because the effects from the media were not specific and are further based on the background of the subject (Price and Zaller 1993; Robinson 1976). With respect to television news, Neil Postman (2006) suggested that it could not be taken seriously, due to the advertisements as well as the presentation of news broadcasts in a manner more reflective of entertainment.Additionally, there are other theories of media malaise that suggest individuals are so saturated with media exposure, that the lines are blurred between news and entertainment (Postman 2006). Furthermore, Robert Putnam (2000) described the modern media as an isolating force that leads to the decline of communities and social capital. It should come to no surprise, the earliest studies on potential effects of the Internet on political phenomena were initially dismissed based on previous research on television[[4]](#footnote-4).

Mediums preceding the Internet, such as television and radio, differ from the Internet in one fundamental way: television and radio are one-way mediums, sending messages to its audience, while the Internet is a two-way medium where there is real time interaction (Rheingold 1993). The role of this technology is continuing to change over time, and has become an important part of everyday life, as traditional activities continue to move to this platform[[5]](#footnote-5) (Mossberger, Tolbert and Franko 2013;Xenos and Moy 2007). As the Internet has become more intertwined with everyday activities, research on the Internet has since pushed forward. Initial research within political science indicated an expectation that the Internet could potentially contribute to a more informed and politically active electorate (Bimber 2000; Boulianne 2009; Farrell 2012; Prior 2007). Further, in countries where telecommunications are widely and publicly available to the citizens, there are higher levels of voter turnout and participation in the political process (Baek 2009).

**Emergence of the Internet and its Impact**

More recently, scholars have become more interested in the role that the Internet plays in various political phenomena (Farrell 2012). Many forms of political participation including petitions, political officials, and government agencies, are accessible to the Internet along with many other vital non-political daily activities (Golbeck, Grimes, and Rogers 2010; Mossberger, Tolbert and Franko 2013; Prior 2007; Xenos and Moy 2007). Individuals can now research candidates, sign petitions, join protests, and participate in other forms of political activity using the Internet, whereas in the past, would have been time-consuming and costly (Best and Kreuger 2005). Although this information is available online, the mechanisms are mostly unknown about why the Internet has an effect on politics (Carlisle and Patton 2013). However, it is known that participation in offline groups and communities, do not depend entirely on their technological usage even with the increases in Internet access (Bimber, Flanagin, and Stohl 2012).

A pervasive argument in the literature for the postitive relationship between the Internet and political participation is that the Internet lowers the cost of participation for gathering necessary information to make informed political decisions. Using the calculus of voting, the Internet should increase the probability of voting because there is a cost reduction of information gathering (Beck et al. 2002; Best and Kreuger 2005; Downs 1957; Riker and Ordeshook 1968). Despite theorized decreases in the costs of information gathering, there is still a physical cost to having access to the technologies. Voters must invest in the appropriate Internet and Computer Technologies[[6]](#footnote-6) (ICTs) or seek out venues where the Internet is available in order to access critical information (Mossberger, Tolbert, and McNeal 2008; van Dijk 2005).

Although access to the Internet is important, the structure of online spaces is also critical to understanding its relationship to political activity. Under the Web 2.0 paradigm, web designers create interactive environments where the users create their own experience and share this experience with their friends and contacts (O’ Reilly 2005). Therefore, within this construct, the Internet has become both a social experience and an information source (Lawrence, Sides, and Farrell 2010; O’Reilly 2005). It has become an interactive endeavor where citizens inform each other by sharing links and information, rather than being passively informed by a traditional news source (Lawrence, Sides, and Farrell 2010; O’Reilly 2005; Price and Zaller 1993). As a result, there has been an increase in citizen journalism and opinion-giving which has manifested in the form of blogs (Lawrence, Sides and Farrell 2010; Schlozman, Verba, and Brady 2010). Blogs provide sought-after information, and often increase political sorting, because readers are more likely to read blogs with which they agree, within a fragmented media[[7]](#footnote-7) (Lawrence, Sides, and Farrell 2010; Nie et al. 2010). Due to the fragmentation of the media, however, individuals favor opinion-reinforcement over information that may challenge the individual’s attitudes (Garrett 2009; Mutz 2006; Mutz and Martin 2001; Nie et al. 2010). Coupled with increased interaction with friends and other contacts in an online setting, these attitudes are generally reinforced on SNS. Given the general American disinterest in politics, the Internet potentially brings more non-political content to a user, allowing users to bypass political information and avoid cross-cutting exposure to politics altogether Arceneaux, Johnson, and Murphy 2012;Garrett 2009; Wojcieszak and Mutz 2009). Despite the bypassing of political information for the uninterested user, voters are sharing and gathering information by interacting with one another.

Zaller (1992) suggests that voters use what they see in the general media to draw conclusions about politics. Information gathered from the media is not unbiased, but information from friends takes on a more partisan tone (Beck et al 2002; Mutz 2006). Additionally it should be expected that voters do not learn about political issues and candidates in a traditional sense, where cross-cutting exposure is absent (Mutz and Martin 2001). Online users are more likely to know their political preferences and have them reinforced due to their interactions and self-selection of information online (Beck et al. 2002; Wojcieszak and Mutz 2009).The gathering of political information is understood as a crucial, yet costly, element for an individual’s calculus of voting (Beck et al 2002; Downs 1957; Miller and Shanks 1996; Riker and Ordeshook 1968). It has also been remarked that Americans are generally not politically sophisticated and therefore develop heuristics to determine their voting preferences and attitudes in order to make decisions for participation (Converse 1964). Information gathering is often cited as a costly venture for political participation, due to the investment of time that is needed to learn about current issues (Downs 1957; Miller and Shanks 1996; Redlawsk 2004; Riker and Ordeshook 1968). The Internet reduces the costs, which should lead scholars to still suspect there is still a positive relationship between the Internet and political participation (Steffes and Burgee 2009).

Similar to voting, heuristics are necessary to operate in the Internet and online communities due to the volume of information that users must sort through[[8]](#footnote-8) (van Dijk 2005). In addition to these heuristics, Zaller (1992) suggests that individuals can recall information they have encountered in the media. On the Internet there are instances where individuals may be more swayed by what they read online, see in a video on YouTube, or read in updates from friends on SNS. Considering that the Internet may be a valuable source of information gathering, this may be an inexpensive avenue in which voters can gather information, given the increasing availability of the Internet[[9]](#footnote-9) (Steffes and Burgee 2009). Studies on blogs and other facets of Web 2.0 behavior are absent from many flagship political science journals because of the common assumptions of the media malaise theories that tend to dominate the discipline (Farrell 2012; Prior 2007). Although this could also be a concern with research on the Internet, it falls outside the malaise paradigm because it is a two-way medium. Therefore, given the unique aspects of the medium, traditional theories and methods may not easily apply to Internet and the resulting sociopolitical behavior.

**Forms of Political Participation**

Political scientists have always been interested in the question: what drives citizens to participate in politics (Verba and Nie 1972)? With increased ICT presence, there are consequences for political participation, given access to the Internet (Carlisle and Patton 2013; Mossberger, Tolbert, and McNeal 2008). Despite technological innovations and broader Internet access, voting remains one of the major avenues of political participation for which most citizens participate (Zukin et al. 2006). Verba and Nie (1972) found that there are key dimensions to participation and its measurement, and describe a typology in the modes of participation into four distinct categories: campaign activity, communal activity, voting, and particularized contact. Only three of these categories apply to this study, because the fourth category about particularized contact is not necessarily facilitated by online contact[[10]](#footnote-10).

Campaign activities are acts of campaigning or persuading others in favor of a candidate. Actions that fall under this category entail: persuading others about, working for, or donating to a candidate’s campaign. Other activities include attending rallies or political meetings (Verba and Nie 1972). All of these endeavors can be accomplished in an online space in some form, which can occur through online petitions, or directly soliciting government officials (Golbeck, Grimes, and Rogers 2010). Most notably, President Obama ran the first campaign that relied on donations and advertising on the Internet in favor of relying entirely on traditional resources (Wilcox 2008)**.**

Communal, or cooperative activity, refers to the community and neighborhood aspects of participating in the political process. Activities associated with this type of participation include: forming community groups, as well as protest to solve local or collective problems (Verba and Nie 1972). Studies also show that an individual’s physical and social environment, as well as their social networks, can affect their political choices and behavior (Brownstein and Parker 2014; Huckfeldt et al 1995; Huckfeldt and Sprague 1987; Mutz 2006; Nickerson 2008; Parker, Parker, and McCann 2008). It is conceptualized that friends are affecting political opinions and passing information through personal communication and interaction[[11]](#footnote-11) (Brownstein and Parker 2014; Parker, Parker, and McCann 2008). Voters are influenced by their social networks, and act accordingly with this information (Nickerson 2008; Parker, Parker, and McCann 2008), but more importantly, the mass public may be seeking out media sources that conform to their political preferences (Wojcieszak and Mutz 2009). Close and interpersonal relationships can also be helpful for encouraging voter turnout (Brownstein and Parker 2014; Huckfeldt and Sprague 1987; Nickerson 2008). Although friends tend to inform political decisions, there is also evidence to show that the messages in which friends facilitate discussion have higher levels of partisan undertones (Beck et al. 2002). Additionally, negative information tends to flow through friendship networks more readily than factual information, and friends tend to have similar views to their peers (Brownstein and Parker 2014; Parker, Parker, and McCann 2008).

Voting is the participatory activity that deals with political acts of registration and voting in elections. Frequency of voting is a factor for whether an individual will continue to participate in politics (Verba and Nie 1972). Because the Internet and SNS has a role in the information gathering process, voters can find information about candidates in a convenient manner that has the potential to be personal[[12]](#footnote-12) (Golbeck, Grimes and Rogers 2010). Therefore, Individuals who are more interested in politics, may have a cost-effective avenue in which their interaction with campaigns and political information can be further engaged in the process (Carlisle and Patton 2013).

Although there seems to be a positive outlook on the Internet and ICTs being associated with higher levels of political participation, there is the potential for the effects of the Internet to increase inequality that is already present (van Dijk 2005). Digital inequality is caused in part by the technology itself, due to the costs and barriers to access and ICT availability. Further, ICTs and Internet access may be a function of promoting present economic inequality. As government services and other forms of participation move to the Internet, there is concern that there may be individuals left out of the process (Mossberger, Tolbert, and McNeal 2008; van Dijk 2005). Larger inequalities with respect to political representation and economic well-being has consequences elections, policy, and governance (Bartels 2008). Despite these inequalities, there seems to be theoretical backing that there is a possibility that access to the Internet has a positive effect on political participation, however there is still an inequality in information access. Portable ICTs such as smartphones and other SMS devices are approached as supplements, although many citizens have substituted these ICTs in favor of traditional Internet access (Mossberger, Tolbert, and Franko 2013). Given this inequality, it is important to understand the relationship between the Internet and political participation.

**DATA USED IN THE ANALYSIS**

In order to analyze the relationship between the Internet and political participation, the American National Election Studies (ANES) time series survey from 2012 is used for this analysis. This dataset was chosen over the General Social Survey (GSS) because of its political participation variables. The GSS dataset had more questions pertaining to online behavior, but lacked in the political participation variables which Verba and Nie (1972) used in their study. The 2012 study was chosen, because it is the most recent survey collected by the ANES with information about Presidential elections and behavior. The ANES collected their data in two concurrent methods: face-to-face interviews and online surveys. For the analysis, the full dataset (N=5914) is used, and a statistical weight was included, to take into account for the differing data collection methods[[13]](#footnote-13). Because these methodological changes are new, the data is only analyzed as a cross-section.

**VARIABLES AND METHODS**

**Dependent Variables**

To operationalize participation, I have used Verba and Nie’s (1972) method of using factor analysis to separate and sort these variables into different theoretical dimensions. Table 1[[14]](#footnote-14) describes the variables found in the ANES dataset that were analyzed for the participation dependent variables. Before performing the factor analysis, all the variables assessed in the factor analysis are recoded into dichotomous variables, where a 1 represents having participated in the activity being asked about, and a 0 representing not having participated in the given activity[[15]](#footnote-15). The variables were factor analyzed by varimax rotation using Kaiser Normalization, as shown in Table 2[[16]](#footnote-16). The variables are rotated on an orthogonal axis, which sorts out the correlated variables and loads them in the appropriate dimensions together. The dependent variables sorted into three different dimensions of political participation, which are in accord with the Verba and Nie’s findings. The dependent variables are then created by adding the values from the variables that loaded together on their respective dimensions. These variables represent three different types of participants in politics that are consistent with definitions by Verba and Nie: communal activities, voters, and campaign activities.

The variables within the communal activity dimension are all activities in which political participants are taking on traditional forms of local political involvement.Seven behaviors were included in this variable: (1) joining a protest or a political march; (2) giving to a social or political organization; (3) contacting a representative or senator[[17]](#footnote-17); (4) signing a petition offline; (5) attending a PTA meeting; (6) signing a petition on the Internet; and (7) finally writing a letter to a newspaper about a political issue. The second dependent variable is indicative of voting participation. This variable included three different behaviors: registration and voting participation in the 2008 and 2012 Presidential elections, respectively. This variable not only measures voting in the 2012 election, but also repeated voting behavior. The third and final dimension of political participation are the campaign activities. These behaviors relate to campaign activities and events; generally oriented towards political parties and electoral campaigns. This variable has five behaviors: (1) attending a political meeting[[18]](#footnote-18); (2) donating to a political party; (3) contributing to a political cause[[19]](#footnote-19); (4) wearing a button or putting out a lawn sign for a political candidate; and (5) doing other work beyond the above activities for a political candidate.

**Independent Variables**

There are several measures for Internet access included in the ANES dataset. The variable of Internet in this analysis was measured as Internet access at home. This measurement was chosen, because home Internet access would indicate an investment, as well as a commitment to using the medium for information and other necessary personal activities[[20]](#footnote-20). This variable was coded as dichotomous, and in the dataset roughly 87 percent of respondents used the Internet at home[[21]](#footnote-21). Home Internet access would indicate that there is an emphasis on the Internet as a necessity, by investment. Additionally, the variable should shed light on behavior that would be seen as isolating or avoidance of politics. It should be expected that participants in politics have Internet at home, because they often have higher levels of socioeconomic status, and follow current events (Verba and Nie 1972).

In addition to Internet, television is the largest medium that political participants gather information. Over time, television has become a primary purveyor of news information and as such it must be taken into account (Prior 2007). Because these news and information gathering habits are important for an individual’s decision to vote (Beck et al. 2002; Miller and Stokes 1996; Riker and Ordeshook 1968; Zaller 1992), a dichotomous variable is included that measures whether the subject followed the news for the Presidential election on television (medsrc\_campsrcs\_tvnews). In the dataset 85.49 percent of respondents reported following the Presidential Election on television, while approximately 47 percent of respondents reported following the Presidential Election on the Internet (medsrc\_campsrcs\_inet). A correlation between home Internet access and attention to the campaign via television was found to be 0.1021, indicating no collinearity between the variables. Despite this, television news was included in the analysis because of its role in informing the public as the Internet is not the dominant form of news information consumption (Prior 2007)**.** Television, and more traditionally, newspapers are the form in which most individuals obtain political information and current events (Prior 2007; Mondak 1995). The Internet is a newer medium, and as such, it competes with more traditional mediums as a source of information (Nie et al. 2010). As newspapers go out-of-print, the Internet is becoming a more sought-after medium that will supply information to those seeking this information (Lawrence, Sides, and Farrell 2010; Nie et al. 2010). Newspapers were not included in the analysis, because newspapers are largely online and there may be error in responses from subjects because they may read or have subscriptions to the newspapers’ websites, and not an actual print newspaper[[22]](#footnote-22).

To operationalize socioeconomic status, educational attainment is included in the model. In the literature there is evidence that higher levels of educational attainment leads to higher levels of home Internet access (File and Ryan 2014). Although income is also thought of as an aspect of socioeconomic status, it is not included in this analysis[[23]](#footnote-23). The variable contained 16 ordinal levels of educational attainment ranging from less than a first grade education to the attainment of a doctorate. The median educational attainment indicated that the subject had completed some college[[24]](#footnote-24). About 88 percent of the subjects reported having some college also claimed to have Internet at home[[25]](#footnote-25). This rate of home Internet access is also higher than the national figures among all Americans, which is closer to 75 percent nationally[[26]](#footnote-26) (File and Ryan 2014).

 Party identification is a quintessential indicator of voting and political participation (Campbell et al. 1960; Green, Palmquist, and Schickler 2002; Miller and Stokes 1996).Partisanship, and in particular party identification is stable over time despite shifts in preferences and attitudes in the electorate (Green, Palmquist, and Schickler 2002). Although there have been partisan shifts, the isolation and self-selection of information have led to more polarized environments, especially on the Internet (Bafumi and Shapiro 2009; Wojcieszak and Mutz 2009). A variable for strength of partisanship and ideology is created by adding two variables. First, party identification are coded as dichotomous. A value of 1 represents an individual who has a party identification in either the Democratic or Republican party. All other responses were recoded as a 0, including independents[[27]](#footnote-27). Ideological strength was then recoded from the self-identifying question that places the subject on a liberal to conservative scale. Self-identifications as “extreme” were coded as a 3, a response of liberal or conservative were coded as 2, slight and leaning identifications were coded as 1, and 0 for moderates as well as subjects who not think in those terms[[28]](#footnote-28). The ideological strength and partisan identification variables were then added together to create a partisanship variable[[29]](#footnote-29). The strongest partisans, with a value of 4, only comprised of roughly 7 percent of all subjects in the study. The median partisan attitude was a 2, and roughly 8 percent of the dataset has a 0 for ideological strength.

 Voter efficacy, with respect to government, is a traditional variable that may indicate whether a voter feels that their vote matters, government responsiveness, and whether they may participate in the process (Acock, Clarke, and Stewart 1985). External efficacy is measured using the standard ANES questions that are asked in the 2012 survey[[30]](#footnote-30). Questions asked by ANES about efficacy[[31]](#footnote-31) recoded and an additive index is created[[32]](#footnote-32). A smaller value for the efficacy index indicates lower levels of external efficacy and conversely higher values indicate a higher level of efficacy. This variable specifically measures external efficacy, and the research would indicate that higher levels of external efficacy would lead to higher levels of participation (Acock, Clarke, and Stewart 1985). The average level of efficacy in the dataset was 36.64, and the median was 25, which would indicate lower levels of efficacy among subjects in the survey[[33]](#footnote-33).

 According to the literature, Internet users require a certain theoretical level of interpersonal trust in order to use the Internet effectively under the Web 2.0 paradigm (Grabner-Kräuter 2010). This is due to the sharing nature of information gathering on the Internet. To operationalize trust in the model, the response to the question about how often people can be trusted (trust\_social) was used. The response is an ordinal variable ranging from 1 to 5, recoded to make larger values more trusting, and smaller values less trusting[[34]](#footnote-34). The median respondent was found to trust people about half the time, the middle value. About 94.5 percent of the subjects interviewed did not respond with never (1) or always (5) to the question about social trust.

There have been some discernable trends in political participation, specifically voting trends, which have been consistent over time (Green, Palmquist, and Schickler 2002)**.** For example, it is known that the younger individuals do not generally take part in the political process as much as those in older cohorts (Schlozman, Verba, and Brady 2012). Despite this fact, the younger individuals tend to be the most likely to value Internet access, thereby creating a cohort effect where the Internet may be higher valued by younger individuals (Carlisle and Patton 2013; Jennings and Zeitner 2003; Xenos and Moy 2007). In addition to the younger cohort, those with more education tend to also value Internet access. Although historically younger individuals are not voting as much as older individuals, those with higher levels of education tend to have higher levels of socioeconomic status. Given these considerations, age was also included in the model. The average age of the respondents is 49.4 years of age. Given the current business environment it would be expected that those who are not retired, may be required to use the Internet as part of their employment. Approximately 85.4 percent of subjects over the age of 55 reported having Internet at home, while 88.9 percent of those under 55 reported home Internet access.

**HYPOTHESES**

An effect of the Internet on political participation has been found, however, the size of this effect has varied in the literature (Boulianne 2009). The question has not been asked whether the Internet is necessary for certain groups of political participants. This paper has three sets of hypotheses that address the question of political participation and Internet use. Firstly, to address the question about overall political participants and Internet access:

H1a: As levels of Internet access increase, levels of activism and political participation will increase.

H1b: As levels of Internet access increase, levels of voting activities will also increase.

H1c: As levels of Internet access increase, levels of campaign participation will increase

These notions of participation are set forth by the typology of participation in politics as outlined by Verba and Nie (1972). Additionally, a hypothesis about the popular notion of slacktivism is suggested. It can be the case that individuals see their online use as their participation in the political process, but are still as informed as their peers who are active participants. These voters are more commonly referred to as “slacktivists.” (Christensen 2011).Internet access among these individuals who only participate and discuss politics online would indicate that there is a certain level of slacktivism occurring.

H2: As levels of Internet access increase, slacktivist behavior also increases.

Thirdly, there is a question of information gathering and the role of older technologies, such as television. Since television is the current dominant medium for political information, it is important to understand whether there is a decreasing effect on television watching with increased Internet access. With popular notions of “chord cutting”[[35]](#footnote-35) it would be expected that television viewership is decreasing with increasing levels of Internet access. Therefore:

H3: As levels of Internet access increases, television viewership decreases.

Given these hypotheses, it should be expected that there will be increases in political participation as home Internet access is present. The analysis will then take in account for different types of participants in politics.

The model is assessed in both OLS and Logit regressions. For each dependent variable, four different models are tested for each dependent variable. The first dependent variable tested is communal activities[[36]](#footnote-36), the second dependent variable is the voting activities[[37]](#footnote-37), and finally the third dependent variable is campaign activities[[38]](#footnote-38). For each dependent variable, OLS regression is done in the following order: the first model is a full model including all the independent variables; the second model excludes efficacy with all other independent variables still present; the third model excludes TV news attention, with all other variables still in the model; and the fourth model excludes both TV news attention and efficacy. This procedure is repeated for all three dependent variables. Additionally, the data are analyzed using ordinal logit regression due to the ordinal dependent variables. Similar to the OLS regressions, the same weight was applied as. The models are reported in the same order as the OLS regressions, and the results for the ordered-logit regressions can be found in Tables 6-8[[39]](#footnote-39). In order to interpret the results, CLARIFY was used in order to simulate probabilistic values for the dependent variable based on the independent variables in the model (King, Tomz, and Wittenberg 2000). Using CLARIFY, probabilities for the simulated outcomes of the dependent variable are calculated while holding all variables at their medians. Additionally, the variable for home Internet access was allowed to vary, and simulated probabilities were recorded to take in account for this. The other variables in the model are held at their medians for the simulation. The results are represented graphically in the Figures found in the Appendix.

**FINDINGS**

 It can be seen that there is an effect on political participation with respect to home Internet access. With the campaign participants and traditional activists, a shift from no participation to at least one activity is clear. There is a shift towards greater participation with increases in Internet access, however greater participation levels decreased exponentially. This would indicate that the Internet facilitates further participation, even among active participants. For voters, the Internet seems to play a role with respect to voting in repeated elections. There is evidence of an increase in participation for all three dependent variables, and that voting is still the most common form of political participation.

Although the ANES has surveyed over 5500 subjects, there were quite a few subject dropped from the analysis when the efficacy variable is present. The lack of subjects is directly related to asking of efficacy questions. When dropping the efficacy variable, the number of subjects nearly double. Additionally, home Internet access was statistically significant in most of the models where efficacy was not included. This indicates that efficacy is not necessarily the most indicative of whether the Internet has an effect on political participation, although it would be expected that those with higher levels of efficacy are more likely to participate in politics (Acock, Clarke and Stewart 1985; Tedesco 2011). Additionally, as levels of home Internet access increases, levels of television watching habits also increase. This confirms notions about self-selecting behavior with respect to news and information. Surprisingly age was positively associated, and did not have a large coefficient, considering the literature’s claim that younger individuals have more Internet access. This may indicate that age may not be explanatory with respect to the Internet and its effect on political participation. Older individuals are also using the Internet indicating that there is less of a generational effect than theorized.

Additionally, the results indicate that TV watching for campaign information increases with home Internet access, which could indicate three possible explanations: (1) bundling of services from Internet Service Providers[[40]](#footnote-40); (2) TV could be conflated with Internet television habits due to chord cutting behaviors[[41]](#footnote-41); (3) questions about television watching behavior may be conflated with online video watching. Bundling of Internet services is a way in which consumers can buy Internet and cable at a lower price, and often Internet Service Providers offer deals to consumers to have both cable and Internet. To avoid paying for cable television, some consumers have decided to do away with cable television subscriptions in favor of Internet television options. Despite this trend, the relationship found in the analysis indicates that the Internet is not replacing other mediums as the primary source of information, however television as a traditional medium may not be entirely explained with this variable. With the growth of Internet television, subjects may likely watch their television on the Internet, when this may be thought of as traditional television watching.

All of the probabilities found in the ordinal logit analysis were found to shift towards more activities with Internet access. There was an exponential effect found with increasing levels of participation and probability of participation. An exponential increase is apparent for voting in multiple elections, and a decrease for communal and campaign activities. This would indicate that there is a diminishing returns of benefit of participating in further activities with respect to political participation. This should be expected because as the amount of time and willingness to participate in multiple campaigning events is low in general. Further participation has an effect of diminishing returns, and individuals who are already engaged in the process may not necessarily see the benefit to participate in all political activities. This may indicate some slacktivism behavior, as there are still a considerable number of people who still didn’t participate in the process. However, slacktivism may just be a side product of a lack of interest and investment into further political participation.

Despite the noticeable effect on political participation that the Internet seems to have, it is difficult to interpret because there is no indicator of the causal mechanisms of this relationship. This analysis indicates an effect of the Internet on political participation, but this is only in reference to access. A problem for the analysis of political behavior with respect to the Internet is that the questions in major datasets are not asking enough about online behavior directly. Most questions about the Internet in the ANES dataset are asking about access with respect to the Internet and SNS. While this is an important variable when discussing Internet behavior with respect to political participation there are few, if any, questions about what subjects do on the Internet when they are online and not looking at political information. This is an issue that must be addressed as analysis and research on political behavior and the Internet progresses.

Despite all these variables and analysis of political behavior with respect to the Internet, it is important torecognize a digital inequality that exists in which that people with Internet access have more participatory voice than others (Schlozman, Verba, and Brady 2010). Even though Internet use is pervasive in the American system, there are still inequalities because the information present online differs from that of the offline space, and there is an overarching assumption of access (van Dijk 2005). Inequality in voting and other types of behaviors may be driven even by the technologies themselves, and as a result it should be expected that there will be an increase in political behavior if an individual has the Internet. There is an inequality that is incurred by the high-speed Internet and its access (Mossberger, Tolbert, and McNeal 2008, 18-19). There are even divides within SNS, such as Facebook, where evidence of parental income is indicative of maintaining an active account, which may provide evidence of further inequality online (Carlisle and Patton 2013).

**CONCLUSION**

 This study indicates that there is a positive effect of Internet access on active political participants. It was found that the Internet may have a more profound effect on those that are not involved in the political process outside of voting and registration. Additionally, from these data, traditional voters are not more likely to vote in only one election because of Internet access, however repeated voting behavior is affected positively. The analysis indicates that there is not only an effect of the Internet on political participation, but perhaps a further mechanism that increases voter turnout and political behavior. Despite an effect on political participation, it is impossible to tell what exactly these individuals are doing online due to the limits of the dataset and its questions about online behavior. Are the survey respondents seeking political information? Are they talking to friends on SNS? These are questions that are either unanswered, or could only have partial answers in the ANES dataset. For example, when discussing SNS, there is no mention of Facebook or Twitter activities. If these networks were specifically mentioned, there are aspects of these SNS that could help increase the scope of inference, since there are differing opinions about what constitutes SNS.

Understanding the causal mechanisms of online behavior should be the next step for the research. Henry Farrell’s (2012) suggestion about finding methods for decoupling the Internet for analysis is a truly complex which social scientists must seek to explore for the benefit of future analysis. As more methods develop to analyze data on the Internet, there will be room for more specific analyses that can glean more information on causal mechanisms. Additionally, there may be confounding variables that can be used to discern the slacktivism elements from the participatory elements. Currently in the literature this is something that is fairly difficult to measure and discern, and the analysis conducted sheds new light on this puzzle. It also brings to light another issue about measures of the Internet in major datasets. Perhaps the solution is to build a new dataset that combines Internet behavior and political participation and attitudes variables. As the methods for public opinion change, there is additional reason to understand these behaviors and expand the methods of sampling to properly understand these behaviors.

Additionally there could be complications with the measure of the Internet in the 2012 dataset specifically, due to the fact that there were both online and offline survey methods. The ANES changed their methodology in 2012 which may skew the results for that year. The ANES and GSS datasets are not equipped to help political scientists answer these questions about political participation and online behavior. The effects shown in this paper from the ANES are only cursory and indicate a change in political participation in the presence of Internet. What cannot be known from this dataset is whether this has anything to do with behavior on the web. Missing from this dataset is a question about general social media use that might be useful to know. For example, questions in the ANES are more oriented to general SNS use with no specific questions to the more popular SNS that are likely being used by both participants and those in power[[42]](#footnote-42). Without this information, it is difficult to understand whether subjects are actually using social media regularly, and dependent on the subject’s definition of social media. This is not only an issue for the ANES, but also in the GSS survey. In the GSS survey there are more Internet variables. Yet, with respect to political participation, there are not as many variables outside of registration and voting behavior. The solution to this issue may be to create a new dataset that takes in account for both of these topics at the same time.

Other disciplines are quickly surpassing political science in Internet behavior research and this discipline can contribute to this literature by rethinking survey methods and wording in which questions are asked about the Internet. Other disciplines are discussing topics that are not related to questions of access, and are expanding their research focus to online behavior. For example, other social science disciplines in addition to technological disciplines are discussing issues not only of communication but political behavior with respect to the newer technologies (Golbeck, Grimes, and Rogers 2010; Steffes and Burgee 2009; Tedesco 2011). It is also an opportunity for political science to expand its literature with respect to participation and media effects as well. Understanding that there is an effect on political participation is not sufficient to understand the full breadth of what is occurring with the Internet and politics. Researchers still need to know about participants’ behavior with these technologies, and this information can be disentangled. This disentanglement will start with asking better questions about online behavior and political participation in the same dataset. Scholars are starting to engage this puzzle more, but if there is to be a better analysis of the data by outsiders, data will need to be collected better within the discipline’s prominent datasets.

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**APPENDIX**

**APPENDIX**

**TABLE 1: Participation Variables**

|  |  |
| --- | --- |
| ANES Variable[[43]](#footnote-43) | Description |
| Prevote\_regist\_addr | Is R registered to vote at their current address |
| mobilpo\_rally | Did R attend political meetings, rallies, speeches |
| mobilpo\_ctbpty | Did R contribute to a political party |
| mobilpo\_sign | Did R wear campaign button or post sign or bumper sticker |
| mobilpo\_otherwork | Did R do other work for a candidate |
| mobilpo\_ctboth | Did R contribute to any other group for/against a candidate |
| interest\_voted2008 | Did R vote in 2008 |
| R\_vote2012\_x | Did R vote in 2012 |
| dhsinvolv\_march | In the past 4 years has R joined a protest march |
| dhsinvolv\_org | In the past 4 years has R contributed to a social or political group |
| dhsinvolv\_contact1 | In the past 4 years has R contacted their Representative or Senator |
| dhsinvolv\_letter | Has R written to a newspaper or magazine about a political issue |
| dhsinvolv\_petition | Has R signed a paper petition |
| dhsinvolv\_netpetition | Has R signed an Internet petition in the past 4 years |
| dhsinvolv\_board | In the past 4 years has R been to a school board meeting |

**TABLE 2: VARIMAX ROTATION WITH KAISER ESTIMATION FOR PARTICIPATION VARIABLES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| VAR | Traditional Activists | Voters | Campaigners | Uniqueness |
| attend |  |  | 0.72 | 0.4568 |
| givetoparty |  |  | 0.61 | 0.5846 |
| givetopol |  |  | 0.35 | 0.7607 |
| buttonsign |  |  | 0.63 | 0.5823 |
| workforcand |  |  | 0.72 | 0.4597 |
| vote2012 |  | 0.83 |  | 0.2891 |
| vote2008 |  | 0.83 |  | 0.2918 |
| march | 0.49 |  |  | 0.6793 |
| givesocpolorg | 0.58 |  |  | 0.6444 |
| contact | 0.66 |  |  | 0.5405 |
| petition | 0.63 |  |  | 0.5836 |
| school | 0.44 |  |  | 0.7635 |
| registered |  | 0.85 |  | 0.2697 |
| netpetition | 0.67 |  |  | 0.5423 |
| letter | 0.36 |  |  | 0.7607 |
| Eigenvalue | 2.41606 | 2.19093 | 2.18395 |  |
| Difference | 0.22513 | 0.00698 |  |  |
| Proportion | 0.1611 | 0.1461 | 0.1456 |  |

**TABLE 3: OLS RESULTS FOR COMMUNAL ACTIVITIES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | Model 2 | Model 3 | Model 4 |
| Education | 0.133\*\*\* | 0.132\*\*\* | 0.134\*\*\* | 0.133\*\*\* |
|  | (0.0131) | (0.00891) | (0.0131) | (0.00891) |
| Partisanship | 0.180\*\*\* | 0.184\*\*\* | 0.180\*\*\* | 0.184\*\*\* |
|  | (0.0273) | (0.0189) | (0.0273) | (0.0189) |
| Internet | 0.233\*\* | 0.381\*\*\* | 0.250\*\* | 0.393\*\*\* |
|  | (0.103) | (0.0687) | (0.103) | (0.0682) |
| Age | 0.00439\*\* | 0.00754\*\*\* | 0.00493\*\*\* | 0.00788\*\*\* |
|  | (0.00183) | (0.00124) | (0.00180) | (0.00122) |
| Trust | 0.120\*\*\* | 0.148\*\*\* | 0.119\*\*\* | 0.147\*\*\* |
|  | (0.0337) | (0.0232) | (0.0337) | (0.0232) |
| TV | 0.146 | 0.0941 |  |  |
|  | (0.0897) | (0.0616) |  |  |
| Efficacy | 0.00197\*\* |  | 0.00194\*\* |  |
|  | (0.000857) |  | (0.000857) |  |
| \_cons | -1.464\*\*\* | -1.744\*\*\* | -1.383\*\*\* | -1.694\*\*\* |
|  | (0.199) | (0.135) | (0.193) | (0.131) |
| N | 2440 | 4874 | 2440 | 4874 |
| F | 36.28 | 98.88 | 41.86 | 118.2 |
| r2 | 0.0945 | 0.109 | 0.0935 | 0.108 |
| Standard errors in parentheses |  |
| ="\* p<0.10 |  \*\* p<0.05 |  \*\*\* p<0.01" |  |

**TABLE 4: OLS RESULTS FOR VOTING ACTIVITY**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 5 | Model 6 | Model 7 | Model 8 |
| Education | 0.0909\*\*\* | 0.0877\*\*\* | 0.0920\*\*\* | 0.0889\*\*\* |
|  | (0.00791) | (0.00532) | (0.00794) | (0.00534) |
| Partisanship | 0.139\*\*\* | 0.146\*\*\* | 0.139\*\*\* | 0.146\*\*\* |
|  | (0.0163) | (0.0113) | (0.0163) | (0.0113) |
| Internet | 0.300\*\*\* | 0.201\*\*\* | 0.327\*\*\* | 0.233\*\*\* |
|  | (0.0609) | (0.0406) | (0.0609) | (0.0405) |
| Age | 0.0137\*\*\* | 0.0144\*\*\* | 0.0145\*\*\* | 0.0152\*\*\* |
|  | (0.00108) | (0.000732) | (0.00107) | (0.000724) |
| Trust | 0.0393\* | 0.0539\*\*\* | 0.0385\* | 0.0538\*\*\* |
|  | (0.0202) | (0.0138) | (0.0203) | (0.0139) |
| TV | 0.239\*\*\* | 0.241\*\*\* |  |  |
|  | (0.0537) | (0.0366) |  |  |
| Efficacy | 0.00202\*\*\* |  | 0.00197\*\*\* |  |
|  | (0.000508) |  | (0.000509) |  |
| \_cons | -0.111 | 0.0170 | 0.0237 | 0.145\* |
|  | (0.117) | (0.0798) | (0.114) | (0.0777) |
| N | 2402 | 4768 | 2402 | 4768 |
| F | 81.95 | 193.1 | 91.57 | 221.0 |
| r2 | 0.193 | 0.196 | 0.187 | 0.188 |
| Standard errors in parentheses |  |
| ="\* p<0.10 |  \*\* p<0.05 |  \*\*\* p<0.01" |  |

**TABLE 5: OLS RESULTS FOR CAMPAIGN ACTIVITIES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 9 | Model 10 | Model 11 | Model 12 |
| Education | 0.0119 | 0.0124\*\* | 0.0118 | 0.0129\*\* |
|  | (0.00740) | (0.00506) | (0.00739) | (0.00506) |
| Partisanship | 0.0988\*\*\* | 0.107\*\*\* | 0.0988\*\*\* | 0.107\*\*\* |
|  | (0.0154) | (0.0108) | (0.0154) | (0.0108) |
| Internet | 0.0417 | 0.0502 | 0.0413 | 0.0605 |
|  | (0.0585) | (0.0391) | (0.0582) | (0.0388) |
| Age | 0.00388\*\*\* | 0.00449\*\*\* | 0.00387\*\*\* | 0.00477\*\*\* |
|  | (0.00103) | (0.000702) | (0.00101) | (0.000691) |
| Trust | -0.000438 | 0.0225\* | -0.000414 | 0.0223\* |
|  | (0.0190) | (0.0132) | (0.0190) | (0.0132) |
| TV | -0.00296 | 0.0794\*\* |  |  |
|  | (0.0506) | (0.0350) |  |  |
| Efficacy | 0.00234\*\*\* |  | 0.00234\*\*\* |  |
|  | (0.000483) |  | (0.000483) |  |
| \_cons | -0.255\*\* | -0.367\*\*\* | -0.256\*\* | -0.325\*\*\* |
|  | (0.112) | (0.0764) | (0.108) | (0.0742) |
| N | 2462 | 4900 | 2462 | 4900 |
| F | 14.09 | 31.64 | 16.44 | 36.91 |
| r2 | 0.0386 | 0.0373 | 0.0386 | 0.0363 |
| Standard errors in parentheses |  |
| ="\* p<0.10 |  \*\* p<0.05 |  \*\*\* p<0.01" |  |

**TABLE 6: OLOGIT RESULTS FOR COMMUNAL ACTIVITIES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 1 | Model 2 | Model 3 | Model 4 |
| Education | 0.182\*\*\* | 0.185\*\*\* | 0.184\*\*\* | 0.187\*\*\* |
|  | (0.0172) | (0.0122) | (0.0172) | (0.0121) |
| Partisanship | 0.263\*\*\* | 0.255\*\*\* | 0.261\*\*\* | 0.254\*\*\* |
|  | (0.0351) | (0.0253) | (0.0350) | (0.0253) |
| Internet | 0.462\*\*\* | 0.734\*\*\* | 0.495\*\*\* | 0.761\*\*\* |
|  | (0.138) | (0.0992) | (0.138) | (0.0988) |
| Age | 0.00718\*\*\* | 0.0117\*\*\* | 0.00828\*\*\* | 0.0126\*\*\* |
|  | (0.00232) | (0.00163) | (0.00228) | (0.00161) |
| Trust | 0.175\*\*\* | 0.213\*\*\* | 0.171\*\*\* | 0.211\*\*\* |
|  | (0.0427) | (0.0305) | (0.0426) | (0.0305) |
| TV | 0.314\*\*\* | 0.266\*\*\* |  |  |
|  | (0.117) | (0.0839) |  |  |
| Efficacy | 0.00256\*\* |  | 0.00248\*\* |  |
|  | (0.00107) |  | (0.00107) |  |
| N | 2441 | 4875 | 2441 | 4875 |
| LR Chi2 | 304.93 | 683.13 | 297.61 | 672.93 |
| Pseudo R2 | 0.0401 | 0.0457 | 0.0391 | 0.045 |
| Standard errors in parentheses |  |
| ="\* p<0.10 |  \*\* p<0.05 |  \*\*\* p<0.01" |  |

**TABLE 7: OLOGIT RESULTS FOR VOTING ACTIVITIES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 5 | Model 6 | Model 7 | Model 8 |
| Education | 0.246\*\*\* | 0.250\*\*\* | 0.248\*\*\* | 0.252\*\*\* |
|  | (0.0227) | (0.0157) | (0.0227) | (0.0157) |
| Partisanship | 0.352\*\*\* | 0.386\*\*\* | 0.356\*\*\* | 0.386\*\*\* |
|  | (0.0436) | (0.0317) | (0.0435) | (0.0316) |
| Internet | 0.668\*\*\* | 0.383\*\*\* | 0.717\*\*\* | 0.452\*\*\* |
|  | (0.151) | (0.109) | (0.151) | (0.108) |
| Age | 0.0439\*\*\* | 0.0471\*\*\* | 0.0457\*\*\* | 0.0488\*\*\* |
|  | (0.00314) | (0.00221) | (0.00310) | (0.00219) |
| Trust | 0.156\*\*\* | 0.183\*\*\* | 0.154\*\*\* | 0.180\*\*\* |
|  | (0.0533) | (0.0376) | (0.0532) | (0.0376) |
| TV | 0.441\*\*\* | 0.465\*\*\* |  |  |
|  | (0.131) | (0.0922) |  |  |
| Efficacy | 0.00635\*\*\* |  | 0.00613\*\*\* |  |
|  | (0.00145) |  | (0.00144) |  |
| N | 2402 | 4769 | 2402 | 4769 |
| LR Chi2 | 572.85 | 1146.29 | 561.73 | 1121.46 |
| Pseudo R2 | 0.1311 | 0.1336 | 0.1286 | 0.1307 |
| Standard errors in parentheses |  |
| ="\* p<0.10 |  \*\* p<0.05 |  \*\*\* p<0.01" |  |

**TABLE 8: OLOGIT RESULTS FOR CAMPAIGN ACTIVITIES**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Model 9 | Model 10 | Model 11 | Model 12 |
| Education | 0.0318 | 0.0312\*\* | 0.0331 | 0.0333\*\* |
|  | (0.0214) | (0.0148) | (0.0212) | (0.0147) |
| Partisanship | 0.307\*\*\* | 0.332\*\*\* | 0.305\*\*\* | 0.326\*\*\* |
|  | (0.0459) | (0.0323) | (0.0458) | (0.0321) |
| Internet | 0.242 | 0.234\* | 0.276 | 0.289\*\* |
|  | (0.178) | (0.121) | (0.178) | (0.120) |
| Age | 0.0123\*\*\* | 0.0136\*\*\* | 0.0133\*\*\* | 0.0152\*\*\* |
|  | (0.00297) | (0.00206) | (0.00293) | (0.00203) |
| Trust | -0.0138 | 0.0517 | -0.0162 | 0.0490 |
|  | (0.0550) | (0.0388) | (0.0548) | (0.0386) |
| TV | 0.311\* | 0.528\*\*\* |  |  |
|  | (0.161) | (0.119) |  |  |
| Efficacy | 0.00689\*\*\* |  | 0.00687\*\*\* |  |
|  | (0.00135) |  | (0.00135) |  |
| N | 2462 | 4900 | 2462 | 4900 |
| LR Chi2 | 114.32 | 216.41 | 110.39 | 194.87 |
| Pseudo R2 | 0.0299 | 0.0281 | 0.0288 | 0.0253 |
| Standard errors in parentheses |  |  |
| ="\* p<0.10 |  \*\* p<0.05 |  \*\*\* p<0.01" |  |  |

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2. Some of the earliest online forums were formed around sharing bootleg albums of Grateful Dead concerts in the 1980s. [↑](#footnote-ref-2)
3. Robinson admits that his study may have been timely for the Watergate investigation, and thus also creating this malaise effect. [↑](#footnote-ref-3)
4. Putnam (2000, 185) labeled the Internet a “cyber-apartheid.” [↑](#footnote-ref-4)
5. Online banking, applying for jobs, and education are three of many reasons why individuals may use the Internet that is non-political. [↑](#footnote-ref-5)
6. ICT refers to any technology that allows the user to access the Internet. This includes cell phones, laptops, tablets, etc. Libraries, and some businesses have Wifi and computer access. [↑](#footnote-ref-6)
7. This behavior supports the overarching media malaise theories that have been present in the political science literature. [↑](#footnote-ref-7)
8. Technological and digital literacy, according to van Dijk (2005) is a higher cognitive level than reading. It requires a technical knowledge, in addition to comprehension. [↑](#footnote-ref-8)
9. There is still an issue of digital inequality that exists. Internet accessibility has been improving, especially in the realm of WiFi and ICT costs. [↑](#footnote-ref-9)
10. The fourth dimension of political participation, according to Verba and Nie is about particularized contact. This is not being assessed in this study, because online behavior in this sense would be mostly self-selected behavior online. [↑](#footnote-ref-10)
11. Negative information from friends tend to have a larger effect on individuals [↑](#footnote-ref-11)
12. SNS such as Twitter provide a medium where politicians have the capability to communicate personally with constituents. [↑](#footnote-ref-12)
13. Weight\_full is the name of the variable. The ANES states that the weight is necessary when using the full dataset. [↑](#footnote-ref-13)
14. See Appendix [↑](#footnote-ref-14)
15. If a response did not fit into either category it was recoded as missing. [↑](#footnote-ref-15)
16. See Appendix [↑](#footnote-ref-16)
17. Only includes federal level, not state or local. [↑](#footnote-ref-17)
18. This question also includes rallies and speeches. [↑](#footnote-ref-18)
19. Wording specifically refers to for or against a specific candidate. [↑](#footnote-ref-19)
20. A cross-tabulation of Internet access and days spent on the Internet indicated that those who had Internet access at home showed that there are 20.5 percent of respondents who never used the Internet at home. This is very close to the Census figures for home Internet access. [↑](#footnote-ref-20)
21. This is better than the national statistics about home Internet usewhich is near 80 percent (File and Ryan 2014) [↑](#footnote-ref-21)
22. The question asked by ANES cannot discern whether the information from a newspaper was found online. For example a subject may have an online *New York Times* subscription, and may answer the question given that they are reading the newspaper online. Television may eventually suffer from similar measurement issues as Internet and streaming television is becoming more popular. [↑](#footnote-ref-22)
23. In analyzing a combined income and education variable, over 70 percent of the subjects were dropped out of the analysis. This is mostly because income was only reported by 1,975 of the subjects, and in combining education there were further variables dropped out of the analysis. [↑](#footnote-ref-23)
24. This would be equivalent to a value of 10. [↑](#footnote-ref-24)
25. About 87 percent of the subjects in the dataset reported having Internet access at home. [↑](#footnote-ref-25)
26. The percentage for individuals with some college, but no degree living in a home where there is Internet access is 81.4. The figure for the ANES dataset is still higher. This can probably be attributed to the Internet aspects of the sampling methods. [↑](#footnote-ref-26)
27. Invalid responses were recoded as missing. [↑](#footnote-ref-27)
28. “Don’t know” responses were also put into this category as well. Other invalid answers were recoded as missing. [↑](#footnote-ref-28)
29. The variable ranges from 0 to 4 [↑](#footnote-ref-29)
30. ANES experimented with new questions in the 2012 study. Half the sample was randomly asked the revised questions, and half the standard questions for efficacy. [↑](#footnote-ref-30)
31. The index includes two questions where respondents were asked about their agreement on the statement: “Public officials don’t care what people like me think.” (effic\_carestd) and “People like me have any say about what the government does.” (effic\_saystd). [↑](#footnote-ref-31)
32. The External Efficacy Index was calculated by recoding the responses to the effic\_saystd and effic\_carestd questions. The two variables are added together, and then divided by the number of valid responses. A table for this variable is in the Appendix. For more information visit the NES guide to political behavior: <http://electionstudies.org/nesguide/toptable/tab5b_4.htm>. [↑](#footnote-ref-32)
33. Roughly 40 percent of subjects had an index value of 0 for efficacy. [↑](#footnote-ref-33)
34. The original coding for trust\_social was coded in the opposite direction where 5 is least trusting, and 1 is the most trusting. [↑](#footnote-ref-34)
35. This refers to behavior that individuals are favoring Internet subscriptions over traditional cable television subscriptions. [↑](#footnote-ref-35)
36. See Table 3 for OLS Models (Models 1-4) in Appendix [↑](#footnote-ref-36)
37. See Table 4 for OLS Models (Models 5-8) in Appendix [↑](#footnote-ref-37)
38. See Table 5 for OLS Models (Models 9-12) in Appendix [↑](#footnote-ref-38)
39. Table 6 for the communal activities (Models 1-4), Table 7 for voting activities (Models 5-8), and Table 8 for (Models 9-12). All of these tables can be found in the Appendix. [↑](#footnote-ref-39)
40. Bundling refers to the selling of Internet services with cable television and sometimes telephone services. In the dataset 75.73 percent of the respondents who had Internet access also followed the Presidential campaign on television. This cannot be assumed to be home cable access, but these services tend to be packaged together. [↑](#footnote-ref-40)
41. This is the rising trend that individuals are buying Internet services only. [↑](#footnote-ref-41)
42. The ANES asks more generally about SNS use, but not specifically about whether these individuals are using Facebook or Twitter, for example. These are what subjects may be thinking about when being asked about SNS, but it is impossible to tell in this dataset. [↑](#footnote-ref-42)
43. Variable name from the 2012 ANES Timeseries Study. Question wordings can be found in the Codebook [↑](#footnote-ref-43)