

4-2013

Consumption and Dependency of Social Network Sites as a News Medium: A Comparison between College Students and General Population

Louisa Ha
Bowling Green State University, louisah@bgsu.edu

Kisung Yoon
Bowling Green State University

Xiaoqun Zhang
Bowling Green State University

Follow this and additional works at: https://scholarworks.bgsu.edu/smc_pub



Part of the [Communication Technology and New Media Commons](#), and the [Social Media Commons](#)

Repository Citation

Ha, Louisa; Yoon, Kisung; and Zhang, Xiaoqun, "Consumption and Dependency of Social Network Sites as a News Medium: A Comparison between College Students and General Population" (2013). *School of Media and Communication Faculty Publications*. 11.
https://scholarworks.bgsu.edu/smc_pub/11

This Article is brought to you for free and open access by the School of Media and Communication at ScholarWorks@BGSU. It has been accepted for inclusion in School of Media and Communication Faculty Publications by an authorized administrator of ScholarWorks@BGSU.

Consumption and Dependency of Social Network Sites as a News Medium: A Comparison between College Students and General Population

LOUISA HA*, Ph.D, KISUNG YOON**, Ph.D AND XIAOQUN ZHANG***

Abstract

This exploratory study investigates social network sites (SNS) users' time allocation behavior among various traditional and new media. Specifically, it examines the difference in degree of dependency on SNS between the young generation and the general population as a new form of news medium based on the media system dependency (MSD) and the microeconomic consumption (MEC) theories. The research results reveal that SNS, along with other online media, such as online audio/video news, are the preferred news sources for young people and they are more likely to be interested in soft news than hard news. SNS has become online users' news portal and is closely related to their other online and user-generated content media use. The significant difference in news media use between the general population and college students also illustrates the importance of choosing the sample in studying SNS and media use.

Key Words: Social Network Sites, Microeconomic Consumption Theory, Media System Dependency Theory, News Consumption

Introduction

In a meeting of the third News Agencies World Congress, Anibal Fernandez, the chief of the president's cabinet of Argentina, insisted that "social networks will never supplant the news agencies" (News Agencies World Congress, 2010, para. 1). Although this remark emphasized that the quality and roles of news agencies cannot be replaced by social network sites (SNS), it ironically acknowledged that SNS had a great potential to distribute news and information. In fact, a recent study revealed that the use of SNS among the Internet users was skyrocketing up to 39% in adult online users (age 30 and older) and 72% in young online users (age between 12 and 29 years old, Pew Research

*Prof. Louisa Ha is the Associate Editor, *Journalism and Mass Communication Quarterly*, Professor and Chair, Department of Telecommunications, School of Media and Communication, Bowling Green State University, Bowling Green, OH 43403, U.S.A.

**Dr. Kisung Yoon, Ph.D in communication studies, Bowling Green State University, Bowling Green, OH 43403, U.S.A.

***Xiaoqun Zhang, School of Media and Communication, Bowling Green State University, Bowling Green, U.S.A.

+**Acknowledgement:** The authors would like to thank the Toledo Blade and the Bowling Green State University Research Enhancement Capacity Grant for funding support of this project.

JCMR Journal of Communication and Media Research, Vol. 5, No. 1, April 2013, 1 – 14
 ©Delmas Communications Ltd.

Center, 2010b). Many news organizations recognize the growing popularity of SNS and are actively utilizing SNS such as Facebook and Twitter to reach broader audiences (Schulte, 2009). A classic example of this effort was the purchase of MySpace by News Corporation in 2005 (Boyd & Ellison, 2007). In August of 2008, Fox News opened a webpage on Facebook, which had discussion boards, comments, reviews, polls, and photos sections (Stelter, 2008).

Besides cable news channels, newspapers such as *New York Times* and *The Wall Street Journal* encourage their readers to share links with others via Twitter, a SNS specialized in microblogging (Stone, 2009). As the effort of news organizations to incorporate SNS as a potential channel to reach their audience increases, research on SNS use as news becomes a relevant topic to news consumption. Thus, SNS researchers will want to further inquire about SNS use in the broader context of entire media consumption.

This study combines the perspectives of the media system dependency theory (MSD) and the microeconomic consumption theory (MEC) to examine this new phenomenon, the use of SNS as news and information sources. The MSD explains that the more audience members depend on a medium, the more they use the medium (Ball-Rokeach & DeFleur, 1976). MSD can be applied to SNS use. In fact, MSD will predict that the popularity of SNS can indicate the dependency of SNS users on the medium. In addition, another theory of interest in this paper, MEC, stresses that consumers tend to compose a portfolio of their consumption in a product category to achieve the maximum utility with their limited resources (Owers, Carveth, & Alexander, 2004). In contrast to SNS use, MEC will predict that SNS users may choose a group of news media which best serve their informational needs within their limited time. As an exploratory research, this study aims at describe SNS use by identifying which demographic characteristic best predict SNS use, examining the relationship between SNS use and other traditional news media and other online media and investigating how topic interests relate to SNS use.

Although previous SNS research has identified the demographic characteristics of SNS users (Hargittai, 2008; Pew Research Center, 2010b), investigated their communicative and psychological characteristics (Correa, 2009; Craig, Igiel, Wright, Cunningham, & Ploeger, 2007; Kim & Yun, 2008; Lange, 2008; Liu, 2007; Livingstone, 2008; Sheldon, 2009; Urista, Dong, & Day, 2009), and examined social implications of SNS use (Byrne, 2008; Ellison, Steinfield, & Lampe, 2007; Skoric, Ying, & Ng, 2009), few researchers have inquired about the news consumption of SNS users. In fact, a recent study revealed that 57% of Internet users have used SNS and 23% of them have obtained news from news organizations' SNS and 51% have used non-news organizations' or individuals' SNS for the same purpose (Pew Research Center, 2010a). People sought various news topics online from hard news (e.g., national events, health/medicine, and business/finance/the economy) to soft news (e.g., sports, arts/culture, and celebrities/entertainment). These results showed that distributing and receiving news becomes one of the significant roles of SNS use.

News consumption behavior of SNS users is a salient research topic in online social media studies because the characteristics of SNS, such as instantaneousness and connectedness, are powerful advantages as a news medium. For instance, in the mass protests to the president elect, Mahmoud Ahmadinejad, Iranian Twitters constantly reported what was happening from the field in forms of texts, photos, and videos. Twitter facilitated its users and international news organizations to quickly share the news from the nation which allows only restricted amount of freedom of speech (Landler & Stelter, 2009). Iranian SNS use showed potentials of hard news use on SNS. However, how current SNS users' topical news use in non-crisis situations is unknown and an important

area of research that will improve our understanding of SNS use in the context of news information distribution and its impact. If SNS users constantly consume news information through limited news outlets, the landscape of news consumption can be gradually changed by news distributed by SNS. Even though SNS are not a typical news medium with professional reporters, they have the potential to influence the general

media use behavior, news consumption in particular, because these sites are changing how people connect with each other and how they share information.

SNS Users' Demographic Characteristics

This study conceptualizes SNS as a distinct medium from other online media because the SNS have dual identities: as a means of a personal social network and also a news medium open to the “friends” (members) of an individual’s network page. Previous researchers argued that SNS are only a tool to maintain existing personal networks and form new ones which are termed as bonding and bridging social capital respectively (boyd & Ellison, 2007; Ellison, Steinfield, & Lampe, 2007; Lenhart & Madden, 2007; Sheldon & Honeycutt, 2008). These functions of SNS differ from those of many television networks’ websites, which are primarily used for providing supplemental materials on the TV news (Ha, 2002).

Previous SNS literature attempts to explain why so many people use SNS by looking at the demographic characteristics of the SNS users. For example, the younger online users are more likely to use SNS (comScore, 2007; Pew Research Center, 2010b). Females use SNS more than males do (Strano, 2008). In addition, the use of SNS of teens from lower income households was more likely to be higher than those of their counterparts in the higher income bracket (Pew Research Center, 2010b). Among the demographic characteristics, previous researchers did not investigate which one is a better predictor of SNS use. Hence we start building our first research question:

RQ1: Which demographic variable best explain SNS use?

SNS Users' News Media Consumption and Media Dependency

The media system dependency theory (MSD) stresses that the amount of time spent using a medium is explained by the audience’s dependency on the medium (Ball-Rokeach & DeFleur, 1976; Loges & Ball-Rokeach, 1993). According to this theory, as a person’s needs are met from a certain medium use, the person will increase his or her dependency on the medium. When a person has a high dependency on a medium, he or she will use the medium more often and longer. Therefore, in this theory the amount of time spent using a medium corresponds to its fulfillment of a person’s needs.

MSD can be best conceptualized when it is compared with Uses and Gratifications Theory (U&G). Although there are some similarities between types of dependency in the MSD and gratifications in the U&G (e.g., social understanding dependency and surveillance gratification, self understanding dependency and information gratification, and solitary play dependency and habit gratification), the understanding of the roles of audience in media use are clearly different in these two perspectives. It is because the MSD emphasizes the initiative of media in meeting the needs of audience members when the U&G focuses on the active role of audience in media consumption (Loges & Ball-Rokeach, 1993). Therefore, these two perspectives have their own strengths in explaining a specific area of media use and complement each other.

The U&G perspective has prompted many researchers to unravel the relationship between individual motivation and the media use (e.g., Katz, Gurevitch, & Haas, 1973; McQuail, Blumler, & Brown, 1972; Palmgreen, Wenner, & Rayburn, 1980). But the assumptions of the U&G that audience members are active consumers and make conscious choice amongst media based on their needs are not adequate to explain contemporary media use, especially SNS use. It is because, as Potter (2009) pointed out,

its active and conscious choice assumption cannot explain the habitual or spontaneous use of media such as SNS use. It is unlikely that users always initiate their visit of SNS, which may be triggered by an e-mail invitation or hyperlinks from a Facebook page. In

addition, they may not have a distinct gratification sought when Internet users surf the Internet. Or, they may have multiple gratifications for a given website use.

To investigate habitual or spontaneous media consumption behaviors, the researchers of this paper approach SNS use from a behavioral perspective. This study proposes SNS users' media use "behaviors" as better predictors of the use of those sites because their behaviors reflect their needs with realistic constraints, as the MSD stressed long time ago (Ball-Rokeach & DeFleur, 1976). Uses and Dependency Model (Rubin & Windhal, 1986), a later revision of the MSD theory, stresses the connection between an individual's needs and motives to communicate, information seeking strategies, selection of media and functional alternatives leads to dependency on certain media channels. For example, dependency on the Internet medium is found to be caused by motivations and mediated by cognitive and affective involvement (Sun, Rubin, & Haridakis, 2008). One of the MSD's strengths is that it takes the social context in where media use occurs into account to draw a comprehensive picture of media use (Ball-Rokeach & DeFleur, 1976). When in crisis situations or with environmental constraints, those media that the individual habitually use will become the primary sources of information for the user (Hirschburg, Dillman, & Ball-Rokeach, 1986; Rubin, 2002). The basic argument of the theory is that the medium that a person uses a lot will play a more important role to the person and influences him or her more.

Thus, this study investigated the relationship between SNS use and other media use and the importance (manifested by time use) of those media to an individual. SNS (Online social media) in the context of total media use has been overlooked in previous research and online social media was treated in isolation from other media use. This study is based on the premise that media use has to be analyzed from the entire spectrum of media choices available to individual media consumers. To accomplish this goal, this study examines the relationships among the uses of traditional news media online news media, other user-generated content media, and SNS. Three research questions are posed to survey the relationships among the different media types use:

RQ2a: How do SNS users use traditional news media?

RQ2b: How do SNS users use online news media?

RQ2c: How do SNS users use other user-generated content media such as cell phones, webpage, and weblog ownership?

SNS Users' News Media Channels

Previous researchers defined SNS as "web-based services that allow individuals to (1) construct a public or semi-public profile within a bounded system, (2) articulate a list of other users with whom they share a connection, and (3) view and traverse their list of connections and those made by others within the system (Boyd & Ellison, 2007). However, the definition ignored a potential function of SNS as a news medium. As the Pew Research Center's (2010a) study showed, SNS is used by Internet users to seek news online from professional news to personal news as well.

Instead of simply treating SNS as just an interpersonal/group communication medium between the users and their social network, SNS is viewed in this study as a news portal for SNS users because the users are constantly participating in the production and consumption of news through this medium (Pew Research Center, 2010a). Previous SNS literature raised that SNS use behavior is related to the freedom of expression and the exchange of information (Brott, 2009). Even though the free exchange of information

is an important principle in a democratic society and SNS use may be a channel of this exchange, few studies have investigated the news consumption behaviors of SNS users. When consumers try to fulfill their general information seeking motivation from available news media, they will put their time resource and allocate it to maximize their satisfaction. They will choose the best media or avoid the worst to meet their needs with their limited time. When SNS users are satisfied with those news sources, they will frequently use them. Therefore, their actual media use behavior reflects how these media outlets are perceived in fulfilling their needs. It is conceivable that users see high relevance in the content of their social network page and form a habit of frequent use.

While the MSD theory well explains the habitual or spontaneous SNS use, the microeconomic consumption (MEC) theory provides a useful theoretical ground to explain the initial and rational choice of SNS as a news medium. The theory points to the three important economic characteristics of consumers' behavior. The first is that the marginal utility of every good is diminishing. In other words, as a person increases a unit of product use, the additional utility from the use will be decreased. Therefore, the person decides the number of units of product they will use to maximize total value. In addition, each consumer has their distinct ranking system when they choose a product. When a person has many options for their consumption, he or she will compare them and choose the best. Therefore, a rational consumer will form a portfolio of consumption of goods which can achieve the highest total utility under the limited resources (Owers, Carveth, & Alexander, 2004; Seufert & Ehrenberg, 2007).

Based on the MEC, an individual audience knows how much they need to increase or decrease the unit of consumption because the marginal utility of a news channel can diminish after consuming certain time in it. Alternative channels may provide more utility value. In addition, among various news sources, audiences will compare them and choose which channel provides the best news information. Moreover, under the constraint of resources, they will choose the best combination of news media sources to achieve the highest total utility. Therefore, the rational audience's behavior is a result of their motivation and satisfaction of use.

Although both the U&G and the MEC stress audience' active and rational role in the media use, one of the important differences between these two theories is that the MEC incorporates the concept of audience' scarce resources in its explanation, which U&G does not. Whereas the audience can select media based on their motivations in the U&G without any specific limit, the audience must take their scarce resources into account when they use media in the MEC. Another main difference is that while the U&G deals with each medium separately, the MEC expects that an audience will create a portfolio of media for a certain content category. This study argues that media users' time is scarce resource in media consumption even though the general MEC refers to the limited resources of consumers as financial resources. It is because most news media is "free" with advertisement. Although cable news channels and newspapers may charge subscription fee to their audience, they are more an exception than the rule and usually subsidy exists with advertising and other bundling practices (Seufert & Ehrenberg, 2007).

A recent survey revealed that 92% of Americans get news from multiple outlets in a day, such as national television, local television, the Internet, newspaper, and radio (Pew Research Center, 2010c). In addition, 59% obtain news from a combination of online and offline sources (Pew Research Center, 2010c). Furthermore, 80% of Internet users have used the Internet to obtain news and 44% of them do it daily (Pew Research Center, 2010a). The results reveal that audience members fulfill their information seeking motivation from both traditional and new news outlets although initial U&G research studied only network television news (Palmgreen, Wenner, & Rayburn, 1980). Therefore, this study examined from which sources SNS users obtain news information because they can share and spread the information to friends on their SNS. Hence, we pose the

question on the information sources of SNS users:

RQ3: Which news media outlets do SNS users consume?

SNS Users' News Topic Interest

If SNS users form the best portfolio of news media outlets to reach the highest utility, they will also make the best combination of news content to maximize their satisfaction of news consumption with limited time. The content of the news medium will be an important criterion. Particularly, many researchers have reported the line between information seeking and entertainment is blurred. They even coined the term "infotainment" to explain audiences who obtain political information from their entertainment program consumption, such as *The Daily Show with Jon Stewart* (Baym, 2007; Delli Carpini & Williams, 2001; Holber, Lambe, Dudo, & Carlton, 2007; Moy, Xenos, & Hess, 2005a; Moy, Xenos, & Hess, 2005b; Thussu, 2007). This study posits that SNS users will use SNS as a news source to compensate their unsatisfied topic

interest from other media, such as entertainment. Therefore, this study raised two research questions regarding content preference as a predictor of SNS use:

RQ4: Which topics do SNS users prefer?

RQ5: Between news media channel and news topic preference, which one better predict SNS use?

Method

This study is based on a mail survey in Northwest Ohio area from September 8 to December 20, 2009. Respondents could choose to respond to the web version of the survey. There were two sampling frames for this study to cover all spectrums of the population: 1) NW Ohio resident database supplied by a local newspaper, and 2) college students in a NW Ohio state university. Because college students are the most desirable target group audience group for advertisers and reportedly have high use of SNS but difficult to reach, they were recruited through university campus recruitment process.

The survey design followed the Tailored Design Method of Dillman (2007). For NW Ohio residents, a simple random sample selected from NW Ohio residents database (n=1499) were sent the questionnaire package with a cover letter, a visually attractive questionnaire booklet, and a stamped reply envelope with a fresh one dollar bill as an incentive for participation. The non-respondents of the first mailing were sent a postcard reminder three weeks from the initial contact and those with telephone numbers were contacted by telephone to remind them to return the questionnaires. For college students, 12 general education and large introductory lecture classes with a variety of majors and class standings in NW Ohio were used to recruit participants and students received extra credits for participating in the study. A total 688 responses were received, of which 329 (effective response rate = 28% excluding non-deliverable addresses) were from NW Ohio residents and 369 were from college students. The survey, which took approximately 15 minutes to complete, focused on the audience's use and opinion of various news media including SNS.

Measurements

Social network and other news media use. Respondents were asked to write down the number of hours per week for the seven offline news media: a) broadcast network news, b) cable TV news, 3) daily newspapers, 4) suburban newspapers, 5) other newspapers, 6) news magazines, 7) radio news; and three online news media: 1) online newspapers, 2) non-newspapers websites such as Yahoo, 3) online video or audio sites. SNS use was measured by adding the number of hours per week for specific SNS such as Facebook,

Twitter, etc. Examples were given to participants for each medium to avoid confusion.

Other user-generated content media use. The time spent on three new communication media involving the creation of content by users was examined: cell phones, webpages, and weblogs. We asked respondents the number of hours per week used in cell phone activities, such as 1) text messaging, 2) websites viewing, 3) checking

e-mail, 4) taking picture, 5) using a calendar or electronic organizer, 6) playing music, and 7) playing video and also their ownership of personal webpages and weblogs.

Topic interest. News topic interests were grouped into soft news and hard news for comparison purposes. Soft news includes music/entertainment, celebrity/lifestyle/fashion, and sports. Hard news are politics/government/society, business, and technology.

Occupation. We asked respondents to mark their occupation, such as 1) manager/business/sales, 2) professional, 3) homemaker, 4) cashier/customer service, 5) clerical/administration, 6) factory worker, 7) engineer/technician, 8) retiree, 9) unemployed, and 10) other.

Age. We asked respondents to write their age.

Income. We asked respondents to mark their household income, such as 1) under US\$ 30,000, 2) \$30,001-\$60,000, 3) \$60,001-\$90,000, 4) \$90,001-\$150,000, and 5) over \$150,000.

Education. We asked respondents to mark their education level, such as 1) grade 8 or less, 2) grades 9-11, 3) high school or equivalent, 4) 1 to 3 years of college or technical school, 5) college education (4 years), and 6) attended or completed graduate school.

T-tests were used to compare the differences in time use on each medium between the student and the resident sample. Multiple regressions were used to examine the predicting power of demographic variables, other media use and topic preference on SNS use.

Results

As shown in Table 1, SNS indeed have become the most important news medium for college students. They reported spending over 8 hours a week using the medium and it was the most important medium to them based on their time use. In contrast, the general population (residents) spent only 1.21 hours a week on using SNS. While broadcast network news was the most frequently used news sources to residents (mean=5.17 hours), college students used it only for an average of 1.82 hours a week. Table 1 showed the difference in news media use within each group. The two groups showed significantly different patterns of news media consumption on almost all categories except suburban newspapers, other newspapers, and news magazines.

Table 1. News media use in different groups (mean number of hours per week)

	Residents	Students
Broadcast Network TV *	5.17	1.82
Cable TV*	3.81	1.45
Daily Newspapers*	2.96	0.99
Online Newspapers*	0.57	1.01
Suburban News	0.37	0.34
Other Newspapers	0.24	0.3
News Magazines	0.34	0.46

Radio*	2.64	0.84
Social Network Sites*	1.21	8.22
Non-newspaper Websites*	1.32	4.1
Online video/audio*	0.36	1.82

* $p < 0.01$ *Best Demographic Predictor of SNS Use*

As shown in Model 1 in Table 2 which put the demographic variables as the only predictors of SNS time use in a multiple regression analysis, we found that age was the most important demographic predictor variable ($\beta = -.35$, $p < .001$) with gender a distant second ($\beta = 0.09$, $p < .05$) in the combined sample. Younger people were heavier user of SNS. Females were also likely to indulge in SNS use than males were. Using the three demographic variables can explain 13% of the variances in SNS use time in the combined sample (see Table 2). Because of the significant difference in age and media use between the general population sample and the college student sample, we ran separate regression analysis to examine the influence of the various demographic factors on SNS use (see Table 3). We found that in the general resident sample, the female gender was not a significant predictor of SNS use, but in the college student sample, it became a significant predictor. However, income was not a significant predictor of SNS time use in either sample.

Table 2: Predicting models of SNS use with combined sample

	Model 1	Model 2	Model 3
Age	-.35***	-.23***	-.18***
Gender	.09*	.11**	.09**
Income	-.03	-.02	-.01
Network News		.02	.02
Cable News		.05	.05
Daily Newspaper		-.05	-.05
News Magazine		.04	.04
Radio News		-.04	-.04
Non-Newspaper Websites		.21***	.21***
Online Video/Audio News		.24***	.23***
Online Newspapers		.04	.06
Soft News Interest			.09*
Hard News Interest			-.07
Adjusted R ²	.13	.28	.28

Note: * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$ **Table 3: Two predicting models of SNS use (resident sample vs. student sample)**

	Model 1		Model 2		Model 3	
	Residents	Students	Residents	Students	Residents	Students
Age	-.33***	-.07	-.24***	-.06	-.23***	-.05
Gender	.01	.15**	.07	.16**	.07	.14*
Income	-.04	.03	-.02	.04	-.02	.04
Network News			.10	.04	.10	.03

Cable News	.03	.14*	.03	.13*
Daily Newspaper	-.04	-.06	-.04	-.07
News Magazine	.02	-.02	.02	-.02
Radio News	-.08	-.02	-.08	-.02
Non-Newspaper Websites	.30***	.17**	.30***	.19**
Online Video/Audio News	-.01	.30***	-.01	.27***
Online Newspapers	.09	.07	.10	.09
Soft News Interest			.05	.09
Hard News Interest			-.04	-.05
Adjusted R ²	.10	.02	.21	.21

Note: *p<0.05, **p<0.01, ***p<0.001

SNS Users' Other Media Consumption

RQ2a asked how SNS users use traditional news media, such as print newspapers, over-the-air radio, and magazine. Prior to analyzing the regression results, we ran multicollinearity diagnostic statistics of the media use variables. All of the media use variables show a tolerance value of 0.9 or above (much higher than the minimum critical value of 0.4), indicating no problem of collinearity among the media use predictors. Traditional news media use did not significantly predict SNS use after controlling age, gender, and income. But as shown in Table 3, cable TV news use is a significant predictor of SNS use of college students ($\beta = .14, p < .001$). RQ2b asked how SNS users used online media. Not surprisingly, because SNS is a form of online media, SNS users were also heavy users of other online news media, such as non-newspapers web sites ($\beta = .21, p < .001$) and online video/audio news sites ($\beta = .24, p < .001$). But online version of newspapers and online radio did not predict SNS use after controlling age, gender, and income. There was a notable difference in online media consumption for the resident and the student sample. In particular, online video and audio news was an insignificant variable in the general resident sample, but in the college student sample, it became the most significant variable.

RQ2c asked how SNS users used other user-generated content media, such as specific cell phone use and their webpage and weblog ownership. We discovered that SNS users were more active in using the entertainment functions of their cell phones that facilitated the sharing of content for SNS, such as viewing websites ($\beta = .47, p < .001$), taking pictures ($\beta = .20, p < .001$), using it for personal schedule management such as calendar or electronic organizer ($\beta = .18, p < .001$), and text messaging ($\beta = .09, p < .05$). But heavy SNS users were less likely to use cell phones for two-way communication that can be done on SNS, such as e-mail checking ($\beta = -.29, p < .001$) after controlling age, gender, and income. In addition, even though the means of SNS use were significantly higher among those who had personal webpages ($t = 4.51, p < .001$) and weblogs ($t = 4.60,$

$p < .001$) than those who did not. However, after holding age, gender, and income constant, webpage ($\beta = -.02, p = n.s.$) and weblog ($\beta = .00, p = n.s.$) became insignificant.

RQ3 asked the news media outlet use of SNS users. Non-online news outlets, such as broadcast networks, cable news channels, and print daily newspapers did not predict the SNS use after controlling age, gender, and income. But online video and online non-newspapers sites were significant predictors SNS use. Further comparison of the student and resident sample revealed important difference in the specific online media

consumption of the college student and the resident samples. Online video/audio news was especially an important predictor of SNS use for the college student sample ($\beta = .30$,

$p < .001$), but totally unrelated to the resident sample ($\beta = .001$, n.s.). With the addition of other news media uses especially online media as predictors of SNS use, the explanatory power of the model increased to 28% of the variances of SNS uses for the combined sample (see Table 2).

SNS Users' News Topic Interest

RQ4 asked topic interests of SNS users. Heavy SNS users were more likely to be interested in soft news, such as music/entertainment ($t = 3.93$, $p < .001$) and celebrity/lifestyle/fashion ($t = 6.99$, $p < .001$). However, they were less likely to be interested in politics ($t = -3.34$, $p < .01$) and business ($t = -3.12$, $p < .01$). We analyzed the influence of topic interest by grouping the news topics to soft news and hard news. Only SNS users' soft news interest significantly predicted their SNS use ($\beta = .09$, $p < .01$) after controlling age, gender, and household income, whereas hard news interest was not a significant predictor of SNS use ($\beta = -.07$, $p = \text{n.s.}$). Adding the topic interest only minimally (R^2 change = 0.009, see table 2) increased the adjusted R^2 , meaning 28% of variance in SNS can be explained with demographics, media use, and topic preferences. Topic interest was not a salient factor to explain SNS use.

RQ5 asked between news channel (platform) and news content, which one better predicted SNS use. Online news media use was a much stronger predictor of SNS use than news content. The regression coefficients were highest for non-newspaper web sites and online video or audio news sites. They were much higher ($\beta = .21$ for non-newspapers sites, $\beta = .24$ for online video sites, $p < 0.01$) than the coefficients of news content topic interest ($\beta = .09$, $p < 0.01$ for soft news and $\beta = -.07$, n.s. for hard news). Therefore, news media channel (platform) use was a better predictor than topic preference as a predictor of SNS use.

Discussion

The results show four interesting patterns about SNS use. The current study reveals that only two demographic variables, age and gender, predict the SNS use. This result is different from previous Pew Research Center study (2010b) that reported no gender difference and significant income difference. First, age difference indicates that SNS has become the primary news medium for young adults. They are dependent on SNS for information. The different dependence on different news media in different age groups shows the necessity to use multiple news media platforms to disseminate news effectively to each age group.

Second, gender is a statistically significant variable in the present study among the college student sample. Although age was the most significant predictor of SNS use in general, among a homogeneous young sample such as college students, gender became an important predictor of SNS use. This finding of our research suggests importance of choosing a proper sample studying SNS use. For instance, Pew Research Center studies were from the national population of the United States with no specific inclusion for college students. Compared to the Pew studies, the sample of the current study is consisted of Northwest Ohio residents and college students. Because SNS is still primarily used by young population, research with young sample will describe current SNS use better.

Another interesting pattern is that SNS users' other media consumption behaviors further explains the time spent on SNS because of how they complement the use of SNS. The media use pattern shows that they chose media based on the marginal utility value as explained by the MEC theory especially in other user-generated media. Cell phone users who use it for entertainment and information and for personal scheduling (non interactive

purposes) are more likely to spend more time on using SNS. Perhaps heavy SNS users use their cell phone to check their social network web pages and take pictures using their cell phone to upload the pictures to their social network web pages. Or, SNS itself already satisfies the users' need to communicate among their social networks such as e-mails so that heavy SNS users do not need to use their cell phones to do the same functions.

The third important finding of this study is that the news consumption patterns of residents sample and students sample are very different. Residents obtain news information from traditional news outlets, but college students get news from non-traditional news outlets. In particular, heavy SNS users do not obtain news from traditional "authoritative" news outlets, such as broadcast network news, cable news channels, or daily newspapers. Instead, they get news from non-newspaper websites, such as Google news, Yahoo news, online video, and/or audio news. In the framework in MSD, this result indicates that heavy SNS users are dependent on online media for information and ignore other non-online alternatives. It seems like these heavy SNS use is not conducive to accessing quality information that may only be available offline but only related to other heavy online media use. For these users, they are highly dependent on online media. This study does not investigate psychological motivation of these users and further research on this topic will be necessary to find important reasons for such media consumption behavior.

SNS users' heavy dependency on the SNS bears an important implication about information dissemination among these population segments. Especially, the high amount of time that college students spent on SNS is remarkable. It seems like those high SNS users are confined to their own individualized walled garden of the Facebook page with their "friends" with similar interests. It is particularly concerning that our research was about their news diet. If SNS users are primarily consuming news from SNS, it is very likely that they will not be exposed to media content or views that is outside their comfort zone. Their dependency on non-newspaper websites and online audio/video news sources use will not be too much different from their SNS use. It means that they will share information from these sources with their friends who will have similar background and interest of theirs. On the top of this concern, SNS users' interests are not in hard news, but in soft news. This unbalanced news diet may have potential impact on the way our democratic decision making process has been conducted. SNS use and the news content consumption will need more attention from researchers.

Although this research posited that social media compensate for the weaknesses of traditional news media in fulfilling their preference for soft news. However, the explanatory power of non-newspaper websites and online video/audio news was much higher than the one of topic interests. In addition, adding topic interests to the total SNS use model increases only 1% of the explanatory power of SNS use. These results imply that SNS users are not actively seeking non-traditional news media for their soft news topic preference, but rather SNS users' dependency on the Internet reflects their dependency on online media in general. The potential effect on users' civic engagement by the habitual or spontaneous consumption of SNS is indicated in the MSD theory. Whether this SNS walled garden will negatively or positively affect users' civic engagement will require further examination how they use SNS. Furthermore, as SNS have other social functions for the users other than news, topic interest may not be able to account for time the social networking and companionship use of the media. As the SNS medium is evolving, more research is needed on the types of content being shared on the sites and the multiple roles that SNS play in an individual's life.

References

Acar, A. (2008). Antecedents and consequences of online social networking behavior: The case of

- Facebook. *Journal of Website Promotion*, 3(1/2), 62-83.
- Ball-Rokeach, S. J., & DeFleur, M. L. (1976). A dependency model of mass media effects. *Communication Research* 3(1), 3-21.
- Boyd, D. M., & Ellison, N. B. (2007). Social network sites: Definition, history, and scholarship. *Journal of Computer-Mediated Communication*, 13, 210-230.
- Brott, C. (2009). *Consensual invasion: A path model of how Facebook users conceptualize and contextualize privacy*. Paper presented at the annual meeting of the AEJMC, Boston.
- Baym, G. (2007). Emerging models of journalistic authority in MTV's coverage of the 2004 US presidential election. *Journalism Studies*, 8(3), 382-396.
- Bryant, J., & Thomspon, S. (2002). *Fundamentals of media effects*. Boston: McGraw Hill.
- Byrne, D. N. (2008). Public discourse, community concerns, and civic engagement: Exploring black social networking traditions on BlackPlanet.com. *Journal of Computer-Mediated Communication*, 13, 319-340.
- comScore. (2007). *Facebook sees flood of new traffic from teenagers and adults*. Retrieved March 2, 2010, from [http://www.comscore.com/Press_Events/Press_Releases/2007/07/Teenagers_and_Adults_Flood_Facebook/\(language\)/eng-US](http://www.comscore.com/Press_Events/Press_Releases/2007/07/Teenagers_and_Adults_Flood_Facebook/(language)/eng-US)
- Correa, T. (2009). *Who interacts on the web? The intersection of users' personality and social media use*. Paper presented at the annual meeting of the AEJMC, Boston.
- Craig, E., Igiel, M., Wright, K., Cunningham, C., & Ploeger, N. (2007). "Will you be my friend": *Computer-mediated relational development on Facebook.com*. Paper presented at the annual meeting of the ICA, San Francisco.
- Delli Carpini, M. X., & Williams, B. A. (2001). Let us infotain you: Politics in the new media environment. In W. L. Bennett & R. M. Entman (Eds.), *Mediated politics: Communication in the future of democracy* (pp. 160-181). Cambridge, MA: Cambridge University Press.
- Ellison, N. B., Steinfield, C., & Lampe, C. (2007). The benefits of Facebook "friends": Social capital and college students' use of online social network sites. *Journal of Computer-Mediated Communication*, 12, 1143-1168.
- Ha, L. (2002). Enhanced television strategy models: A study of TV web sites. *Internet Research: Electronic Applications and Policy*, 12(3), 235-247.
- Hargittai, E. (2008). Whose space? Differences among users and non-users of social network sites. *Journal of Computer-Mediated Communication*, 13, 276-297.
- Hirschburg, P. L., Dillman, D. A., & Ball-Rokeach, S. J. (1986). Media dependency theory: Responses to the eruption of Mount St. Helens. In S. J. Ball-Rokeach & M. G. Cantor (Eds.), *Media, audience, and social structure* (pp. 117-126). Newbury Park, CA: Sage.
- Holbert, R. L., Lambe, J. L., Dudo, A. D., & Carlton, K. A. (2007). Primacy effects of *The Daily Show* and national TV news viewing: Young viewers, political gratifications, and internal political self-efficacy. *Journal of Broadcasting & Electronic Media*, 51(1), 20-38.
- Katz, E., Gurevitch, M., & Haas, H. (1973). On the use of the mass media for important things. *American Sociological Review*, 38, 154-181.
- Kim, K., & Yun, H. (2008). Cying for me, cying for us: Relational dialectics in a Korean social network site. *Journal of Computer-Mediated Communication*, 13, 298-318.
- Landler, M., & Stelter, B. (2009, June 16). Washington taps into a potent new force in diplomacy. *New York Times*. Retrieved March 25, 2010, from <http://0-www.lexisnexis.com.maurice.bgsu.edu/hottopics/lnacademic/>
- Lange, P. G. (2008). Publicly private and privately public: Social networking on YouTube. *Journal of Computer-Mediated Communication*, 13, 361-380.
- Lenhart, A., & Madden, M. (2007). Social networking websites and teens: An overview. Retrieved November 10, 2007 from http://www.pewinternet.org/PPF/r/198/report_display.asp.
- Liu, H. (2007). Social network profiles as taste performances. *Journal of Computer-Mediated Communication*, 13(1), 252-275.
- Livingstone, S. (2008). Taking risky opportunities in youth content creation: Teenagers' use of social networking sites for intimacy, privacy and self-expression. *New Media & Society*, 10(3), 393-411.
- Loges, W. E., & Ball-Rokeach, S. J. (1993). Dependency relations and newspaper readership. *Journalism Quarterly*, 70(3), 602-614.

- McQuail, D., Blumler, J. G., & Brown, J. R. (1972). The television audience: A revised perspective. In D. McQuail. (Ed.), *Sociology of mass communication* (pp. 135-165). Middlesex, England: Penguin.
- Moy, P., Xenos, M. A., & Hess, V. K. (2005a). Priming effects of late-night comedy. *International Journal of Public Opinion Research*, 18(2), 198-210.
- Moy, P., Xenos, M. A., & Hess, V. K. (2005b). Communication and citizenship: Mapping the political effects of infotainment. *Mass Communication & Society*, 8(2), 111-131.
- News Agencies World Congress. (2010). "Social networking will never supplant the news agencies," said Fernandez. Retrieved October 24, 2010, from <http://www.nawc.com.ar/en/showNews/39>
- Owers, J., Carveth, R., & Alexander, A. (2004). An introduction to media economics theory and practice. In A. Alexander, J. Owers, R. Carveth, C. A. Hollifield, & A. N. Greco (Eds.), *Media economics: Theory and practice* (3rd ed.) (pp. 3-47). Mahwah, NJ: Lawrence Erlbaum.
- Palmgreen, P., Wenner, L. A., & Rayburn, J. D., Jr. (1980). Relations between gratifications sought and obtained: A study of television news. *Communication Research*, 7(2), 161-192.
- Pew Research Center. (2010a). *Online news survey*. Retrieved October 19, 2010, from http://www.pewinternet.org/~media/Files/Questionnaire/2010/Online_News_Topline.pdf
- Pew Research Center. (2010b). *Social media & mobile Internet use among teens and young adults*. Retrieved March 2, 2010, from <http://www.pewinternet.org/Reports/2010/Social-Media-and-Young-Adults.aspx>
- Pew Research Center. (2010c). *Understanding the participatory news consumer: How Internet and cell phone users have turned news into a social experience*. Retrieved March 23, 2010, from <http://www.pewinternet.org/Reports/2010/Online-News.aspx>
- Potter, W. J. (2009). *Arguing for a general framework for mass communication scholarship*. Los Angeles: Sage.
- Rubin, A. M. (2002). The uses and gratifications perspective of media effects. In J. Bryant & D. Zillman. (Eds.), *Media effects: Advances in theory and research* (pp. 525-548). Mahwah, NJ: Lawrence Erlbaum.
- Rubin, A. M., & Windahl, S. (1986). The uses and dependency model of mass communication. *Critical Studies in Mass Communication*, 3, 184-199.
- Schulte, B. (2009). The distribution revolution. *American Journalism Review*, 31(5), 22-25.
- Seufert, W., & Ehrenberg, M. (2007). Microeconomic consumption theory and individual media use: Empirical evidence from Germany. *Journal of Media Business Studies*, 4(3), 21-40.
- Sheldon, P. (2009). "I'll poke you. You poke me!" *Self-disclosure, social attraction, predictability and trust as important predictors of Facebook relationships*. Paper presented at the annual meeting of the AEJMC, Boston.
- Sheldon, P., & Honeycutt, J. (2008). *A structural equation model of oral communication and Facebook use*. Paper presented at the annual meeting of the NCA, San Diego.
- Skoric, M. M., Ying, D., & Ng, Y. (2009). Bowling online, not alone: Online social capital and political participation in Singapore. *Journal of Computer-Mediated Communication*, 14(2), 414-433.
- Stelter, B. (2008, August 18). Fox News joins a social network, but not its parent's site. *New York Times*. Retrieved March 29, 2010, from http://www.nytimes.com/2008/08/18/business/media/18fox.html?_r=1&ei=5087&en=821fa71a1e16176c&ex=1219291200&adxnnl=1&pagewanted=print&adxnnlx=1269882050-1uxI4xaiMSSRWaf47kbJnQ
- Stone, B. (2009, September 26). Share the moment and spread the wealth. *New York Times*. Retrieved March 21, 2010, from <http://www.nytimes.com/2009/09/27/business/27ping.html?scp=1&sq=Share%20the%20moment%20and%20spread%20the%20wealth&st=cse>
- Strano, M. M. (2008). User description and interpretations of self-presentation through Facebook profile images. *Journal of Psychosocial Research on Cyberspace*, 2(2), 1-11.
- Sun, S., Rubin, A. M., & Haridakis P. M. (2008). The role of motivation and media involvement in explaining Internet dependency. *Journal of Broadcasting and Electronic Media*, 52(3), 408-431.
- Thussu, D. K. (2007). *News as entertainment: The rise of global infotainment*. Los Angeles: Sage.

- Urista, M. A., Dong, Q., & Day, K. D. (2009). Explaining why young adults use MySpace and Facebook through uses and gratifications theory. *Human Communication, 12*(2), 215–229.
- Valenzuela, S., Park, N., & Kee, K. F. (2009). Is there social capital in a social network site? Facebook use and college students' life satisfaction, trust, and participation. *Journal of Computer-Mediated Communication, 14*(4), 875–901.

Zywica, J., & Danowski, J. (2008). The faces of Facebookers: Investigating social enhancement and social compensation hypotheses; predicting Facebook™ and offline popularity from sociability and self-esteem, and mapping the meanings of popularity with semantic networks. *Journal of Computer-Mediated Communication, 14*(1), 1–34.