

# SOCIAL NETWORKING SITES AND POLITICAL INVOLVEMENT

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# SOCIAL NETWORKING SITES AND POLITICAL INVOLVEMENT

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## ABSTRACT

Social media, especially social networking sites (SNS) is an important platform for people to seek and share information. Its features of unique spread function, easy accessibility and wide content coverage attract more and more people to use it. Based on a dataset by the Pew Internet and American Life project, this research uses an ordered probit model and tries to find out whether there is a relationship between social networking sites use and offline political involvement. The findings indicate that the relationship depends on people's interests on politics. The paper classified the result into two groups – positively correlated group and negatively correlated group. The result shows that if people like to talk about politics, social networking sites have the positive effect letting them be more involved in offline politics. Differently, for people who are not interested in politics, social networking sites actually have a negative effect to people's offline political involvement. Even though this unexpected result may need further investigations, the overall result indicates social networking sites have a significant relationship to offline political involvement. These findings are also important for policy implications.

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## **I. Introduction**

Social media consists of the websites and technologies allowing people to co-create, assess, share, discuss, and communicate with each other. Compared to the traditional media, social media normally have a large number of users and spread spontaneously. With this unique mechanism, social media attract a lot of attention. They also played an important role in the political sphere. At the White House Correspondent's dinner on April 28, 2012, there were more than 60,000 tweets related to the dinner sent via Twitter. During the 2012 Presidential Election, over thirty-nine percent of all American adults participated in political activities via social networking sites (SNS). In addition, some people even believe that the statistics of social networking sites can be a prediction of political success. In fact, many candidates who won their campaigns had more Facebook fans than their opponents.

This paper examines the relationship between social media, especially social networking sites (SNS), and politics. Although we can find many reports and statistics about social media and politics, there are also reports indicating that people overestimate the political effect of social media. Mindy Finn, the political strategist said "Despite the increased attention paid by the media to political Facebook and Twitter accounts, campaigns today still spend less than five percent of their media expenditures online." But there can be no doubt that social media now play a critical role in human lives.

Social media is a new product. Even though there are not many studies about it, we can see related topics booming. This paper intends to contribute to the existing

body of research related to politics and social media use and its policy implications. Specifically, I examine whether social networking sites can increase people's political involvement. My dataset provides information about people's behavior when they interact with online politics. The Internet provides instant reactions. In addition, some people believe social network use is transient and superficial, and politics online is not a significant part of social networking sites. I also examine whether online politics can keep people engaged with social networking sites. Furthermore, the policy implications are also worth analyzing. Social media may play an effective role in recent campaigns. However, very few government officials are doing good jobs with these tools.

The paper discusses these issues in light of a rigorous hypothesis. If the data prove that social networking sites have strong effects on politics, this would provide strong evidence that government may want to spend more on social media. Similarly, if the data proves that online politics can attract people to those social networking sites, the paper may also be very useful for developers in social media areas. They may consider embedding more political elements in their products.

The structure of this paper is as follows. In Chapter II, I provide a brief background of social media and politics. Chapter III describes the literature on the subject of related studies of social media, social network, the Internet, and online politics. Chapter IV describes my dataset and methodology. In Chapter V, I outline the theoretical framework and design of my research. Chapter VI describes the results of my analysis and explains my findings about the relationship between social media and

politics. Finally, chapter VII discusses conclusions and policy implications.

## **II. Background**

Before discussing how social networking sites play a role in politics, I need to introduce some definitions of and concepts of social networking. Many people who use social media products have misconceptions in that they think products like Facebook and Twitter represent “social media”. This view is superficial because those products are actually social networking sites. Social networking sites are a subset of social media. In 1971, the first e-mail in history was used by scientists in the Advanced Research Projects Agency Network (ARPANET) program to share progress with others. Twenty years later, the foundation of the World Wide Web arose from Tim Berners-Lee’s “hyperlink” transformation. The social media has a history of more than 40 years, but does not begin with Facebook and Twitter. Even the history of the social networking sites do not start from them. Next, I will briefly introduce the history of social networking sites.

### **1. The History of Social Networking Site**

Many people believe that Classmates.com was the start of the history of social networking sites in 1995. Its purpose was to help people find their old classmates. It was a very popular website that had 50 million members in 2008, and it finally dropped out of the top 10 of social networking sites by 2010. Open Diary was another important website in the history of the social networking site. Founded in 1998, it is an online community for people to write diaries. It offered a platform for people who do not understand HyperText Markup Language (HTML), which is a language used to

create web pages, to post their diary either publicly or privately. More importantly, it was the first to allow people to comment on other people's content . This was a milestone of the social networking sites because the significant feature of social networking sites (SNS) is the interaction - allowing people to communicate with each other rather than the old mode of only receiving information. Later in 1999, the famous sites Blogger and LiveJournal with improved functionality became immediately popular. Blogger was acquired by Google in 2003, and it is still live today.

After September 11, 2001, Scott Heiferman built Meetup.com in order to encourage people communicate with each other, and not just online. A year later, Friendster became the first social networking site to get 1 million users. It was also the first SNS that allowed people to build personal pages. The next impressive product was Myspace.com. It appealed to groups of teenagers and young people, and set the record for registration speed for SNS -- one million registrations in a month. However, because of its poor management, it was finally sold to Specific Media for only 35 million dollars in 2011.

Another milestone was Facebook (2004). Today it has about 1 billion active users every month. In 2004, Flickr, another famous community was also formed. Different than most SNS, Flickr focuses more on images. The star in 2005 was Youtube, which is a SNS that focuses on video clips. In 2006, Twitter changed the traditional mode of SNS again by limiting the length of a post to 140 characters. It became another convenient communication tool and a powerful platform. After Twitter, more and

more SNS appeared, and their different focuses gave customers a variety of user experience. Now people have many choices for how they want to communicate with each other, and SNS have become an essential component of these communities.

## **2. How Do Social Networking Sites Work?**

As early as 1929, Frigyes Karinthy, a Hungarian author first pointed out the “six degrees of separation” concept – that the chain of “a friend of a friend” can be connected to any two people in the world by a maximum of six people they know (Princeton.edu). Although this theory is still controversial, it offers a very important concept that two people who don’t know each other can be related or connected in specific ways. This is one of the core concepts of SNS. However, according to this concept, it is not enough for people to communicate with each other smoothly, because we need technology on platform to acquire those chains, and Web 2.0 finally helped us to do that.

Web 2.0 is a mode of platform using the Web. Customers create online products. It is different than a traditional Web 1.0 that only website developers create online content. Web 2.0 makes users both visitors and creators. Web 2.0 websites give people more opportunities to participate. For example, Wikipedia is a typical product under Web 2.0. Before Wikipedia, if people wanted to find some technical term, many of them would go to the Britannica Online, which is an online encyclopedia in which all terms are provided by the website employees. In contrast, Wikipedia allows users to participate in the creation of terms. It not only reduces the workload but also

generates huge productivity. On Britannica Online you can only find 8 different languages, but for many popular terms in Wikipedia, we can find explanations in over 20 different languages. That is the power of people, and Web 2.0 gives people the platform.

There are several features of Web 2.0 besides those I have already mentioned before about the user creation. The first one is that Web 2.0 focuses more on the interaction. Akin to many SNS, during the process of new content, there is not only the interaction between reality and network servers, but also the interaction between different users and websites. Second, it accords with Web standards. Web standards are a series of standards for website design in order to reduce code and network bandwidth use, increase the speed of visits, and be friendlier to the user experience. Third, there is no absolute limit between Web 1.0 and Web 2.0. Web 2.0 concepts also can be used for Web 1.0 websites. Last but not least, the core of Web 2.0 is an idea, not the techniques. Therefore, Web 2.0 is a revolution in thinking rather than the intervention of Internet techniques.

Social networking sites are one classic implementation of Web 2.0. They allow people to express their emotions, share their opinions, and follow other people with interest. SNS let people get connected and give the feeling that the world is getting smaller. And because SNS can quickly and effectively connect people, they become more important in reality. With developing technology, people don't even need to sit in front of computers to post what they want to and see what has happened to their friends. Now people can do this anywhere with access to the Internet. That is why

SNS getting more and more attention from the political area.

Next, I move to a brief literature view and introduce how this paper is different than the existing body of work.

### **3. Literature Review**

Social media are a relatively new product. There are not many studies about the connection between social media and politics, especially in relation to public policy. However, there is clearly an increasing trend of scholarship in related areas. Nevertheless, most existing scholarship is theoretical rather than quantitatively based. This paper intends to contribute quantitative analysis to the discourse.

Most people will not deny that there may be a correlation between social networking sites and politics; however, due to limited research, not many people really understand how social networking sites affect politics. Castells (2009) pointed out that social networking sites offer individuals a new creative autonomy based on a new form of mass communication. The flexibility and various functions of social networking sites give their users a lot of choices. In that virtual world, people cannot only be the people they cannot be in the real world, but they also can express their thoughts to people all over the world with an unbelievable speed of transmission.

Despite the limited scholarly work, existing papers offer opinions in two key areas. The first one argues although social networking sites may not fundamentally affect politics, they can alter people's views about orthodox politics and offer potential opportunities for future change. Those studies always include the function of

new technology and the possibilities of Web 2.0. The second area of scholarship examines whether politicians should let social networking sites play an important role in politics and studies of participation. This scholarship provides the basis for the future analysis of social networking sites on politics.

In 1999, Davis explored the computer-mediated communication (CMC) in political discussion. As early as 1993, in the classic book “The Virtual Community”, Howard Rheingold foresaw that the way people communicate will fundamentally change in the future. Seven years later, in a different book, he wrote: “new media attract colonies of enthusiasts because CMC enables people to do things with each other in new ways, and to do altogether new kinds of things— just as telegraphs, telephones, and televisions did (Rheingold, 2000).” However, he didn’t mention that social media would also alter the way people communicate and interact with each other.

In recent decades, with booming technology, social media platforms have come into lives of many who are “new-technology friendly” to these new styles of communication. This new practice of mediated sociality (Sassen, 2004) has showed the potential of new forms of political participation. Since 2000, many scholars have debated whether new media should be treated as an important opportunity for future voter participation. In recent years, we can see campaign organizations and political parties paying more and more attention to social networking sites. Barack Obama’s two presidential election victories are even referred as the “Facebook election”, the “Twitter elections”, and the “social-media elections (US News, 2012).”

However, whether social networking sites can offer political possibilities is controversial. Some scholars believe social networking sites can effectively change old politics and bring creative possibilities to democratic engagement and mass collaboration (Castells, 2009; Ellison, Lampe & Teinfield, 2009; Erkul, 2009; Shirky, 2008; and Stiegler, 2008a). Other scholars try to show that social networking sites entrap people with private new platforms by indirectly dispossessing personal data and supporting corporate exploitation (Andrejevic, 2004, 2005; Fuchs, 2009a, 2009b; Jarrett, 2008; Terranova, 2000; Van Dijck, 2009; and Zimmer, 2008).

Schulz (2008), Castells (2009) and Erkul (2009) claim that there have been many examples of how social media fostered grassroots' movements and how they have boosted these movements by letting citizens engage in political activities. They believe that social media can also infiltrate old media and let it spread as a new form – viral communication. As early as 1995, there were studies about how the use of new media displaces the use of traditional media (James, Wotring & Forrest, 1995). Today, lots of mainstream traditional media has new forms for their information. The New York Times, the Wall Street Journal, and the Washington Post, all publish their daily newspaper on their websites. People can not only read news articles for free, but also can share them with their friends by social networking sites. All those websites have small icons of social networking sites including Facebook, Twitter, Instagram, Google+, Tumblr, etc. These icons are quick links letting people share the articles they like. Although most of the old media companies think new media is a threat to the existence of established media, they do not deny that new media is an advantage

for spreading information.

For many scholars of politics, internet political participation is another popular topic. Delli, Cook, and Jacob (2004) argue that a “longer” view of participation centers on a more ambiguous understanding of a “sharing of public life.” Based on their definition, when people talk more about politics with others it become a participatory act in itself (Pan et al. 2006). In a recent work, Hamlin and Jennings (2011) sought more a rigorous approach to the term “expressive participation (Endersby and Towle 1996)” by referring to it as a form of political behavior, but not only participation. In a recent work, Gibson and Cantijoch (2013) studied internet participation with the idea that the status of political discussion or talk is in a “gray” area. However, online participation can be clearly differentiated from offline participation.

Finally, another stream of scholarship focuses on how the Internet affects individual political behavior and attitudes. Gibson and Cantijoch (2013) note that this “e-participation” literature has “treated online political activity either explicitly or implicitly as participation and concentrated on identifying its mobilizing effects, establishing whether it is drawing less active citizens into the political process.” They also expand the measure of e-participation to include social-media-based political activities.

There is increasing attention to how to measure and model e-participation, and most forms of e-participation are actually dependent on social networking (Sæbø, Rose, and Nyvang 2009). In earlier research, the analysis from Jensen, Danziger, and

Venkatesh (2007) supported the idea that communal modes of e-participation can be identified online. Their research also elucidated that e-participation has a different influence than offline community involvement of an individual. Subsequent work by Saglie and Vabo (2009) used a special analysis to combine online political actions and familiar offline categories, such as contacting and campaigning. Later, a simultaneous confirmatory factor analysis (SCFA) by Hirzalla and Van Zoonen (2011) used a huge number of both online and offline political activities to identify the disparity between distinct modes of e-participation and traditional types.

Moreover, although there are many e-participation models that tried to increase people's participation in politics, most of them failed (Sæbø, Rose, and Flsk, 2008). One reason is people do not like to help to develop and design services (Turnšek 2008). However, social networking sites have their unique functions that can let people use their imagination and creation. In addition, based on its mechanism, SNS are also good at supporting interaction. Therefore, there is a room for further research about political participation and social networking sites.

Next, I turn to introduce the theoretical framework underlying my model.

### III. Theoretical Framework

To examine whether there is any relationship between social networking sites and political involvement, I develop the following model:

$$\text{Political Involvement (real life)} = f(\text{O, D, } \mu) \quad (1)$$

This equation is meant to show that whether people are more involved in politics as a function of: online behaviors when people use social networking sites (O), demographic control variables (D), and an error term ( $\mu$ ). The logic of this model is that online politics through SNS might affect real life politics.

The dependent variable used in this model measures the frequency of people talking about politics or current political events, with a value of “1” if they never talk about politics and “5” if talk about politics very often. Although some may think using the phrase “political involvement” is not appropriate here because political involvement usually includes more, my dependent variable reflects one important part of political involvement: usually we talk before we act. Therefore, I think it is reasonable to describe my dependent variable as a proxy for “political involvement.” In addition, this variable is a meaningful indicator for politicians to see if the Internet has power in the political areas since more and more politicians are using SNS accounts.

The independent variables include controls for demographic characteristics. All those variables are theoretically related to the model. However, to know whether they

truly support the model, we need to see the results. The other part of independent variables are the most important. They measure the effects of different online behavior. The online behavior here describes actions of social networking sites such as click the “like” button, sharing posts and commenting on posts. The independent variables also contain measures of interactions of people, such as what respondents’ “friends” do via SNS and how “friends” behaviors affect respondents.

Next, I will introduce the data and descriptive statics. This part will introduce more details about the variables.

#### **IV. Data and Descriptive Statistics**

My data come from a survey conducted by Pew Research's Internet and American Life Project, "February 2012 - Search, Social Networks and Politics." The Pew Internet & American Life Project is one of seven projects that make up the Pew Research Center, a non-partisan, nonprofit "fact tank" that provides information on the issues, attitudes and trends shaping America and the world. These projects' reports are based on survey via nationwide random phone calls and the Internet on a variety of research topics.

The January 2012 survey interviewed people via phone from January 20<sup>th</sup>, 2012 to February 19<sup>th</sup>, 2012. It contains data on search engine usage and political interactions on social networking sites. Pew has a amazing track record and its data are consistently of high quality. The dataset has a very large sample size for the telephone survey, which has a total of 2,250 observations. However, this number includes people either using social networking sites or not. Obviously, not everyone uses social networking sites, so I cleaned the data and deleted those people who never used social networking sites. The number of observation for my research is around 1,040.

There are several reasonable concerns about the data. First, we know that social networking sites are a relatively new technology, and, as a result, the data reflect the logical result that the sample skews young in age. People after age 68 rarely use SNS in the sample. Therefore, there is some potential bias. Second, due to the reason of privacy, there are many missing values for people's income in the sample. This results

a reduction of observations in the regression, and could cause a bias. However, because income is a good explanatory variable in the model, its benefit is more than the harm.

**Table 1 -- Descriptive Statistics**

Variable	Observations	Mean	Std. Dev	Min	Max
Age	1027	42.76	16.34	18	90
Age*	2253	53.41	20.04	18	99
Education	1044	4.89	1.59	1	7
Education*	2234	4.45	1.75	1	7
Income	913	5.32	2.39	1	9
Income*	1820	4.78	2.43	1	9
Liberal**	962	260	0.44	0	1
Conservative**	962	372	0.47	0	1
Debate**	1030	249	-	0	1
Followed**	1044	162	-	0	1
Clicklike**	1035	480	-	0	1
Postother**	1038	395	-	0	1
Findpeople**	1043	256	-	0	1

\*: *Contains people who don't use SNS*

\*\**: For indicator variables, the value under the "mean" column is the number of observation equal to 1*

**Table 2 -- Ordinal Variables**

Variable	Observations	Mean	Std. Dev	Min	Max
Frequency	1040	4.37	1.58	1	6
Post	1044	1.60	0.96	1	5
Friend	1018	2.32	0.96	1	5
Talkpolitics	1045	3.02	0.96	1	4

**Table 3 -- Some Variables Description**

Value	Frequency	Post/Friend	Income	Education
1	Less often	None at all	<\$10000	None or 1-8
2	Every few weeks	Just a little	\$10000 - \$19999	Grades 9-11
3	1 to 2 days a week	Some	\$20000 - \$29999	High School
4	3 to 5 days a week	Most	\$30000 - \$39999	Technical/trade/vocational schools after high school
5	About once a day	All or almost all of it	\$40000 - \$49999	College
6	Several times a day		\$50000 - \$74999	College graduate
7			\$75000 - \$99999	Post graduate
8			\$100,000 - \$149,999	
9			>\$150,000	

In the next chapter I will demonstrate the empirical model.

## V. Empirical Model

$$Y_{\text{talkpolitics}} = \beta_0 + \beta_1 X_{\text{frequency}} + \beta_2 X_{\text{debate}} + \beta_3 X_{\text{post}} + \beta_4 X_{\text{findpeople}} + \beta_5 X_{\text{friend}} + \beta_6 X_{\text{followed}} + \beta_7 X_{\text{clicklike}} + \beta_8 X_{\text{postother}} + \beta_9 X_{\text{age}} + \beta_{10} X_{\text{educ}} + \beta_{11} X_{\text{income}} + \beta_{12} X_{\text{liberal}} + \beta_{13} X_{\text{conservative}} + \mu \quad (2)$$

### Where:

$Y_{\text{talkpolitics}}$ : It is the independent variable that reports frequency of people talking about politics or current events;

$X_{\text{frequency}}$ : The frequency of people visiting social networking sites;

$X_{\text{debate}}$ : A binary variable indicating whether people think social networking sites are important to debate or discuss political issues with others;

$X_{\text{post}}$ : It measures how many of people's post are related to politics or political issues;

$X_{\text{findpeople}}$ : A binary variable indicating whether people think social networking sites are an important way to share views about important political issues;

$X_{\text{friend}}$ : An ordinal variable that measures how much of interviewees' online friends' posts are related to politics or political issues;

$X_{\text{followed}}$ : A binary variable indicating whether people "friended or followed someone because they share your political views;"

$X_{\text{clicklike}}$ : A binary variable indicating whether people "click 'like' button in response to political comments or material posted by someone else;"

$X_{\text{posttother}}$ : A binary variable indicating whether people “posted a positive comment in response to a political post or status update from someone else;”

$X_{\text{age}}$ : The age of the respondent;

$X_{\text{educ}}$ : The number of years of education;

$X_{\text{income}}$ : The income of the respondent;

$X_{\text{liberal}}$ : Respondents who think they are liberal;

$X_{\text{conservative}}$ : Respondents who think they are conservative; and

$\mu$ : The error term.

*Talkpolitics* is an ordinal variable which has a five-point scale from “never” to “often”. Compared to a binary variable, an ordinal variable could be less explanatory because it is more difficult for people to choose the extent than to choose “yes or no.” However, it is not reasonable to use a binary variable to indicate political involvement. There are obviously some people who don’t care about politics at all, but for those who are concerned with politics, the extent is significant. In addition, using an ordinal variable is more reasonable mathematically.

*Age*, *educ*, *income*, *conservative* and *liberal* are demographic variables that elucidate some characteristics of respondents. It is important to know respondents’ age since the main user of SNS is young people; however, there is the trend that older people are using SNS increasingly. In addition, this survey only contains people who are 18 or older, which may have bias because many teens use SNS. However, it won’t affect the result much because what I am interested in is the trend. Similarly,

education and income are very useful control variables. What is the relationship between education and likelihood of talking politics is very interesting. Based on our commonsense, it is more likely that people with higher education have more interest on politics. The result of my model may contribute to this question. For income, my expectation is that income has positive relationship to my dependent variable. If not, it would be very interesting because people have more money usually like politics more. They don't need to worry about hunger and other basic needs, so they have more money for advanced things such as politics. Finally, I don't expect any relation between people's ideologies and political involvement. Conservatives and liberals have different opinions, but I would not think this affects their interest in politics.

These demographic variables are also very meaningful to my model. Age, education, and income are universal good demographic variables almost for every model. Ideology is a relatively new control variable for such analysis, but I think it is very interesting to see SNS users' ideologies. Besides, these demographic variables may have some indirect relations to the final results or even policy implications.

*Frequency, debate, post, findpeople, friend, followed, clicklike, and postother* show online actions when people use SNS, particularly in relation to politics. In fact, these variables are from typical survey questions that either have special meaning to my model or fit to my model. In fact, these variables contains a large part of online actions when people using SNS.

I hope to find that the frequency of SNS use has a positive correlation with offline political involvement. If it does, it offers me important thought of policy implications.

However, rationally, I don't think there is any relationship between them because no matter what, the influence of SNS is too small to increase the political interests of people. I expect that *debate*, *post*, *findpeople*, and *friend* have positive correlations to *talkpolitics*, and the expectation is reasonable. I think that if people like to do these things online, there will not be too many hurdles for them to implement those in real life. *Followed*, *clicklike* and *postother* are about detail functions of SNS. I think they do not have a significant correlation to *talkpolitics*. Different than variables in last paragraph, it is not easy to translate these online actions to real movement.

My expectations will be examined in the next chapter, which shows the result of estimating my model.

## VI. Results

The following statistics summarize the results of the ordered probit model:

**Table 4 -- Estimate of Ordered Probit Model:**

Variables	Coefficient	Standard Error	Z Score
Frequency	-0.0311	0.0292	-1.06
Debate**	0.3667	0.1170	3.13
Findpeople	-0.1126	0.1148	-0.98
Post**	0.3497	0.0647	5.40
Friend*	0.1067	0.0541	1.97
Followed	0.1588	0.1351	1.18
Clicklike**	0.3216	0.1170	2.75
Postother	0.2032	0.1221	1.66
Age1**	0.0150	0.0028	5.19
Educ1**	0.1470	0.0290	5.07
Income**	0.0767	0.0196	3.91
Conservative	0.1105	0.0957	1.15
Liberal*	0.2269	0.1042	2.18
*: significant at alpha = 0.05		Number of Observations: 807	
**: significant at alpha = 0.01		LR Chi Square: 272.12	
		Pseudo R Square: 0.159	

The output shows that the model is very robust, with a LR Chi Squared value of 272.12 and an overall model significance of over 99%. Unlike ordinary least square models, for ordered probit regression, we cannot describe only one output. The relationship between each pair of outcome groups is the same. What I need to describe is the relationship between different levels of categories.

As I mentioned above, the dependent variable *talkpolitics* has four different

values – “Never”, “Rarely”, “Sometimes” and “Very Often”. While the estimate of my ordered probit model shows normal output, however, the marginal effects show more dramatic results.

The results indicate that people who talk about politics “Very Often” have the opposite signs to people who “Never”, “Rarely” and “Sometimes” talk about politics. In other words, these three types of people have the same sign for their marginal effects. I will classify them into two groups, one which has negative correlations and one which has positive correlations.

#### **Negatively Correlated Group:**

In this paper, I intend to find out if there is any relationship between political involvement and social networking site usage. The highly significant model explains that relationships or associations exist. However, the result of the negatively correlated group is not what I predicted. I thought that there would be positive correlations between political involvement and SNS variables. In addition, I predicted that the marginal effects would be meaningfully ordered. However, the results of the negatively correlated group support neither of my guesses. All significant independent variables are negatively correlated with people who do not talk about politics very often. Besides, in this group, the coefficients do not follow any meaningful order.

**Table 5 -- Marginal Effects of Negatively Correlated Group:**

Variables	Category		
	Never	Rarely	Sometimes
Frequency	0.0021022 (.00199)	0.0058969 (.00555)	0.003948 (.00377)
Debate	-.0213793** (.00666)	-.0653538** (.01997)	-0.0560095* (.02125)
Findpeople	0.0079875 (.00865)	0.0216292 (.02232)	0.0132281 (.01264)
Post	-0.0236054** (.00513)	-0.0662152** (.01277)	-0.0443312** (.01081)
Friend	-0.007201 (.0037)	-0.0201995 (.0104)	-0.0135236* (.00711)
Followed	-0.0097195 (.00757)	-0.0290403 (.02304)	-0.022902 (.02126)
Clicklike	-0.0219725* (.00831)	-0.0606377** (.02267)	-0.0402597* (.01521)
Postother	-0.0133643 (.00832)	-0.038037 (.02258)	-0.0267902 (.01686)
Age1	-0.0010156** (.00023)	-0.0028489** (.00059)	-0.0019074** (.00046)
Educ1	-0.0099219** (.00244)	-0.0278317** (.00575)	-0.0186334** (.0044)
Income	-0.0051796** (.00151)	-0.0145291** (.00388)	-0.0097273** (.00275)
Conservative	-0.0072259 (.00613)	-0.0206927 (.0177)	-0.0146645 (.0135)
Liberal	-0.0139972* (.00587)	-0.0415251* (.01858)	-0.0324559 (.01726)

\*: significant at alpha = 0.05

\*\* : significant at alpha = 0.01

For those SNS variables, “*Debate*”, “*Post*”, “*Friend*”, and “*Clicklike*” are all statistically significant at the 95 percent level of confidence or higher. In general, it

appears that people who rarely talk politics and current events actually have either higher or lower magnitude than people who “Never” and “Sometimes”. For example, the marginal effects of “Debate” for “Never”, “Rarely” and “Sometimes” are -0.0213, -0.0653 and -0.056. The significance of “Sometimes” is not close to 99% with z-statistic of 2.46. The significances for “Rarely” and “Never” are over 99% with z-statistic of 3.10 and 3.08. This also happens to other significant variables about SNS usage. For example, the variable “*debate*” shows irregularity. In four types of talkpolitics, only the people who sometimes talk politics have lower significance. Other types are all highly significant at 99% confidence level of confidence. Similarly, in the negative group, the variable for people who rarely talk politics has the largest marginal effect.

One explanation of this result is measurement. There is more or less measurement error in the dataset. For example, this survey is only open to people who are older than 18. However, teenagers are not a negligible group of people for SNS use. According to Pew Research, teens share much more information on SNS than they used to, and teen SNS users are growing significantly – an 8 percent increase from 2012 to 2013. I am not sure teenagers would be less interested in politics than older people. My dataset apparently has the bias of the distribution of age. Even though it does not have a significant effect on the overall result, this could be the reason why my data show unexpected result.

Another possible explanation of the negative group is that they may spend more time on other things, both online and offline. These people do not talk politics offline

very often, so they are very likely they have other interests. SNS have a huge amount of non-political content. Due to the difficulty of accessibility, people are more likely to be interested in sports, games, gossips, fashions, and other topics. Remember, all the respondents in my model are SNS users. Therefore, they may spend more time on other interests rather than politics. In real life, they may also tend to discuss their other interests more than political content. This may be the reason why I show negative groups.

First, I will simply state my supposition about why the marginal effects of type “Sometimes” are higher than the marginal effects of type “Never”. It is reasonable to think that for people who sometimes talk politics offline, SNS should positively affect their political involvement. However, the extent of how people like SNS would give an opposite explanation. For example, the variable “*debate*” measures whether people believe SNS is important for them to discuss politics. For type “Sometimes” people, it may not very common for them to discuss politics online. If they believe SNS is a good platform for them to discuss politics, I think they will probably be willing to talk discuss politics online rather than offline. This would not affect type “Never” people, because they barely talk about politics.

The negative group is not meaningless. If you check the marginal effects, you can find that type “Rarely” has the largest marginal effect. It is more complicated to tell why type “Rarely” has larger marginal effects than “Never” and “Sometimes.” For type “Rarely” people, the reason they have larger marginal effect is mysterious. It is reasonable also to use the explanation of “Never” and “Sometimes” for type “Rarely”,

but it is difficult to explain why its marginal effect is larger.

Based on this result, we can state that in the negative group, SNS affect people who talk a little about politics the most, but not those who do not talk politics offline at all. This is an interesting finding because for ordinal variables we are normally looking for trend, and there is no trend for my dependent variable. Therefore, this is a very important question for further research.

### **Positively Correlated Group:**

There is only one category in this group – People who talk about politics or current events very often. Compared to the previous group, this group shows more cheerful findings. The results show that social networking sites are associated with greater political involvement. In addition, the absolute values of marginal effects are larger than those in the negative correlated groups.

**Table 6 – Marginal Effects of Positively Correlated Group:**

Variables	Category Very Often
Frequency	-0.011947 (.01124)
Debate	0.1427426** (.04575)
Findpeople	-0.0428448 (.04336)
Post	0.1341518** (.0251)
Friend	0.0409241* (.02076)
Followed	0.0616619 (.05149)
Clicklike	0.12287** (.04432)
Postother	0.0781916 (.04707)
Age1	0.0057719** (.00111)
Educ1	0.0563871** (.01111)
Income	0.029436** (.00752)
Conservative	0.0425831 (.03706)
Liberal	0.0879783* (.04075)

\*: significant at alpha = 0.05

\*\* : significant at alpha = 0.01

**Frequency:** This variable measures the frequency of people using SNS. Holding all other variables constant, the marginal effect is -0.11947 with a z-statistic of -1.06, which is not significant at traditional levels. This robust result states that if all else is equal, for people who talk about politics very often, there is no direct correlation

between the frequency of SNS usage and political involvement.

**Debate:** This variable is an indicator variable for whether or not people think SNS are important for them to debate or discuss political issues with others. In the survey, only 249 people of the total 1,045 respondents think SNS are very important for debating or discussing political issues. Holding all other variables constant, the marginal effect is 0.1427, with a z-score of 2.93. This means the variable is highly significant at the 0.05 level of confidence and barely reaches the 0.01 level of confidence. The result indicates that people who talk about politics very often and believe SNS is important for them to debate political issues are 14.27 percent more likely to discuss politics or current events offline than people who do not think SNS is important.

The result shows that for people who are very likely to talk about politics or current events, SNS can increase their interests even further. It implies that SNS could be useful for promoting political issues. Although we get negative results from people who are not very likely to talk about politics, the overall result indicates the relationship is worth doing further research and perhaps policy action.

**Findpeople:** This variable is an indicator variables for whether or not people think SNS are important for them to find people who share their political views. Holding all other variables constant, the marginal effect is -0.0428 with a z-statistic of -0.99, which is insignificant. This result indicates that, if all else is held equal, for people who talk about politics very often, there is no direct correlation between finding people to share political view and political involvement. Compared to

“debate”, the results indicate that SNS is not “friendly” in political topics.

**Post:** This variable measures how many of people’s recent online posts are related to politics or political issues. 378 respondents had posts about political issues or related to the 2012 election, and 666 respondents who are SNS users said they did not post anything about politics recently. Holding all other variables constant, the marginal effect is 0.1342 with a z-statistic of 5.53, which is highly significant at the 0.01 level of confidence. This robust result states that, if all else is equal, for people who talk about politics very often and recently have posts about political issues are 13.42 percent more likely to discuss politics or current events offline than people who do not have any posts about political issues.

**Friend:** This variable measures how much of respondents’ friends’ recent online posts are related to politics or political issues. Here we have an interesting phenomenon. Only 378 of respondents say they post items about politics; however, 763 of them say their friends have posts about politics or current events. Holding all other variables constant, the marginal effect is 0.041 with a z-statistic of 2.13, which is highly significant at the 0.05 level of confidence. It states that people who talk about politics very often and their friends who recently had posts related to politics on the 2012 elections are 4.1 percent more likely to discuss politics or current events offline than people who do not have any posts about political issues.

**Followed:** This variable is an indicator variable for whether or not people followed or friended on SNS someone who share their political views. Only 162 of 1,044 respondents state they have done that. Holding all other variables constant, the

marginal effect is 0.0617 with a z-statistic of 1.20, which is not significant. However, this variable may have bias because it is not very easy to get people to share their political views. Therefore, it may be hard to follow or friend others. If we could change this survey question to whether you followed or friended people because of their political views, that would be much better.

**Clicklike:** This variable is an indicator variable for whether or not people clicked the “like” button in response to political comments or material posted on SNS. 480 of 1,035 respondents state they have done that. Holding all other variables constant, the marginal effect is 0.1229 with a z-statistic of 2.93, which is highly significant at the 0.01 level of confidence. This finding indicates that people who talk about politics very often and ever clicked the “like” button in response to online political matters are 12.29 percent more likely to talk about politics offline than people who never clicked the “like” button.

**Postother:** This variable is an indicator variable for whether or not people posted a positive comment in response to political material on SNS. 395 of 1,038 respondents state they have done that. Holding all other variables constant, the marginal effect is 0.0781 with a z-statistic of 1.66, which is insignificant. The result may show that as the most basic function, posting a comment is a very common thing that it barely affects people’s political involvement.

### **Control Variables:**

**Age1:** Holding all other variables constant, I find a marginal effect of age of 0.0057, with a z-statistic of 5.18, which is strongly statistically significant. This shows that age has a significant effect in explaining whether people talk about politics. The result shows that for people who talk about politics very often, each unit increase in age is associated with a 0.57 percent increase in discussing politics.

**Educ1:** Holding all other variables constant, I find a marginal effect of education of 0.05638 with a z-statistic of 5.08, which is strongly statistically significant. This shows a positive relationship between education and talk about politics. A unit increase in education results in a 5.6 percent increase in people's likelihood of political involvement. However, if we run another regression about *frequency* and *educ1*, the result shows education is not statistically significant to SNS usage (See Table 7 in the Appendix).

The model also shows that education has a strong positive correlation to offline political involvement. This finding leads indirectly to a public policy implication of my research. Although there are studies showing that college education may not directly increase people's willingness to vote (Berinsky & Lenz, 2011), my model shows people with higher education are more likely to talk politics offline. In general, people with higher education have more interested in politics and they have more opportunities and platforms to present, discuss, and share political opinions. To improve the average education level may not increase people's political participation, but it may increase the frequency of politics in people's lives.

**Income:** Holding all other variables constant, I find a marginal effect of income of 0.0294 with a z-statistic of 3.91, which is significant at the 0.01 level of confidence. This finding shows that for people who talk about politics very often, those with higher income are more likely to discuss politics. Each unit increase in income results in a greater likelihood of political involvement.

**Liberal:** Holding all other variables constant, I find a marginal effect of self-reporting as “liberal” of 0.088, with a z-statistic of 2.16, which is significant at 0.05 level of confidence. This finding shows that people who define themselves as liberal are 8.8 percent more likely to discuss politics. Interestingly, the variable “conservative” is not statistically significant. It is not clear why we have this result. However, according to another study by Pew Research, that Liberals are more likely to unfriend, block or hide someone on SNS than conservatives and moderates (Rainie and Smith 2012).

## VII. Policy Implications and Conclusion:

The model yields an unexpected result; however, this does not mean that the public policy implications of this research are insignificant. The results suggest a positive relationship between the offline political involvement of people who talk politics very often and the use of social networking sites. However, for people who do not like to talk politics very much, the correlations are negative.

These complicated results are very different than what I expected. First, by using an ordered probit model, I expected meaningful results about the relationships of different types of dependent variables. In this case, it is “*talkpolitics*”. However, the result was unexpected in that three types of dependent variables have opposite signs to the remaining one. People who do not talk about politics very often actually are negatively correlated to SNS variables. Therefore, one thing we can conclude is that SNS let people who like to discuss politics be more involved in them.

Despite the unexpected result, the analysis still proves SNS has a relationship to political involvement. Even though for *talkpolitics*, levels of “Never”, “Rarely”, and “Sometimes” estimate negative signs for the majority of variables (all significant variables), some of them are significant or even strongly significant. This means certain correlations exist. One possible explanation is that people who do not talk about politics very often tend to do other things online rather than seek or share political materials. According to a report of Pew Research (2013), the top five things people do online are “use a search engine”, “send or read e-mails”, “look for information about their hobbies”, “search for map or directions”, and “check the

weather”. There are many people who use SNS, and many people look online for news or information about politics. However, there are not many people who are using SNS to get political news or information. Therefore, this could be why only people who like politics a great deal have positive correlations between *talkpolitics* and SNS usage.

For those who are not very interested in politics, although the regression shows the negative correlation, those are the comparable results. The marginal effects cannot fully represent that using SNS will reduce political involvement if people do not like politics. After all, the coefficients of the ordered probit model have the same sign as people who talk about politics very often. The overall results show that SNS has a positive relationship to political involvement.

These unexpected results still lead to some significant policy implications. First, SNS can be a convenient tool for people who like to talk about politics. Secondly, the data also show that age and SNS usage are negatively correlated. Young people are the main users. So, SNS might increase young people’s interests in politics. Third, education is strongly positively related to political involvement. Last but not least, the overall result shows that SNS and political involvement have a positive correlation. Therefore, the government should build an online platform that can encourage more people to discuss politics. It may give the country more useful policies (or, at least, ideas).

In fact, we can combine the first and second policy implications because they have some interrelationships. We know that younger generations are more likely to

use SNS than older people. If we run a simple regression about SNS usage and age, the highly statistically significant result shows a negative relationship between these variables (See Table 7 in the Appendix). Some people, especially younger generations, think that SNS is a very convenient tool to obtain information. Increases in users and in the frequency of using SNS will let people know this platform is becoming more popular. These young people are the future. It would be very meaningful if more of these people contributed to policy making.

SNS can spread information faster than most other channels (and these channels always connect to SNS). However, SNS have some risk. For example, fraudulent information can be harmful and misleading. It is more difficult to define whether the information on SNS is real. In addition, for many people, information on SNS is like fast food that people would not savour after eating. They may directly share this information and it would mislead more people. Young people have worse judgment and experience, so they are easier to be misled. Therefore, government and companies should build their official channels to spread information (and most of them already do). In addition, it would be very helpful if we had some online monitoring system. It could find and remove fraudulent information quickly and accurately.

All implications above are coordinated to people who talk politics very often. As the paper mentioned above, for people who talk politics very often, SNS is an important tool to acquire, share, and discuss politics. Although we have people like those in the negatively correlated groups, if we can transfer these people into the positively correlated group, it can be very significant. In fact, if we look at the data on

*talkpolitics*, we can see that 38.85 percent of respondents talk politics very often, which is more than the other categories. In addition, we can find that there are 34.07 percent of respondents sometimes talk politics. This category is the closest to a positively correlated group, and perhaps the easiest people to transfer. If we can turn these people into the different group,  $38.85 \text{ percent} + 34.07 \text{ percent} = 72.92 \text{ percent}$  would be a very impressive number.

Even though you give the greatest effort, SNS may not turn a politics hater into a politics lover. However, SNS can let people who love politics to come together. My research shows that SNS can not only let those people debate, share, and discuss politics online, but also can increase people's offline political involvement. In 2007, Bryan Caplan mentioned a political theory called the "Miracle of Aggregation" in his book "The Myth of the Rational Voter" that even if the majority of voters are uninformed or their errors are purely random, the minority of well-informed voters are sufficient to produce an efficient result (Caplan 2007). Like a recipe of alchemist, the compound of 99 percent ignorance plus 1 percent wisdom is exactly the same to the pure wisdom.

Although I personally do not completely agree with this argument, my research seems to have a little connection to it. If the minority is people who talk about politics very often, they are the well-informed people. Relatively, people in the negatively correlated group can be seen as uninformed people. Like I mentioned above, SNS may not be enough to let people who do not like politics to politics lovers. However, if SNS can make a more efficient system for those politics lovers, these politics lovers

can actually decide the future of this country.

Moreover, suppose type “Never” people dislike politics completely and actively avoid them, and “Sometimes” people are mainly apathetic about politics (which means you can hardly move them in any direction on politics). However, if the only source of political content to “Rarely” people is SNS, it may be the reason why “Rarely” people have larger marginal effects, and it would be useful to examine what SNS can do for them. It is possible that over time SNS move the “Rarely” people towards liking politics and these people would like SNS (although they may still not like politics). It is a wonderful topic for further research to track the same respondents and encourages them to use SNS. I am looking forward to see if any of these respondents are more interested in politics.

Finally, if by using SNS, the government can build some platforms that increase people’s interests of politics, it would not only contribute to policy making, but also possibly make politics more efficient. Official platforms can also lead people to think more critically. Barack Obama said that “Our politics all too often encourages people to think selfishly.” (TPM, 2013) Even though I cannot fully agree with this, it shows there might be something wrong with how people think about politics. Indeed, people think and analyze politics based on their own experiences; they think from their own perspectives. Therefore, if the government has some official platforms that can teach people, especially young people, a conceptual framework of politics, it will increase the quality of people’s political thoughts. SNS with other online resources can offer the most economic and efficient method to build those platforms, which can

overcome conventional social-economic status limitations (Jaarsveldt, 2011).

All of my policy implications are based on my model and support more and better explanations of the correlation between SNS and political involvement. My research demonstrates this relationship not only from the broad perspectives, but also from details such as specific actions of SNS. Even though the results are unexpected, they are meaningful and worth further study. To identify why and how this study has unexpected results, using some other dataset to study the same question would be a good point to start. To simply ignore the question would be unwise.

**Appendix:**

**Table 7 – Relationship between SNS Usage, Age, and educ1**

Variable	Coefficient	Standard-Error	T-Score
Dependent Variable: <u>Frequency</u>			
Debate	0.2131496	0.1247687	1.71
Findpeople	0.1412227	0.1255728	1.12
Post	0.0162453	0.0651568	0.25
Friend*	0.1274638	0.0613289	2.08
Followed	0.0699458	0.1374849	0.51
Clicklike**	0.4680171	0.1436205	3.26
Postother	0.2883745	0.1460877	1.97
Age1**	-0.0201966	0.003249	-6.22
Educ1	-0.0253253	0.0352818	-0.72
Income	0.0273042	0.0222119	1.23

\*: significant at alpha = 0.05

\*\* : significant at alpha = 0.01

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