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How Government Surveillance Modifies Social Network Service Use in South Korea

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Abstract

Government Surveillance systems have been expanded in the new media environment. Surveillance of online public spheres could pose a serious threat to online social network service providers. The present study integrates previous research on government surveillance, researching findings from privacy studies and 'uses and gratifications' (U&G) research regarding social network service use motivations, in order to understand the factors influencing the use of the online social network services in a high surveillance environment. The research data was collected in South Korea in March, 2016. The research results show, first, that privacy concern is the mediator between governmental online surveillance and social network service switching intention. Second, SNS switching intention is predicted positively by interaction motivation and negatively by convenience motivation. Last, the research found that people with higher levels of privacy management efficacy are more likely to respond to governmental online surveillance by increasing their intention to switch to alternative social network services.

How Government Surveillance Modifies Social Network Service Use in South Korea

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How Government Surveillance Modifies Social Network Service Use in South Korea

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Chapter 1: Introduction

Online government surveillance systems have been expanded with advances in new media (Smith & Lyon, 2013). A longitudinal study of perceptions of surveillance and privacy found that citizens in free media countries such as America and Canada are becoming increasingly concerned about government surveillance (Smith & Lyon, 2013). Furthermore, people in media-controlled societies like China cannot use the popular online services, such as Facebook, without using circumvention tools to bypass the government's active Internet surveillance (Mou, Wu, & Atkin, 2014; Yang & Liu, 2014). Although technology advocates explain that government online surveillance systems can increase users' gratification by making the media environment more secure, pro-privacy scholars argue that technology development to support government online surveillance is a significant threat to the privacy of new media users (Mason & Raab, 2005; Zittrain & Palfrey, 2008).

The civil societies in both free and controlled media environments have been influenced by the development of social network services, which contribute to the expansion of the public sphere (Habermas, 1962; Harlow, 2015; Mou et al., 2013). Boyd and Ellison (2007) explain that social network services enhance users' ability to increase connectivity in public life, as past social changes have been generated through communications facilitated by social network services (Harlow, 2015; Lomicky, & Hogg, 2010). Although social network services' potential to transform societies has not been fully unveiled, the possibility of gradually transforming people using SNS's (Hunt, Atkin, & Krishnan, 2012; Kim, Atkin, & Lin, 2016; Papacharissi, 2009) into participants in a civil agenda has been identified through previous research (Harlow, 2015).

The ongoing specter of government online surveillance could pose a serious threat to the providers of such web services such as instant messengers and social network services (Ha et al., 2015). When the story of the Korean government's monitoring of an SNS messenger service was broadcast through major television news shows in 2014, Koreans were moving away from the dominant Korean messenger service--monitored by Korean persecutors--to the encrypted German messenger service called Telegram (Brandon, 2014). In September, 2014, Korean prosecutors organized a special task force investigating the impact of online messages on rumors about the Korean government and the Korean president, after the Korean president complained about the unidentified stories (Waring, 2014). A reporter for the most influential English newspaper in South Korea linked her complaints to rumors on the veiled schedule of the president on April, 16, 2014, when about 300 high school students died in the sunken Ferry, Sewol (Yoon, 2014). Telegram was recorded as the most downloaded application in October, 2014, when the Korean people heard that the KokaoTalk provider cooperated with the prosecutors monitoring personal messages exchanged through the messenger service. KakaoTalk, the instant message service, has more than 35 million users in South Korea (Brandon, 2014).

In the meantime, the Daum communication cooperation--the service provider of KakaoTalk-- lost the service users of their social network service, KakaoStory (Kim, 2015). In 2014, 39.9% of South Koreans used social network services. The ratio of KakaoStory service users among Koreans dropped from 55.4% in 2013 to 46.4% in 2014, while the ratio of Facebook users in South Korea increased from 23.4% to 28.4% in 2014 (Kim, 2015). Young adults in their 20's--who are more open to adopt newly introduced technology--seem to prefer Facebook to KakaoStory, which was linked to government surveillance in 2014(Kim, 2015). The government surveillance cases in South Korea, which has the leading developers and providers

of new media services (Park, Cho, & Lee, 2014), can thus help inform our understanding of how government surveillance modifies users' attitudes toward social network service.

Based on the news reports of the Korean government's online surveillance, it can be assumed that those who use online social network services to fulfill their gratifications can switch to alternative services, particularly when they regard government surveillance as a factor with privacy concern. The present study integrates previous studies--which address government surveillance, privacy concerns and social network service use motivations--to understand the factors influencing the use of online social network services. While previous research has used motivation variables to explain causes of online service use, the present research will include the negative attributes of online service use, which include exposure to surveillance news and privacy concerns. Both positive factors and negative attributes of the online environment will be included in the research model. The research also tests a model outlining how news stories concerning government surveillance could prompt privacy concerns surrounding the use of social network services. Furthermore, other variables, such as user personality traits (e.g., extraversion, and privacy management efficacy) will be included in the research model as possible moderators.

Chapter 2: Literature Review

2.1 Social Network Service Use

Boyd and Ellison (2007) define social network service 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"* (p.211). Social network services (SNSs) are expected to have a great message dissemination potential in U.S., because, in 2016, approximately 195. 73 million U.S. people have user accounts on social network services (Statistia, 2016). According to Statstia (2016), the number of social network users are expected to reach to almost 2.2 billion worldwide. As well in South Korea, the social network service users have drastically increased (Kim, 2015). Some 39.9% of Korean people were using social network services in 2014, while 31.3% of them had SNS accounts in 2013.

Communications on social network services are monitored by government surveillance agents, who gather personal information to manipulate SNS opinion (Fernback, 2012). As the case of Korean government surveillance in 2014 shows, governments are willing even to investigate personal information, which are open on social network services (Waring, 2014). In order to explore social network services in the context of a public sphere distorted by government surveillance, the previous research findings regarding social network service use need to be addressed.

2.1.1 Attitude, Intention and Social Network Service Use

Eagly and Chaiken (1993) defined attitude as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor" (p.1). The definition

includes positive as well as negative preferences, and assumes that user attitudes can be measured with a continuous measurement scale. For example, a popular innovation acceptance model–the technology acceptance model (TAM)--has attitudes as the key construct to expect actions to adopt new media development (Davis, 1989). When people have a positive attitude toward innovations, such as new technology in mobile phone use (Shin 2011), online network system technology (Wei, 2006), and satellite broadcasting system development (Lin, 2010), they tend to eagerly adopt technology developments. The strong relationship between new technology use behaviors and attitudes toward technology has been found, also, in Internet services such as blogging webpage use (Styen et al, 2008). Likewise, studies on social network service use have found significant connections between media use attitudes and behaviors governing new media use (Braun, 2013; Shipps & Phillips, 2013).

Major theories on behavior and attitude change consider intention as the key component to connect behavior with attitude. First off, in the Theory of Reasoned Action (Fishbein & Ajzen, 1975), the consistency from attitude to behavior is mediated by intention. The theory outlines a cognitive construct sequence to determine technology use behaviors. The sequential cognitive constructs of TRA (Theory of Reasoned Action) are belief, attitude, intention and behavior. Intention can be strongly predicted by attitude, and behavior is predicted by beliefs, attitudes, and intentions. In addition, the parsimonious TAM theory posits media use attitudes as predictors of media use intention. Studies addressing message effectiveness reveal that people's attitudes toward certain objects are followed by their intention to use the objects (e.g., Mulero, Adeyeye, & Ajibesin, 2012)

Based on the TRA and TAM theoretical perspectives, people with more positive attitudes are expected to have stronger adoption intentions, and SNS users' attitude variables can be

strong predictors of their intention to adopt new developments of online social network services. This survey research, which explores Korean people's social network uses and experience with government surveillance, assumes that their actual behaviors are predicted by SNS attitudes and intentions. In the research model proposed here, intention to switch to alternative SNS services will be inversely related to SNS attitudes, considering that SNS intentions are positively related to SNS attitude. In particular, we explore the degree to which negative attitudes toward their incumbent social network service prompts users to consider opening accounts in alternative social network services.

2.1.2 Extraversion and Social Network Service Use

User personality needs to be considered to explore relationships among online government surveillance, privacy concern and social network service use, because previous research has found that personal characters are important predictors to define differences in media use on the Internet platform (Cowels, 1989). In psychology, the "Big-Five" personality theory provides a theoretical frame to understand personality types, which make differences people's behaviors (McCrea & Costa, 1991). McCrea and Costa (1991) explain that extraversion, neuroticism, openness to experience, agreeableness and conscientiousness are the archetypes comprising the "Big-Five" personality schema.

Krishnan and Atkin (2014) found, for instance, that the "Big-Five" typology is a useful tool to understand communication behaviors on social network service sites. Their results suggest that extraversion is a significant predictor of active social network service use, but openness is not. Extraverts tend to seek more information for entertainment purposes. This tendency to seek information to entertain makes them eagerly search for social tools to communicate with others.

Furthermore, extraversion can be a critical factor in research on social network services and privacy concerns. A study addressing social network service use and privacy concerns in Taiwan found that extraverts show less privacy concern--while disclosing their private information--when they use social network services (Kuo & Tang, 2013). Extraversion tends to reduce their sensitivity to perceive risk factors (Gajdosova et al., 2009; Spirling & Persaud, 2003). When displaying reduced perception of privacy concern--a type of risk perception--, extraverts seem to make people more open to social network service use.

The present study is going to consider extraversion as a moderator between privacy concern and attitude toward social network service use. Based on past theory and research, extraversion is expected to decrease privacy concern, which is inversely related to social network service use. Increased privacy concern does not seem to severely influence social network service use among extraverts.

2.2 Government Online Surveillance and Privacy Concern

2.2.1 Government Online Surveillance

According to Fernback (2012), "surveillance is the practice of rigorous monitoring, sometimes openly and sometimes illicitly, of human data for the purposes of control" (p.12). The information society, whose name connotes utopian notions of information technology development, has been transformed into a surveillance society (Andrejevic & Burdon, 2014). Surveillance capabilities have been increased by the aggregation of information and technology development (Andrejevic & Burdon, 2014; Woo, 2006). These emerging capabilities have been enabled by the development of new media technology, which enhances the monitoring of Internet users' personal information and their online behaviors (Andrejevic & Burdon, 2014; Mou et al., 2013; Mou et al., 2014).

Dystopian scholars such as Foucault (1977) and Lyon (1997) anticipated that the development of information and communication technology enhances government control over their citizenry and facilitate ongoing surveillance. Online government surveillance systems have been enhanced by the development of numerous new media technologies, such as data analysis of online communication records, remote system controlling software, and spyware installation techniques (Brown & Korff, 2009). These surveillance technologies enable government agencies to set target civilians through the algorithms of online surveillance technologies (Brown & Korff, 2004). While law enforcement agencies have constantly maintained that their online surveillance programs are used to identify suspicions regarding probable terrorists since the 9/11 Al Qaeda terror attacks in 2001, the surveillance technologies gather data from the entire universe of Internet users (Brown & Korff, 2004). The intelligence agencies as well as government investigators have been expanding the possible surveillance targets by generating propaganda regarding the need to prevent possible threats to public security (Brown & Korff, 2009).

The online information regarding personal identities, which are targeted by government surveillance agencies, has drastically increased since online social network services became popular tools to share users' personal texts and files (Hodgkison, 2010). The new media technology developments make it possible for bureaucratized government powers to monitor the users' data accumulated in the servers of social network services, which includes users' personal video clips, web site IDs, and social network use histories (Fernback, 2012). In addition, government agencies can take advantage of social adverting systems managed by social network service providers, who are tempted to make profits by commodifying the aggregated data collected through the user activities on their services (Eldon, 2010). Government investigators have the ability to aggregate personal information collected from social network services into

their databases, which are reanalyzed to screen SNS users for the agencies' convenience without user consent on the information use (Fuchs, 2010).

Governments' unconditional surveillance without consent among people is one of the most critical privacy threats, because people do not have any sense that personal online messages may be monitored by governmental authorities (Nissenbaum, 2011). Government surveillance of online service provider servers represents an obstacle for users to feel secure from privacy threats (Child, Haridakis, & Pertronio, 2012). Exposure to news stories on government surveillance increases the netizens' concerns about their online privacy (Whitley, 2013). Whitley (2013) explains that privacy protection actions and surveillance perceptions can thus be strengthened by increases in mass media coverage of the issues.

2.2.2 Privacy Concern

In the user created content environment, privacy threats are expected to increase extensively (Stančin & Tomažič, 2009). According to Westin (1967), privacy can be defined as "the claim of individuals, groups, or institutions to determine for themselves when, how, and to what extent information about them is communicated to others" (p.6). Since the early days of new media development, in which the right of online privacy protection was discussed as the most perilous obstacle to the development of a new media society (Rice & Katz, 2008), people have increased their voices more on privacy concerns and privacy protection actions (Litt & Hargittai, 2014Spilliotopoulos & Oakley, 2013).

There are various types of online privacy threats, such as employer monitoring, fraud in online merchant services, and misuse of private online contents (Stančin & Tomažič, 2009). Usually, people tend to feel more threats to their privacy when they perceive that the online services fail to guarantee their online anonymity (Jiang, Heng, & Choi, 2015). A national survey

showed that people are ambivalent about perceptions of privacy threats from corporate and governmental institutions (Turow & Hennessy, 2007). People think that those institutions endeavor to diminish privacy threats, even when they disclose their private information for commercial purposes.

Social network services have been confronted with critiques of numerous privacy threats (Fernback, 2012). Heavier social network users, who feel privacy concern more acutely, exhibit negative attitudes toward the adoption of newly developed functions on social network pages (Lin & Kim, 2016). Past work found that privacy concern is a negative predictor of SNS use frequency (Cha, 2010). Privacy concern tends to control the relationship between self-presentation motivation and over-use of SNS's (Chen & Kim, 2013). Privacy concern decreases the negative correlation between relationship-building and overuse of SNS's (Chen & Kim, 2013). In a comparison study with Facebook and MySpace, Dwyer, Hiltz, and Passerrini (2012) found that the users of both SNS services offer positive scores with regard to privacy concerns, and that there is no significant difference in privacy concern between the users of the two services. Privacy concern is positively related to refraining from disclosure of personal information online (Mesch, 2012). SNS users tend to not reveal their personal names on the websites when they have privacy concerns. Considering that SNS users reveal their personal information to their friends, privacy concerns can dampen their intentions of using SNS services. Facebook users tend to modify the privacy settings of their Facebook accounts, particularly when they experience privacy invasions (Debatin, Lovejoy, Horn, & Hughes. 2009).

2.2.3 SNS Switching and Privacy Concern

Traditional privacy protection systems have not been successful in guaranteeing online privacy completely (Nissenbaum, 2011). In a new media environment, one's control over flows

of their personal information (Westin, 1967) is barely possible. Larsson and his colleagues (2012) explain that most current privacy protection functions in websites tend to be no more than rhetoric. Media developers, policy makers, and users need to consider each type of online service and appropriate information flows in each context (Nissenbaum, 2011).

Actions to reduce privacy concerns are critical in the expanding mobile media environment--including social network services--which are enhanced by smart phone use (Larsson, Svensson, & Kaminsky, 2012). Privacy concern negatively influences self-disclosure and increases misrepresentation, which entails providing false information (Jiang, Heng, & Choi, 2015). The relevant factors influencing privacy perception are suggested by Mekovec (2010): user factors, situation (type of online service), user-website relation, website factors, and government factors. User-website relationships and legislative-government protections are negative predictors of privacy concern (Mekovec & Vrcek, 2011). In addition, other previous research found some significant variables influencing privacy concern management. People are more likely to take actions to reduce privacy concerns when they have more privacy protection knowledge (Park, Cambell, & Kwak, 2012). When people do not have trust in the media environment in the political realm, they tend to devote greater effort to maintain privacy management actions (Mou et al., 2014).

As active users, netizens can undertake privacy protection actions such as switching from services with higher levels of privacy threats to newly developed services with better privacy protection functions (Zhang et al., 2012). New media technology developers have initiated the advance of online privacy protection tools and strategies (Fernback, 2012), although individual Internet users do not seem to adopt the effective tools to protect their privacy (Whitley, 2013). Online service users can realize effective privacy management actions, when media developers

devise alternative online services equipped with more secured privacy protection functions (Fernback, 2012). As a power struggle is unfolding between surveillance enhancement groups and counter-surveillance groups, the progress of online services with more advanced privacy protection methods--developed by counter-surveillance groups--is expected to enhance users' power to switch to alternative services requiring less effort in privacy management (Fernback, 2012). Service switching has been identified as an effective strategy for new media adopters of mobile phone and web blogs to avoid privacy threat, when they experience declines in attitudinal support toward the Internet services which they had used (Hu & Hwang, 2006; Zhang et al., 2012).

2.2.4 Privacy Management Efficacy and Privacy Concern

The concept of privacy management efficacy stemmed from Bandura's self-efficacy theory (1986). Bandura defined self-efficacy as "*people's judgments of their capabilities to organize and execute courses of action required to attain designated types of performances*" (p. 391). When people have some skills to modify online privacy settings, they tend to be more successful in protecting their privacy (La Rose & Rifon, 2007). Privacy management efficacy--which enables users to take actions to protect privacy--helps the Internet users to relieve their privacy concerns (Acquisiti & Gross, 2006)

Strong negative relations were found between privacy perception and online efficacy (Mekovec & Vrcek, 2011). Digital efficacy variables--such as familiarity with technical aspects of the Internet, awareness of common institutional practice, and understanding of privacy policy--are significant predictors of privacy management behaviors (Park, 2013). Users tend to undertake some actions to protect their privacy when they have a higher level of efficacy relevant to their privacy protection. Privacy protection knowledge and privacy protection actions

are highly correlated (Park, Cambell, & Kwak, 2012). People who feel casual about using the Internet tend to participate more in Internet communities--and online interaction--with other Internet users. Even in Internet censored environments like China, people with higher levels of online efficacy tend to be active in participating in online forums (Mou, Atkin, Fu, Lin, & Lau, 2012; Mou, Atkin, & Fu, 2011).

Chen and Chen (2015) explain that the previous research on the relations between privacy management efficacy and privacy protections actions yield ambivalent results. Social network service users valuing privacy management efficacy tend to disclose their identities more as well as to keep their personal information more protected (Chen & Chen, 2015). However, the combined results on SNS use implies that people with privacy management efficacy communicate more actively on their social network service pages, because they feel confident that they can protect their personal information from privacy threats. SNS users with more privacy management efficacy reduce the privacy invasion risk by themselves, and they know how to cope up with unexpected events of privacy threats (La Rose & Rifon, 2007). The confidence in privacy protection seems to enable SNS users to be more active in using social network services as much as they do not avoid disclosing their personal information when communicating on SNSs.

In this research, privacy concern is expected to mediate the relationship between government online surveillance and switching intention of social network service use. People who are exposed to government online surveillance news can worry about the possibility of being secretly investigated by government agents who are monitoring people's social network use. In addition, privacy management efficacy is considered as a moderator intervening in relations between privacy concern and other variables, which are include exposure to

government online surveillance and social network service attitudes. People with valuing privacy management efficacy are expected to respond actively to privacy concerns caused by government online surveillance. They can take assertive actions, such as switching to social network services with more advanced privacy protection system, to alleviate privacy threat more actively, while people with less privacy management efficacy should be less likely to take decisive actions to reduce privacy invasion risk.

2.3 Uses and Gratifications (U&G), and Motivations to Use SNS

2.3.1 Uses and Gratification Theory

Uses and gratifications (U & G) theory provides a research framework for considering individuals' internal motivational dynamics when choosing a media channel and consuming contents of mass media (Katz et al., 1974; McQuail, 1994). The early U & G research focus on the categorization of media use motivation, leaned heavily on descriptive research and emphasized quantitative methodology, did not suggest a coherent theoretical framework to explain the media selection process (Berelson, Lazarsfeld, & McPhee, 1954; Katz & Lazarsfeld, 1955; Ruggiero, 2000). However, the methodology development of U&G theory made it possible for the theory to attain theoretical coherence by considering multivariate interactions and comparing relevant research concepts suggested by previous research (Eastman, 1979; Rubin, 1983).

The theory development in uses and gratifications theory contributes to the redefinition of relations between media and audiences. First off, the theory explains that audiences are active in choosing media channels and content (e.g., Raacke& Bonds-Raacke, 2008; Rubin, 1994). Audience research suggests that individual audiences have differences in media consumption behaviors, and that their audiences tend to use media in different times (Levy & Windahl, 1984;

Sundar & Limperos, 2013). Second, the active audience paradigm implies that users' media dependency is caused by their intentions and behaviors to consume media (DeFleur & Ball-Rokeach, 1982). The dependency of audiences on media increases when audiences clearly recognize their purposes for media use, which increases user gratification (Ball-Rokeach, 1985). This paradigm shift in U&G research from passive audience to active audience conceptions suggests that media influence needs to be explained by exploring interactions among media, the social environment, and audiences (DeFleur & Ball-Rokeach, 1982).

Uses and gratification theory is not free from criticism. First, its consistency as a theory has not been clear, because normalized processes governing the operationalization of research concepts are rarely agreed upon among scholars (Stanford, 1983). Although researchers agree that they should explore audiences' needs and motivation to choose media, they have not reached a theoretical consensus on universal measurements of motivations, needs, and behaviors. Second, scholars on the side of strong media effects argue that audience autonomy in media selection seems to be overstated (White, 1994). Third, the focus on individual roles in media selection cannot be generalized in societies with a non-Western culture, such as Japan (Cooper, 1997). In addition, U&G theory is too individualistic to explore the influence of media factors and social factors governing media use decision (Elliott, 1974). Also, the challenge to individualistic approach of exploring media use motivations might raise questions on the critical preposition of the theory, which encompasses an audience (Severin & Tankard, 1997). Finally, self-report survey methodology from previous U&G research is not suitable for explaining behavioral change, which could be observed in experimental research settings (Rosentein & Grant, 1997).

2.3.2 Motivations to Use Online Social Networks

Uses and gratifications theory has provided a useful conceptual framework for explaining audience motivations to use new media. Importantly, audiences use new media in order to fulfill needs of interactivity (William, Rice, & Rogers, 1998). Interactivity is a critical predictor of entertainment gratification, to gather information, and to be connected with other users (Ha & James, 1998). In addition, the Internet environment increases users' power to choose media channels and contents (Abrahamson, 1998). While traditional mass media satisfy information needs and entertainment needs, online media systems are more likely to fulfill needs of interpersonal interaction among users (Ruggiero, 2000).

In addition, recent U&G research has identified several motivations for using social network services. First off, social network service use, which is operationalized as uses of interactive features, tends to be determined by entertainment motivation (Hunt, Atkin, & Krishnan, 2012). While there seems to be no direct relation between interpersonal interaction motivation and SNS use, social network services enables their users to increase social network coverage by enhancing interpersonal interactions. In addition, Ha and her colleagues (2014) found that entertainment needs and mobile convenience are the great predictors of attitude toward SNS use. In South Korea, Facebook users score higher in hedonic gratification, while uses of online instant messenger tend to be determined by motivation of convenience (Ha et al., 2014).

Furthermore, Cha's (2010) research found that interpersonal utility seems to be a predictor of both of SNS frequency and SNS use amount, although the research did not find any relationship between the dependent variables and other research variables, which include innovativeness, entertainment, learning, boredom relief, convenience, and perception of

usefulness. In the research on exploring motivations to use instant messenger service and email (Lo & Leung, 2008), gratification goals are divided into two groups. One of them is gratification-opportunities, and the other is gratifications-obtained. Gratification-opportunities variables include multi-functionality and synchronicity. Gratifications-obtained variables include relationship maintenance, sociability, and peer expression.

Drawing from the findings of the previous research in the realm of uses and gratification theory, this research considers three primary motivations, --interaction motivation, convenience motivation and entertainment motivation--in the context of online social network service (SNS) use. Formal hypotheses and research questions are explored in the chapter to follow.

Chapter 3: Hypotheses and Research Questions

The research concepts, encompass social network service use, government online surveillance, and privacy concern, can be organized in a research model. Based on the previously reviewed body of research and theory, we assume that users feel more privacy concern when they perceive that government agencies conduct online surveillance on personal information uploaded on social network service sites (Child et al., 2012; Nissenbaum, 2011). Although it is hardly likely for common users to sense the government's covert intervention in SNS communication, occasional consumption of government online surveillance reports could logically increase SNS users' privacy concern (Whitley, 2013). In addition, a psychological construct–attitude toward social network service--is considered as a predictor of SNS use behaviors (Fishbein & Ajzen, 1975; Mulero et al., 2012). It is expected that increased privacy concern can erode user affinity for social network services. Last, intention to switch to an alternative SNS can be decided by SNS users, who experience government online surveillance and privacy concern increases (Hu & Hwang, 2006; Whitley, 2013). When privacy concerns prompt users to express lower affinity toward social media, people are expected to intend to open accounts in more secured social network services (Zhang et al., 2012).

Based on the literature review on government online surveillance, privacy concern and switching intention, it is assumed that privacy concern--which is caused by exposure to news of government surveillance--can increase one's intention to switch SNS services. Based on this assumption, the following hypotheses can be posited to explore the influence of government online surveillance on people's switching intention of social network services

H1) Exposure to government online surveillance news is positively related to privacy concern regarding SNS use

H2) Privacy concern regarding SNS use is inversely related to attitude toward SNS use.

H3) Privacy concern regarding SNS is positively related to SNS switching intention.

H4) Attitude toward SNS use is negatively related to SNS switching intention.

In the research model, motivation variables—i.e., interaction, convenience, and entertainment motivations--are also included in the research model. The motivation variables are likely to positively impact social network service use (Cha, 2010; Ha et al., 2014; Hunt et al., 2012). In addition, extraversion is considered as moderator of relation between privacy concern and attitude toward SNSs. Extraverts tend have low sensitivity to privacy concern (Kuo & Tang, 2013; Krishnan & Atkin, 2014), which is expected to have negative influence on SNS attitude. Last, privacy management efficacy of SNS users seems to intervene in relations between privacy concern and other variables, which include attitude toward SNS attitude and consumption of government online surveillance new story (Mekovec & Vrcek, 2011). Privacy management efficacy can make SNS users more active in SNS communication, because people scoring high in efficacy feel confident in coping with privacy threats (Chen & Chen, 2015).

With the U&G literature explains that people use social network services to fulfill their gratifications of entertainment, interaction, and convenience, this research assumes that there are positive relations between the motivation variables and SNS attitude. The following hypotheses and research questions can be posited to explore influence of motivation variables on switching intention of social network services

H5) Entertainment motivation is positively related to attitude toward SNS use

H6) Interaction motivation is positively related to attitude toward SNS use

H7) Convenience motivation is positively related to attitude toward SNS use

RQ1) How do motivation variables influence privacy concern?

RQ2) How do motivation variables influence SNS switching intention?

Lastly, the main research variables--government online surveillance, privacy concern, attitude toward social network use, and SNS switching intention--tend to be influenced by user factors such as extraversion and privacy management efficacy. The literature on SNS user difference in extraversion and privacy management efficacy implies that the relations between the research variables can moderated by levels of extraversion and privacy management efficacy (see Figure 1).

RQ3) Does extraversion moderate the relationship between privacy concern and attitude toward SNS use?

RQ4) Does privacy management efficacy moderate the relationship between privacy concern and exposure to government online surveillance?

RQ5) Does privacy management efficacy moderate relationship between privacy concern and SNS switching intention?

Chapter 4: Methodology

4.1 Sample

The sample of this study was collected through the Survey Monkey data collection system. From March 1, 2016 to March 3, 2016, 525 people–recruited from the respondent pool of the Banana Lab in Seoul, Korea--participated in the survey. Banana Lab is the Korean affiliate of Survey Monkey. The participants were Korean social media users who were at least 18-years-old and live in South Korea. Two filter questions were included in the survey questionnaire to screen-out unqualified respondents: "The capital of Korea is Busan"; "I have a resident registration card issued by the Korean Government." After screening out unqualified respondents, the survey rendered responses from 402 people, which provided study data. An online calculator, which is on 'danielsoper.com', was used to determine the necessary sample size for the proposed structural equation model; the number of observed (9), the latent variables in the model (2), the anticipated effect size of .1, the probability of .01, and the desired statistical power levels of .80. The calculator returned the minimum sample size of 364. Thus, 402 respondents of this study is workable for hypotheses testing in structural equation model.

The timing of data collection was designed to coincide with prominent public discussions concerning the Korean government's surveillance practices. In particular, 38 lawmakers from the opposition parties held a parliamentary filibuster over 192 hours to stop legislation addressing the 'Anti-terrorism Act' (BBC, 2016). The law is known to allow the National Intelligence Service to investigate individuals' social media use records extensively (Kim, 2016). Since the filibuster started on February 23, 2016, people's interest in the risk of government surveillance on communicating via smart phones, including SNS use, was keen during the period of data

collection (BBC, 2016). The parliamentary filibuster increased Korean people's attention on issue of government online surveillance (Kim, 2016).

All told, 207 participants (51.5%) of the sample were males, and 195 (48.5%) were females. The participants were from 19 - 59 years old (M = 40. 16, SD = 11.45). The average number of working hours of the participants is 36. 62 hours per week (SD = 20.33), and the participants' family income is KRW 5,382,100 (SD = 6,560,510), which is approximately USD $4,717.00. Some 219 (54.5%) of the participants answered that they are married, 176 (43.8%) are single and 7 (1.7 %) of them marked 'Other' for marital status. The average respondent household size is 3.51 persons (SD = 1.12).

More than half of the respondents said that they have no political affiliation (227, or 56.5%), 73 people (18.2%) identified as Saenuri-Dang (a conservative party), 61 (15.2%) were in the The Democrat Party (a liberal party), 23 respondents (5.7%) for the more moderate People's Party, 13 (3.2%) hailed from the far left Justice Party, and a handful (4, or 1.00 %) hailed from other parties. The present sample thus reflects a useful cross-section of the diversity of political orientations in South Korea.

In addition, the average reported SNS log-in time per day was 7.19 times (SD = 9.88), and participants have 98.56 (SD=163.45) SNS friends, on average. When asked about their favorite SNS service, respondents answered as follows; 132 (32.8 %) of KakaoStory, 181 (45.0%) of Facebook, 20 (5.0%) of Twitter, 33 (8.2%) of Naver Band, 3 (.07 %) of Cyworld and 33 (8.2 %) of KakaoGroup.

4.2 Measurement

Measurements of each study variable will be adopted from previously used research scales as well as previous research theoretical frameworks, and will be modified to include recent online surveillance issues in South Korea.

Exposure to Government Online Surveillance News

Exposure to government surveillance news (see Table 1a) was measured with five questions, measured with a five- point scale, ranging from "never" to "very often" (Nagler & Hornik, 2012). A principal component analysis was conducted to confirm the scale. Five items were tested and they were grouped in one single factor with a Cronbach's Alpha of .87. The Factor loading values of study items are as follow; 1. "I hear news stories on government online surveillance from television (.83; M = 3.13, SD = 1.27);" 2. "I hear news stories on government online surveillance from radio" (.81; M = 2.34, SD = 1.36); 3. "I hear news stories on government online surveillance from newspapers" (.86; M = 2.59, SD = 2.40); 4. "I hear news stories on government online surveillance from magazines" (.82; M = 2.13, SD = 1.33); 5. "I hear news stories on government online surveillance from the Internet" (.73; M = 3.50, SD = 1.26).

Privacy Concerns Regarding Social Network Use

The questions regarding privacy concerns on SNS use probe how secure respondents feel when logged on social network services (Angst & Agarwal, 2009; Wolfinbarger & Gilly, 2003). A principal component analysis was conducted to confirm the scale. The scale was divided into two factors in the preliminary principal component analysis. Each of the groups was tested with principal component tests to confirm the structure of each factor. The factor consists of questions on respondent privacy concerns regarding SNS use, such as personal information posting, SNS

messenger use and personal information inputs, while components of the second factor impinge upon one's effort to increase use of SNS providers to protect their personal information.

First, seven questions, labeled as the "*Privacy Concern on SNS Use scale*" (see Table 1b), were tested to confirm the factor structure. They were grouped in one single factor, with a Cronbach's Alpha of .90. The Factor loading values of each of these items are arrayed as follows; 1. "I feel insecure when posting personal information on my SNS pages" (.72; *M* = 4.05, *SD* = .83); 2. "I feel insecure when posting personal information on my friend's SNS pages" (.80; *M* = 3.86, *SD* = .84); 3." I feel insecure when texting my personal information on SNS messenger service" (.80; *M* = 3.60, *SD* = .95); 4. "It usually bothers me when social network service pages ask me for personal information" (.83; *M* = 4.01, *SD* = .88); 5. "When social network service pages ask me for personal information, I sometimes think twice before providing it" (.81; *M* = 3.94, *SD* = .85); 6. "It bothers me to give personal information to social network services" (.75; *M* = 4.04, *SD* = .89); 7. "I'm concerned that social network services are collecting too much personal information about me" (.81; *M* = 4.09, *SD* = .85).

Second, six questions were grouped as the "*Privacy Concern on SNS Providers scale*" (see Table 1c), and the scale was tested with a principal component analysis to be confirmed. The six questions were grouped into one factor with a Cronbach's alpha of .94. The Factor loading values of each item follow; 8. "Social network service providers should not use personal information for any purpose unless it has been authorized by the individuals who provided the information" (.84; *M* = 4.66, *SD* = .70); 9. "Social network service providers should never sell the personal information in their computer databases" (.86; *M* = 4.73, *SD* = .65); 10. "Social network services should never share personal information with other SNS providers unless it has been authorized by the users who provided the information" (.90; *M* = 4.68, *SD* = .68); 11.

"Social network service providers should devote more time and effort to preventing unauthorized access to personal information" (.91; *M* = 4.62, *SD* = .70); 12. "Computer databases that contain personal information should be protected from unauthorized access, no matter how much it costs" (.86; *M* = 4.58, *SD* = .72); 13. "Social network service providers should take more steps to make sure that unauthorized people cannot access personal information in their servers" (.86; *M* = 4.60, *SD* = .70).

Attitude toward Social Network Services

Attitude toward social network service use (see Table 1d) has seven questions measured with a five-point scale, ranging from "strongly disagree" to "strongly agree" (Taylor et al., 2011). A principal component analysis was conducted to confirm the scale. Although one single factor was produced with the seven items of the scales with Cronbach's alpha as .83, one of the items -- the fourth component was dropped from the following analyses because a low factor loading. The factor loading values of each of the items are as follow; 1. "I like the function of status posting on social network service sites" (.80; *M* = 3.54, *SD* = .80); 2. "I like the function of status notification of other users on social network service sites" (.75; *M* = 3.70, *SD* = .80); 3. "I like the function of video clip uploading on social network service sites" (.74; *M* = 3.58, *SD* = .83); 4. "I like the function of customized advertisements on my social network pages" (.48; *M* = 2.90, *SD* = .81); 5. "I like the function of picture uploading on social network service sites" (.76; *M* = 3.79, *SD* = .81); 6. "I like the instant service messenger service on my social network pages" (.66; *M* = 3.82, *SD* = .85); 7. "I like the communication styles of social network services" (.76; *M* = 3.63, *SD* = .79).

Social Network Service Switching Intention

SNS switching intention (see Table 1e) was measured with three questions with five-point scale from "strongly disagree" to "strongly agree" (Kim et al., 2006). A principal component analysis was conducted to confirm the scale. One single factor was produced in the analysis, with a Cronbach's alpha of .93. The factor loading values of each items are follow; 1. "I am considering about switching to another social network service" (.83; *M* = 2.85, *SD* = .87); 2. "I am considering opening an account in another social network service" (.83; *M* = 2.76, *SD* = 1.00); 3. "The likelihood of my switching to another network service is high" (.90; *M* = 2.67, *SD* = .95); 4. "The likelihood of my opening an account in another social network service" (.91; *M* = 2.67, *SD* = .97); 5. "I am determined to switch to another social network service" (.86; *M* = 2.30, *SD* = 1.01); 6. "I am determined to open an account in another social network service" (.87; *M* = 2.32, *SD* = 1.00)

Entertainment Motivation

Entertainment motivation (see Table 1f) is measured with four five-point questions (Ha et al., 2015; Nambisan & Baron, 2007), ranging from "strongly disagree" to "strongly agree". A principal component analysis was conducted to confirm the scale. One single factor was produced by the test, yielding a Cronbach's Alpha of .74. One item with a low value, the first component, was dropped from the scale. The factor loading values of each items are seen as follows; 1. "I would like to have some enjoyable and relaxing time" (.50; *M* = 4.40, *SD* = .67); 2. "I would like feeling fun" (.85; *M* = 3.97, *SD* = .71); 3. "I would like feeling pleased" (.83; *M* = 4.22, *SD* = .65); 4. "I would like to have something to entertain my mind" (.77; *M* = 3.83, *SD* = .81)

Interaction Motivation

Interaction motivation (see Fable 1g) has four questions arrayed along a five-point scale (Ha et al., 2015; Ko et al., 2005), ranging from "strongly disagree" to "strongly agree". A principal component analysis was conducted to confirm the scale. One single factor was produced with Cronbach's alpha of .76. The factor loading values of each items are seen as follows; 1. "I would like to see what other people said" (.83; *M* = 3.55, *SD* = .82); 2."I would like to see what is going on" (.77; *M* = 3.82, *SD* = .77); 3. "I would like to express myself freely" (.72; *M* = 3.73, *SD* = .87); 4. "I would like to meet someone with the same interests as me" (.74; *M* = 3.93, *SD* = .79)

Convenience Motivation

Convenience motivation (see Table 1h) is measured with four five-point scale questions, with response categories ranging from "strongly disagree" to "strongly agree" (Ha et al., 2015; Leung & Wei, 2000; Ko et al. 2005). A principal component analysis was conducted to confirm the scale. In the analysis process, a single factor, was produced with a Cronbach's alpha of .76. The factor loading values of each items are as follow; 1. "I would like to immediately access to others anywhere and anytime" (.70; *M* = 3.78, *SD* = .84); 2. "I would like to gather information with less effort" (.79; *M* = 3.96, *SD* = .75); 3. "I would like to feel convenient when doing something" (.79; *M* = 4.18, *SD* = .68); 4. "I would like to gather information without delay" (.81; *M* = 4.17, *SD* = .72).

Extraversion

The extraversion personality trait (see Table 1i) is measured with five questions arrayed along a five-point scale (John, Naumann, & Soto, 2008), ranging from "strongly disagree" to "strongly agree". A principal component analysis was conducted to confirm the scale. It was

confirmed as one solid scale, with a Cronbach's alpha of .83. The factor loading values of each component were as follow; 1. "I am talkative" (.700; *M* = 2.99, *SD* = .97); 2. "I am full of energy" (.84; *M* = 3.31, *SD* = .85); 3. "I generate a lot of enthusiasm" (.79; *M* = 3.42, *SD* = .86); 4. "I have an assertive personality" (.71; *M* = 3.41, *SD* = .91); 5. "I am outgoing, sociable" (.82; *M* = 3.00, *SD* = 1.00).

Privacy Management Efficacy

Privacy management efficacy (see Table 1j) has five questions measured on a five-point scale, ranging from "strongly disagree" (1) to "strongly agree" (5) (Torkzadeh & van Dyke, 2001). A principal component analysis was conducted to confirm the scale. One single factor was produced by the analysis with Cronbach's alpha of .90. The factor loading values of each items are seen as follows; 1. "I feel confident exchanging files through Internet services" (.67; *M* = 3.89, *SD* = .96); 2. "I feel confident making changes in my computer setting" (.77; *M* = 3.09, *SD* = 1.08); 3. "I feel confident recovering a file I accidentally deleted" (.77; *M* = 2.66, *SD* = 1.08); 4. "I feel confident editing files" (.81; *M* = 3.15, *SD* = 1.05); 5. "I feel confident finding information on the Internet" (.71; *M* = 3.91, *SD* = .87); 6. "I feel confident in blocking spam or unwanted content on SNSs" (.74; *M* = 3.40, *SD* = .94); 7. "I feel confident in adjusting privacy settings on SNSs" (.83; *M* = 3.35, *SD* = 1.00); 8. "I feel confident in managing personal profiles on SNSs (.77; *M* = 3.29, *SD* = .89).

After the factor analyses, components of each variable were transformed into scales by calculating mean values of items. The scale of Exposure to Government Online Surveillance News has the mean valued between "disagree" and "moderate (*M* = 2.27, *SD* = 1.07). The mean value of Privacy Concern on SNS Use scale was located between "agree" and "moderate" (*M* = 3.39, *SD* = .68). Interestingly, the mean value of Privacy Concern on SNS Providers scale is

pretty high, around “strongly agree” (*M* = 4.47, *SD* = .60), while the average of Attitude toward SNS scale shows that participants do not have negative attitudes toward SNS (*M* = 3.68, *SD* = .61). The mean value of the SNS Switching Intention scale is located between “disagree” and “moderate” (*M* = 2.59, *SD* = .83). The mean values of motivation scales show that the participants are somewhat high in their SNS use motivations, such as Entertainment Motivation (*M* = 4.01, *SD* = .61), Interaction Motivation (*M* = 3.76, *SD* = .62), and Convenience Motivation (*M* = 4.02, *SD* = .57). Last, the mean value of the Extraversion scale is located between “moderate” and “agree”, and the mean of items in Privacy Management Efficacy scale was 3.35 (*SD* = .75).

4.3 Analysis Plan

The analysis plan of this study consists of two sections: preliminary multiple regression analysis and structural equations modelling. In the first phase, preliminary multiple regression analyses via SPSS v.20 will be conducted in order to answer to the research questions of this study. The multiple regression models will be produced to examine the following influences; 1) the influence of motivation variables on SNS switching intention and privacy concern, 2) the moderation effect of extraversion on relationship between privacy concern and SNS attitude, and 3) the moderation effect on privacy management efficacy. The moderation effects of extraversion and privacy management concern will be tested by producing interaction terms, which are ‘extraversion*privacy concern’, ‘privacy management efficacy* exposure to government online surveillance news’, and ‘privacy management efficacy*privacy concern’.

In the second part of the analysis plan, structural equation models will be created by using AMOS v.18. In the first model, the seven research hypotheses will be tested. In addition, the other models will consider the findings from the preliminary multiple regression models. The

second model will be a revised model, which include direct effects of motivation variables on privacy concern and SNS switching intention. The third model, which is a simplified model, will show the significant relations among variables; it will be used to consider the moderation effects of extraversion and privacy management efficacy. More structural equation models will be added to show the moderators' impact on the relations between the research variables.

Chapter 5: Results

5.1 Correlations and Multicollinearity Test

Pearson correlation coefficients between main research variables show that many of the correlations are sufficiently robust to stand for further analyses, such as multiple regression analysis and structural equation models, which are aimed to explore mediation effects (see Table 2). First, exposure to government online surveillance news is significantly correlated with privacy concern on SNS use ($r = .20$, $p < .01$), attitude toward SNS ($r = .25$, $p < .01$), SNS switching intention ($r = .27$, $p < .01$), entertainment motivation ($r = .15$, $p < .01$), and interaction motivation ($r = .20$, $p < .01$), although it was not significantly correlated with privacy concern regarding SNS providers ($r = -.07$, $p = .177$). Second, privacy concern for SNS use is significantly related to exposure to government online surveillance news ($r = .20$, $p < .01$), privacy concern on SNS providers ($r = .44$, $p < .01$), attitude toward SNS ($r = .13$, $p < .01$), SNS switching intention ($r = .26$, $p < .01$), entertainment motivation ($r = .13$, $p < .01$), interaction motivation ($r = .22$, $p < .01$), and convenience motivation ($r = .22$, $p < .05$).

Third, privacy concern regarding SNS providers is positively correlated with privacy concern on SNS use ($r = .44$, $p < .01$), attitude toward SNS ($r = .20$, $p < .01$), entertainment motivation ($r = .18$, $p < .01$), interaction motivation ($r = .18$, $p < .01$), and convenience motivation ($r = .22$, $p < .01$), while it is not significantly related to other variables, such as exposure to government online surveillance news ($r = -.07$, $p < .177$) and SNS switching intention ($r = -.06$, $p < .234$). Fourth, attitude toward SNS's is positively correlated with exposure to government online surveillance news ($r = .25$, $p < .01$), privacy concern on SNS use ($r = .13$, $p < .01$), privacy concern regarding SNS providers ($r = .20$, $p < .01$), SNS switching

intention (r = .18, p < .05), entertainment motivation (r = .36, p < .01), interaction motivation (r = .46, p < .01), and convenience motivation (r = .38, p < .01). Contrary to study expectations, attitude toward SNS is positively related to privacy concern. Also, the correlations between attitude toward SNS and SNS switching intention are positive, contrary to expectations. Finally, SNS switching intention is significantly correlated with exposure to government surveillance news (r = .27, p < .01), privacy concern on SNS use (r = .26, p < .01), attitude toward SNS (r = .18, p < .01), entertainment motivation (r = .15, p < .01), and interaction motivation (r = .30, p < .01), while it is not significantly correlated with privacy concern on SNS providers (r = -.06, p = .234) and convenience motivation (r = .09, p < .067).

In addition, motivation variables are positively correlated with other variables. First, entertainment motivation is positively correlated with exposure to government surveillance news (r = .150, p < .01), privacy concern on SNS use (r = .13, p < .01), privacy concern on SNS providers (r = .18, p < .01), attitude toward SNS (r = .36, p < .01), SNS switching intention (r = .15, p < .01), interaction motivation (r = .48, p < .01), and convenience motivation (r = .41, p < .01). Second, interaction motivation is significantly correlated with exposure to government surveillance news (r = .28, p < .01), privacy concern about SNS use (r = .22, p < .01), privacy concern about SNS providers (r = .18, p < .01), attitude toward SNS (r = .46, p < .01), SNS switching intention (r = .30, p < .01), entertainment motivation (r = .48, p < .01), and convenience motivation (r = .55, p < .01). Last, convenience motivation is positively correlated with exposure to government surveillance news (r = .11, p < .05), privacy concern about SNS use (r = .22, p < .01), privacy concern about SNS providers (r = .22, p < .01), attitude toward SNSs (r = .38, p < .01), entertainment motivation (r = .41, p < .01), and interaction motivation (r = .55, p < .01).

Furthermore, possible moderation variables--extraversion and privacy management efficacy--are significantly correlated with other research variables. First, extraversion is positively correlated with exposure to government surveillance news ($r = .27$, $p < .01$), privacy concern about SNS use ($r = .11$, $p < .05$), attitude toward SNS ($r = .29$, $p < .01$), SNS switching intention ($r = .21$, $p < .01$), entertainment motivation ($r = .46$, $p < .01$), interaction motivation ($r = .46$, $p < .01$), convenience motivation ($r = .32$, $p < .01$), and privacy management efficacy ($r = .27$, $p < .01$), while it is not significantly correlated with privacy concern on SNS providers ($r = .04$, $p = .45$). Second, privacy management efficacy is significantly correlated with exposure to government surveillance news ($r = .30$, $p < .01$), attitude toward SNS ($r = .31$, $p < .01$), SNS switching intention ($r = .24$, $p < .01$), entertainment motivation ($r = .18$, $p < .01$), interaction motivation ($r = .27$, $p < .01$), convenience motivation ($r = .32$, $p < .01$), and extraversion ($r = .27$, $p < .01$), while it is not significantly correlated with privacy concern variables such as privacy concern on SNS use ($r = .03$, $p = .501$) and privacy concern regarding SNS providers ($r = .01$, $p = .793$)

Finally, some descriptive variables—SNS log-in time, number of SNS friends, and age--are significantly correlated with some research variables (see Table 2). Family size is positively related to attitude toward SNS ($r = .10$, $p < .05$). Log-in time is significantly correlated with attitude toward SNS ($r = .23$, $p < .01$), interaction motivation ($r = .14$, $p < .01$), convenience motivation ($r = .15$, $p < .01$), extraversion ($r = .10$, $p < .05$), and privacy concern ($r = .10$, $p < .05$). Number of SNS friends is positively correlated with exposure to government online surveillance news ($r = .15$, $p < .01$), attitude toward SNS ($r = .17$, $p < .01$), interaction motivation ($r = .19$, $p < .01$), convenience motivation ($r = .11$, $p < .01$), extraversion ($r = .18$, $p < .01$) and privacy management efficacy ($r = .19$, $p < .01$). Last, age is negatively correlated with

entertainment motivation (r = -.20, p < .01), interaction motivation (r = -.14, p < .01), Extraversion (r = -.11, p < .05), and privacy management efficacy (r = -.25, p < .01).

Based on the Pearson correlation coefficients between variables in this study, multicollinearity does not seem to be a concern. Although the Pearson correlation coefficient between Interaction Motivation and Convenience Motivation is over .50, the variance inflation factor (VIF) suggests that there is no critical multicollinearity issue between these two variables (*VIF* = 1.000).

5.2 Preliminary Analyses with Multiple Regression Models

In the suggested research model (see Figure 1), the preliminary analyses is expected to identify significant relations among the factors to support and modify the research model, and to search moderation effects of the user variables such as Extraversion and Privacy Management Efficacy. Three multiple regression models--which employ Privacy Concern on SNS use, Attitude toward SNS use and SNS Switching Intention as the dependent variables for each model--are considered with Extraversion and Privacy Management Efficacy as possible moderators.

5.2.1 Multiple Regression Results for Privacy Concern on SNS Use

In the multiple regression model, SNS Friends, Exposure to Government Online Surveillance News, Entertainment Motivation, Interaction Motivation, Convenience Motivation, Extraversion, Privacy Management Efficacy are specified as independent variables (see Table 3); Exposure to Government Online Surveillance News (β = .20, p < .001) and Convenience Motivation (β = .18, p < .05) emerge as significant predictors of Privacy Concern with SNS Use (*adjusted* R^2 = .08, F = 5.93, p < .001).

Based on past work addressing online efficacy and privacy perception (Mekovec & Vrcek, 2011), the moderation effect of Privacy Management Efficacy on the relationship between Exposure to Government Online Surveillance News and Privacy Concern on SNS use was explored by producing an interaction term, labeled 'Exposure to Government Online Surveillance News* Privacy Management Efficacy'. The interaction term was produced by multiplying Exposure to Government Online Surveillance News and Privacy Management Efficacy after centering each variable. However, the interaction term reflecting 'Exposure to Government Online Surveillance News* Privacy Management Efficacy' (β = .09, p = .067) turned out not to have a significant impact on Privacy Concern on SNS use (*Adjusted* R^2 = .09, F = 5.64, p < .001).

5.2.2 Multiple Regression Results for Attitude toward SNS Use

The next multiple regression model specified Log-In Time, SNS Friends, Exposure to Government Online Surveillance News, Privacy Concern on SNS Use, Entertainment Motivation, Interaction Motivation, Convenience Motivation, Extraversion, and Privacy Management Efficacy as its independent variables. Here Log-In Time (β = .14, p < .001), Exposure to Government Online Surveillance News (β = .11, p < .05), Entertainment Motivation (β = .16, p < .01), Interaction Motivation (β = .22, p < .001), Convenience Motivation (β = .11, p < .05), and Privacy Management Efficacy (β = .13, p < .01) are significant predictors of Attitude toward SNS Use (*Adjusted* R^2 = .29, F = 18.56, p < .001).

In light of past work addressing extraversion and SNS use (Krishnan & Atkin, 2014), an interaction term--Privacy Concern with SNS Use*Extraversion--was produced to explore the moderation effect of Extraversion on the relation between Privacy Concern on SNS Use and Attitude toward SNS Use. When the interaction term was added in the regression model, Privacy

Concern on SNS Use*Extraversion (β = -.13, p < .01) was found to be a significant predictor (*Adjusted* R^2 = .30, F = 19.98, p < .001). In the multiple regression model with Privacy Concern on SNS Use*Extraversion, neither Privacy Concern with SNS Use nor Extraversion are significant predictors of attitude toward SNS use.

For the further exploration of the interaction term, Privacy Concern with SNS Use*Extraversion was considered in other multiple regression models with Attitude toward SNS Use as dependent variable. First, the multiple regression model has only Extraversion and Privacy Concern on SNS Use as independent variables. In the first model, Privacy Concern on SNS Use (β = .10, p < .05) and Extraversion (β = .28, p < .001) significantly predict Attitude toward SNS Use (*Adjusted* R^2 = .09, F = 20.25, p < .001). When Privacy Concern with SNS Use*Extraversion (β = -.14, p < .01) was added to the first model, the three variables--Privacy Concern on SNS Use (β = .10, p < .05), Extraversion (β = .30, p < .001) and the interaction term--significantly predict Attitude toward SNS Use (*Adjusted* R^2 = .11, F = 16.76, p < .001).

However, both of the models that consider relations between Privacy Concern with SNS Use and Attitude toward SNS Use by Extraversion level have poor adjusted R^2 values. First, the participants, who are above the mean value for Extraversion (N = 213), do not seem to show a significant relationship between Privacy Concern on SNS Use (β = .103, p < .05) and Attitude toward SNS Use (*Adjusted* R^2 = - .005, F = .037, p = .847). Second, in the regression model of Low Extraversion (N = 189), Privacy Concern with SNS Use (β = .21, p < .01) significantly predicts SNS Attitude toward SNS Use (*Adjusted* R^2 = .04, F = 8.78, p < .01). Nonetheless, Privacy Concern with SNS Use (β = .10, p = .125) does not significantly predict Attitude toward SNS Use (*Adjusted* R^2 = .24, F = 15.899, p < .001), when motivation variables--Entertainment

Motivation (β = .09, p = .184), Interaction Motivation (β = .30, p < .001), and Convenience Motivation (β = .19, p < .01) -- are added to the regression model.

To sum up, the regression models with Attitude toward SNS Use have good adjusted R^2 values when they include Interaction Motivation and Convenience Motivation as their independent variables. The regression models, which consider moderation effects of Extraversion, show that Extraversion moderates the relations between Privacy concern on SNS Use and Attitude toward SNS Use. When Interaction Motivation and Convenience Motivation are considered in the multiple regression models, Privacy Concern on SNS Use fails to significantly predict Attitude toward SNS Use in both regression models of High Extraversion and Low Extraversion (see Figure 4).

5.2.3 Multiple Regression Results for SNS Switching Intention

The prediction model for SNS Switching Intention utilized the following as independent variables; Exposure to Government Online Surveillance News, Privacy Concern on SNS Use, Entertainment Motivation, Interaction Motivation, Convenience Motivation, Attitude toward SNS Use and Privacy Management Efficacy(see Table 5), Significant predictors include Exposure to Government Surveillance News (β = .12, p < .05), Privacy Concern with SNS Use (β = .21, p < .001), Interaction Motivation (β = .24, p < .001), Convenience Motivation (β = -.18, p < .01) and Privacy Management Efficacy (β = .18, p < .001) (*Adjusted* R^2 =17, F = 12.85, p < .001).

The moderation effect of Privacy Management Efficacy on the relationship between Privacy Concern on SNS Use and SNS Switching Intention was also explored (Mekovec & Vrcek, 2011). Privacy Concern with SNS Use (β = .25, p < .001) is a significant predictor in the regression model (*Adjusted* R^2 = .12, F = 26.851, p < .001) without the interaction term.

However, factoring in the interaction term 'Exposure to Government Online Surveillance News* Privacy Management Efficacy' (β = .55; p < .01), Privacy Concern regarding SNS (β = -.28, p = .136) use does not significantly predict SNS Switching Intention in the model (*Adjusted* R^2 = .13, F = 21.103, p < .001).

After identifying the moderation effect of Privacy Management Efficacy on the relationship between Privacy Concern on SNS Use and SNS Switching Intention, two more regression models with SNS Switching Intention as dependent variable were conducted. First, in the model of High Privacy Management Efficacy, Exposure to Government Online Surveillance News (β = .20, p < .01), Privacy Concern regarding SNS Use (β = .21, p < .001) and, Interaction Motivation (β = .29, p < .001) are significant predictors of SNS Switching Intention (*Adjusted* R^2 = .23, F = 11.11, p < .001, N = 210). Second, the Low Privacy Management Efficacy model, which includes Privacy Concern with SNS Use (β = .175, p < .05), Interaction Motivation (β = .196, p < .05), and Convenience Motivation (β = -.274, p < .01) significantly predict SNS Switching Intention; the model has relatively weak explanatory value (*Adjusted* R^2 = .04, F = 2.37, p < .05, N = 185).

5.3 Hypothesis Testing and Research Findings in Structural Equation Models

The exploratory analyses through the multiple regression model shows that further exploration through structural equation models can be productive in testing the research hypotheses and responding to the research questions. In this section, the hypotheses will be tested in the suggested research model. After hypothesis testing, a revised model based on the results of the preliminary multiple regression analyses and a simplified model including significant relations among variable will be presented. In addition, two structural equation

models exploring level of Privacy Management Efficacy will be compared in order to explain the moderation effect of this variable.

5.3.1 Structural Equation Model for Hypotheses Tests

Based on the research hypotheses, the research variables are organized in the order of the suggested research model (see Figure 1) for hypothesis testing. The model fit of the structural equation model based on the suggested model is acceptable (χ^2 = 821.06, p = .00, CMIN/DF = 1.58, CFI = .96, NFI = .90, RMSEA = .04). In the model (see Figure 2), Hypothesis 1, "Exposure to government online surveillance news is positively related to privacy concern on SNS use", is supported (β = .26, p < .001). Hypothesis 3, which predicted that "Privacy concern on SNS is positively related to SNS switching intention," is also supported (β = .27, p < .001). In addition, Hypothesis 6, "Interaction motivation is positively related to attitude toward SNS use," is supported (β = .76, p < .001).

However, other hypotheses are not supported in the structural equation model. First off, Hypothesis 2, "Privacy concern on SNS use is inversely related to attitude toward SNS use", is not supported (β = -.02, *Not Significant*). Hypothesis 4, "Attitude toward SNS use is negatively related to intention to SNS switching intention," also fails to gain support (β = .21, p < .001), as attitude toward to SNS Use was expected to a negative predictor of SNS Switching Intention. In addition, Hypothesis 5, "Entertainment motivation is positively related to attitude toward SNS use" (β = .04, *Not Significant*) is not supported in the research model. The same is true of Hypothesis 6: "Convenience motivation is positively related to attitude toward SNS use" (β = -.17, *Not Significant*).

5.3.2 Revised Structural Equation Model

The results of preliminary regression analyses show that other significant variables can be considered to understand the influence of Government Online Surveillance on SNS Switching Intention. In addition, the preliminary research findings imply that the motivation variables need to be possible predictors of SNS Switching Intention and Privacy Concern regarding SNS Use. The revised model has an acceptable model fit (χ^2 = 778.4, p = .00, CMIN/DF = 1.51, CFI = .90, NFI = .90, RMSEA = .04). In the structural equation model, Exposure to Government Online Surveillance News (β = .24, p < .001) is a significant predictor of Privacy Concern on SNS Use, and Privacy Concern with SNS Use (β = .22, p < .001) significantly predicts SNS Switching Intention. In addition, Convenience Motivation significantly predicts Privacy Concern regarding SNS Use (β = .24, p < .001). In addition, Interaction Motivation (β = .48, p < .001) is a strong predictor of SNS Switching Intention in the revised SEM (see Figure 3).

Interestingly, the standardized beta value of Attitude toward SNS Use predicting SNS Switching Intention is insignificant (β = .02, *Not Significant*), when the direct relationship between SNS Switching Intention and the motivation variables such as Interaction Motivation (β = .48, p < .001) and Convenience Motivation (β = -.34, p < .001) are specified. In the revised model, both Entertainment Motivation (β = .15, *Not Significant*) and Convenience Motivation (β = -.03, p = *Not Significant*) fail to significantly predict Attitude toward SNS Use. In addition, Privacy Concern regarding SNS Use (β = -.02, p = *Not Significant*) is not a significant predictor of Attitude toward SNS Use, even in the revised model. Unlike the regression analysis results for SNS Switching Intention (see Table 24), Exposure to Government Online Surveillance turned out not to be a significant predictor of SNS Switching Intention (β = .107, *Not Significant*), when the mediation effect of Privacy Concern on SNS Use is considered.

5.3.3 Structural Equation Models by Privacy Management Efficacy Level

Based on the preliminary multiple regression results and the revised SEM, a simplified model can be produced, as seen Figure 4. The simplified model has an acceptable model fit (χ^2 = 642.88, p = .00, CMIN/DF = 1.50, CFI = .97, NFI = .91, RMSEA = .04), and the rejected hypotheses were not included in the simplified model. Entertainment Motivation is not included in the simplified model, and the relationship between Privacy Concern on SNS Use and Attitude toward SNS Use is not considered. The SEM results in the revised model suggest that relation between Attitude toward SNS Use and SNS Switching Intention can be dropped from the simplified model.

In the simplified model, Interaction Motivation (β = .60, p < .001) is the only predictor of Attitude toward SNS Use. In addition, Convenience Motivation (β = -.46, p < .001) significantly predicts SNS Switching Intention and Interaction Motivation (β = .24, p < .001) is a significant predictor of Privacy Concern regarding SNS Use. Exposure to Government Online Surveillance News (β = .24, p < .001) significantly predict Privacy Concern on SNS Use, and Privacy Concern regarding SNS Use (β = .24, p < .001) is a significant predictor of SNS Switching Intention.

Two additional SEM analyses (see Figure 4 and Figure 5) are produced to explore the moderation effects of Privacy Management on the relations between research variables in the simplified model. Both of the structural equation models for high privacy management efficacy group (χ^2 = 645.29, p = .00, CMIN/DF = 1.51, CFI = .94, NFI = .84, RMSEA = .05; N = 210) and the SEM for low privacy management efficacy group (χ^2 = 449.72, p = .00, CMIN/DF = 1.17, CFI = .98, NFI = .86, RMSEA = .03; N = 185) have acceptable model fits. The comparison

of two SEM analyses shows that people tend to show differences in Influence of Exposure to Government Online Surveillance News on SNS Switching Intention.

The standardized beta of Exposure to Government Online Surveillance predicting Privacy Concern on SNS Use is .30 ($p < .001$) in the simplified model for the high privacy management group, while it is .18 ($p < .05$) in the low privacy management model. In addition, the standardized beta of Privacy Concern with SNS Use predicting SNS Switching Intention is .24 ($p < .001$) in the simplified model for the high privacy management group, while it is .20 ($p < .05$) in the low privacy management model. Furthermore, the influence of Interaction Motivation on SNS Switching Intention in the high privacy management efficacy group seems stronger ($\beta = .67$, $p < .001$) than the influence of Interaction Motivation on SNS Switching Intention in low privacy management efficacy group ($\beta = .44$, $p < .001$). However, the influence of Convenience Motivation on SNS Switching Intention in low privacy management efficacy group ($\beta = -.45$, $p < .001$) is stronger than the influence of Convenience Motivation on SNS Switching Intention in high privacy management efficacy group ($\beta = -.36$, $p < .001$).

To sum up, Privacy Management Efficacy works as moderator between research variables. When Privacy Management Efficacy is high, Privacy Concern on SNS Use can be expected to work as a mediator between Exposure to Government Online Surveillance News and SNS Switching Intention. In addition, Interaction Motivation is a great predictor of SNS Switching Intention, whether it is in low privacy management efficacy group or in high privacy management efficacy group. Last, Convenience Motivation is a stronger negative predictor of SNS Switching Intention when it is in low privacy management group.

Chapter 6: Discussion

This present chapter addresses research findings, limitations of the study, suggestions for future research and implications of this research. First off, the relationship between government surveillance and SNS switching intention will be addressed. Also, the influence of motivation variables on SNS switching intention will be discussed in the context of East Asian culture and the U&G (Uses and Gratification) theoretical framework. In addition, the research findings on privacy management efficacy, which influences people's SNS switching, will be discussed. Second, the research has limitations in terms of data collection, measurement design and sample size. The limitations on research will be discussed in the third section. Third, suggestions for future research will be discussed. Redesigning of measurement, research population and possible additional variables will be suggested in the discussion section for future research. Finally, in the conclusion, implications of this research will be discussed. New media development, news media reporting and user empowerment can be the suggested interventions to avoid governmental illegal online surveillance.

6.1 Research Findings and Theoretical Implications

6.1.1. Social Network Use in South Korea

The South Korean law enforcement's efforts to quell rumors about the Korean president–who was unresponsive for seven hours following the Sewol ferry tragedy in April, 2014--was irrational in a contemporary democratic society. In democratic societies, the government should not work to serve the political leaders' personal interests. The abnormal public servants might not hesitate in taking the action to monitor personal online

communications between instant messenger users, and in enforcing the Korean domestic social network service providers to cooperate with their surveillance efforts.

The Korean government's surveillance efforts must have threatened the privacy of social network users and instant messenger users. The German messenger service, Telegram, and the international social network service, Facebook, experienced rapid growth in in their South Korean user base in 2014, while the leading Korean online communication service provider, which assisted the Korean prosecutors' surveillance, lost a huge portion of their social network service and online messenger service markets. Many Korean SNS users seem to be very active in switching to the alternative social network service, which is free from surveillance by Korean public servants. The alternative SNS service was more likely not only to be useful in fulfilling audience media use motivations, but it was also an effective vehicle for avoiding government surveillance.

The research sample shows that the Korean online social networks, many of whom felt victimized by Korean government online surveillance, continued to lose users through 2015. On the question ascertaining participants' favorite social network service, 41.0 percent (n = 165) of the participants responded that their favorite SNSs are KakaoStory or KakaoGroup. Both KakaoStory and Kakao Group belonged to the social network service provider, Daum communications, which cooperated with the National Intelligence Service to surveil people's communication on the SNS services (Kim, 2015). The ratio of KakaoStory users decreased from 55.4% in 2013 to 46.4% in 2014, and the ratio of users of KakaoStory or KakaoGroup is marginally over 40 percent in this research sample.

Meanwhile, 45 percent of the participants (n = 181) responded that their favorite SNS is the imported social network service, which is Facebook. From 2013 to 2014, the ratio of

Facebook users among SNS users in South Korea increased from 23.4% to 28.4 %. The drastic difference between national ratio of Facebook users in 2014 and ratio of Facebook users in the present sample is consistent with ratio change tendency of Korans' popular social network services.

6.1.2. Government Online Surveillance, Privacy Concern, and SNS Switching

South Korean SNS users are willing to use alternative social network services in order to reduce their privacy concern caused by government online surveillance, while they are willing to switch to another social network services, also, to fulfill their media use motivations. SNS switching intention items in this study tapped participants' general ideas on how much they are "considering," "likely," or "determined" to switch to another social networking service (Kim et al., 2006). By asking these general questions, the influence of government online surveillance's on SNS switching intention can be compared with the influence of other motivation variables' influence on SNS switching intention. The results show that privacy concern on SNS use and government online surveillance are significant predictors of SNS switching intention, and their influence is as great as other motivation variables to switch social network services.

As expected, South Korean SNS users express an intention to switch to an alternative social network services when they feel privacy concerns about their SNS use, as the results of this study imply. Study findings thus confirm those of previous research, which uncovers a strong negative influence of privacy concern on SNS use (Chen & Kim, 2013; Cha, 2012). Although some people with privacy management skills could cope up with privacy threats (Debatin, Lovejoy, Horn, & Hughes. 2009), privacy concern functions as one of the factors that diminish SNS use frequency (Fernback, 2012). The negative effective effect of privacy concern is prevalent over diverse social network services (Dwyer, Hiltz, & Passerrini, 2012). The strong

relations between privacy concern and SNS switching intention were found in all SEM models tested here.

In addition, this research found that privacy concern regarding SNS use is significantly influenced by exposure to government online surveillance news in South Korea. Government online surveillance was assumed to threaten Internet users' privacy (Nissenbaum, 2011). The research finding is consistent with previous studies on relations media exposure on government online surveillance and feeling secure of privacy protection (Child, Haridakis, & Pertronio, 2012). Korean people express concerns that the expansion of their government's online surveillance will threaten their privacy in online communication. The strong relationship between the two variables--exposure to government online surveillance and privacy concern--were found in each structural equation model tested.

Furthermore, privacy management efficacy was found to be a significant moderator between research variables. First, privacy concern predicts SNS switching intention more powerfully when people possess ability to manage their privacy setting on SNS use. In the low privacy management group, the significance level in relations between privacy concern and SNS switching intention is marginal. These results imply that privacy management efficacy is critical moderator influencing SNS users' sensitivity to privacy threats caused by governmental online surveillance. Privacy management efficacy enables Korean netizens--particularly those who want to avoid their government's surveillance on SNS--to search for alternative social network service. Second, privacy management efficacy is a critical moderator between exposure to government online surveillance and privacy concern. Exposure to government online surveillance more strongly predicts privacy concern when users have sufficient privacy management skills. Again,

the significance level in relation between government online surveillance exposure and privacy concern is marginal in the case of low privacy management efficacy.

This research found no direct effect of exposure to government online surveillance news on SNS switching intention, while the influence of exposure to government online surveillance news on SNS switching intention is mediated by privacy concern. Government surveillance influence on privacy concern (Whitley, 2013) seems to be critical to explain SNS users' actions to avoid government surveillance. This complete mediation effect of privacy concern implies that Korean people's SNS switching intention needs to be understood as a result of privacy concern when they hear about government online surveillance.

Therefore, the mediation effect of privacy concern implies that the previous SNS switching phenomena observed among Korean people in 2014 (Yoon, 2014) and 2015 (Kim, 2015) can be better explained in light of user privacy concerns. Korean SNS users, particularly those who consumed the news on their government's SNS surveillance, seemed to take their privacy protection on SNSs seriously. The increased privacy concern must be very likely to make them choose alternative social network services, such as Telegram and Facebook.

6.1.3. SNS Attitude

It's useful to now discuss the unexpected results involving attitude toward SNS use, which were expected to be significantly predicted by privacy concern (Mesch, 2012) and motivation variables (Ha et al., 2014; Hunt, Atkin, & Krishnan, 2012; Ruggiero, 2000), and to predict SNS switching intention (Hu & Hwang, 2006). With the measurement of SNS use attitudes, this research asked how much Korean SNS users favor specific functions of social network services (Taylor et al., 2011). Except for a question addressing user liking customized advertisements on SNSs, the other questions on general functions of SNS are grouped as one

variable to tap attitudes toward SNS use. While attitude variable is a significant variable in media use research (Zhang et al., 2012), study findings reveal outcomes contradictory to the research hypotheses, which were based on previous research.

First of all, SNS attitudes of research participants are not predicted by privacy concern. In the structural equation model, the influence of privacy concern on SNS attitude was not significant. Also, the influence of privacy concern on SNS attitude erodes in the revised model. According to previous research, privacy concern tends to be a significantly negative predictor of social network service use (Cha, 2012; Chen & Kim, 2013). Nevertheless, the Korean social network service users, in this research, do not show a softening of support in SNS attitudes when they feel privacy concern. This surprising result can be explained by differences in understanding privacy between East-Asians, who can give up their privacy to fulfill media use motivation gratifications, and Westerners, who may take greater offense to such privacy threats (Luther & Radovic, 2012). In addition, the cultural difference can be understood from high/low context cultural typologies (Hall, 1976) to explain the social environment. High-context societies like Korea seem less responsive to privacy threats when using social network services. The hypothetic relation between privacy concern and SNS attitude has been identified in low-context societies. Even in this study, the Korean SNS users do not seem to curtail their pursuit of interaction motivations, even when they feel privacy concern when using SNSs.

In addition, attitudes toward SNSs, is not predicted by either convenience motivation or entertainment motivation in our South Korean sample. Previous research has found that people fulfilled their motivation of hedonism (Ha et al., 2014; Hunt, Atkin, & Krishnan, 2012). Even past work in the Korean contexts suggests that entertainment motivation are fulfilled in the use of social network services, with convenience motivations fulfilled in the use of messenger

service (Ha et al., 2014). Nevertheless, the current study findings, based on research involving data collected the data in 2016, suggest that convenience motivation and entertainment motivation are not positive predictors of SNS attitude. Meanwhile, interaction motivation, which is one of the three motivation variables in this research, turned out to be a great predictor of attitude toward social network service. Interaction motivation seems to represent the most profound motivation, which can determine entertainment gratification and convenience motivation (William, Rice, & Rogers, 1998) to use social network services.

Furthermore, attitude toward SNS use does not predict SNS switching intention--when the direct influences of motivation variables are considered--in structural equation models tested here. This research hypothesis posited a negative relationship between SNS attitude and SNS switching intention, because previous theory and research suggests that attitudinal variables are strong positive predictors of behavioral intention variables (Davis, 1989). Contrary to this expectation, in the SEM hypothesis test, SNS attitude displays a significantly positive relationship with SNS switching intention. In addition, in the SEM for the revised model, which includes motivational variables' direct influence on SNS switching intention, SNS attitude has almost no influence on SNS switching intention.

6.1.4 Motivations to Choose and not to Choose; Uses and Gratifications

In this research, two motivational variables--interaction motivation and convenience motivation--were found to be as significantly strong predictors of SNS switching intention. While convenience motivation is the negative predictor of the switching intention, interaction motivation emerges as a positive predictor of SNS switching intention. SNS users in Korea thus seem to choose alternative SNSs to fulfill their interaction motivation, as well as to avoid alternative SNS not to lose fulfillment of convenience motivations. Taken together, these

research results imply that users are active not only in media selection (Rubin, 1994; Sundar & Limperos, 2013), but also in media avoidance.

People, who are willing to interact with others, seem to expand their media channels. Here the interaction motivation was found to be a great predictor of SNS switching intention in preliminary multiple regression models and structural equation models. The selection of newly popular social network services can be taken as tools to increase the users' ability to interact others. The research finding involving the relation between interaction motivation and SNS witching intention is consistent with Boyd and Ellison's (2007) definition on social network service. To wit, SNS users can enhance the connectivity in their social lives and public sphere, even by switching to newly developed social network service (Boyd & Ellison, 2007; Harlow, 2015).

In addition, from the U&G theoretical framework, SNS users tend to actively choose alternative social network services to reduce their privacy concern or to feel secure in SNS use. In order to have their privacy guaranteed, they can abandon their present social network service. While previous research has found positive motivations influencing SNS use decisions (William, Rice, & Rogers, 1998; Ruggiero, 2000), the new media environment, which increases users' power to select media (Abrahamson, 1998), enables users to actively abandon traditional media (e.g., Sundar & Limperos, 2013).

Furthermore, the convenience motivation apparently causes ambivalence in social network service use. Previous research explains that people use social network services to conveniently reach other people (Ha et al., 2014). However, the Korean SNS users seem to regard SNS switching as an inconvenient process. The SNS users profiled here tend to actively remain with their present using social network service to preserve the motivation of convenience,

even though their convenience motivation seems at odds with privacy concerns. The adaptation to newly developed media can be an inconvenient process. SNS user resistance in adopting new social network services implies that people in the new media environment have the power not to accept newly developed media in order to maintain their motivation gratification.

Unlike the traditional media such as television and radio--which satisfy information motivation and entertainment motivations (Ruggiero, 2000) -- emerging social media can be used to fulfill numerous motivations gratifications for its users. SNS users in South Korea to choose alternative SNS's to fulfill interaction needs and privacy enhancement needs; they do not choose alternative SNS's to preserve their convenience fulfillment. Uses and gratifications theory can expand its research scope from exploring the positive motivation variables of media use (e.g., Hunt et al., 2012), to the negative motivation factors that restrain users from switching to alternative media.

6.1.5. Privacy Management Efficacy and Government Online Surveillance

Privacy management efficacy moderates relations between SNS switching intention and other predicting variables, which include interaction motivation, convenience motivation and privacy concern. SNS users scoring high in privacy management efficacy act more sensitively to cope with privacy concern, as well as to fulfill interaction motivation. By contrast, SNS users, who have low privacy management efficacy, responsively act to fulfill convenience motivation by switching SNSs services. In addition, South Korean SNS users with high privacy management concern tend to have more privacy concern, when they are exposed to government online surveillance news.

Online privacy management skills enable netizens to use more actively use online social networks. SNS users, who are knowledgeable in managing privacy, are more active in managing

their privacy management actions, SNS switching intention (Zhang et al., 2012). In addition, privacy management efficacy makes people adopt alternative social network services to increase their ability to interact with other users. Meanwhile, SNS users with low privacy management efficacy seem to resist more SNS switching in order not to sacrifice their convenience motivation.

In the new media era, online efficacy influences overall media use, including social network services. SNS users can take instant actions to protect privacy (Park, Cambell, & Kwak, 2012). The knowledge about new media use enhances one's power to perceive privacy threats (Park, Cambell, & Kwak, 2012). By increasing privacy management efficacy, SNS users can enjoy a greater ability to understand the risk of SNS use, importance of privacy protection functions and necessity of privacy protection actions (Park, 2013). When people recognize the privacy threat caused by government online surveillance, their knowledge and ability to protect their privacy enable them rapidly switch to more secured social network services.

6.2 Limitations of the Research

Although the key study findings are sufficiently robust to show that government online surveillance causes social network service switching, there are limitations in research design and generalization in the research findings. First off, the challenges concerning attitude measurement need to be pointed out. In this research, SNS attitude measurements tapped general attitudes toward social network use. With the general SNS attitude measurement, it was impossible to distinguish participants' attitude toward their present use of social network services from the attitude toward the alternative social network services. Attitude toward presently using SNS's--which is vulnerable to privacy invasion--can be inversely related to the attitude toward alternative SNS, which is secured in privacy protection.

Second, the privacy concern measurements were divided into two groups. In this research, the first group, labeled privacy concern on SNS use, emerged as an influential link between government online surveillance and SNS switching intention. The other group, labeled privacy concern on SNS providers, was dropped from the analysis, because the variable does not mediate online government surveillance and SNS switching intention. Although privacy concern on SNS use and privacy concern on SNS providers are strongly correlated with each other, these two groups exhibit differences in their relations with other research variables, such as exposure to government online surveillance news. The influence of privacy concern on SNS providers for government online surveillance needs be explored further in future research.

Third, the revised model of this study shows that the convenience motivation is a significant predictor of privacy concern. The significant relationship between convenience motivation and privacy concern was not well explained in this research. The unexpected result on the relation between convenience motivation and privacy concern is left as an inquiry for future research.

Fourth, extraversion, the critical personality influencing social network use, has not been fully explored. The previous study suggested that there are other mediators to connect the SNS use and extraversion (Krishnan & Atkin, 2014), while this study assumes there is a direct impact of extraversion on SNS attitude. Extraversion needs to be considered as predictor of motivation variables to predict SNS use, rather than a moderator of the relationship between SNS use and other variables.

Fifth, the research has limitations in terms of the generalizability research findings. While the research findings from Korean participants can extend to societies of Asian countries such as Japan and Taiwan, the research findings might not be duplicated in countries with massive

populations or in countries with less freedom in media use. While the East-Asians' understanding of privacy is different from that of North Americans, the countries in East Asia have common cultural and historical orientations toward privacy (Luther & Radovic, 2012). The present research findings can be generalized to East Asian countries with a developed economic system and mono-ethnic culture. The present research framework cannot be profitably duplicated in more populous and multi-ethnic societies, such as China and the U.S.

The survey window took advantage of an extraordinary period, when the South Korean Congress held filibuster sessions for the legislators from the opposition parties to pass the 'Anti-terrorism Ant', which gives the National Intelligence Service the extensive power to investigate individual social media use records (Kim, 2016). The British Broadcasting Corporation (BBC, 2016) observed that the filibuster increased Koreans' interest in the risk of government surveillance on online communication.

Last, this survey study has a limitation in proving causality between government online surveillance and SNS switching intention. Although the research found significant factors predicting SNS switching intention, the causal relations between them cannot be confirmed without further research with experimental assessment instruments.

6.3. Suggestions for Future Research

Based on the research findings and discussion on limitations of the research, suggestions for future research need to be discussed for the more advanced understanding of online government surveillance. First off, other societal contexts should be considered to duplicate the research framework. The Korean people have been successful in developing Western democracy in their society, although the recent conservative governments in South Korea have threatened to severely curtail their people's freedom of speech. The research framework can come out with

different research results in a media-controlled society, which has less value in political democracy. As the previous research on media control in China found, people in media controlled societies might use more aggressive resistance strategies to expand their freedom of media access (Mou, Wu, & Atkin, 2014). In censored media contexts, SNS users might choose circumvention tools to avoid government surveillance, rather than switch SNS carriers.

Second, other emotion variables, such as fear of government, need to be considered. In media-controlled societies, fear of government (Clavel et al., 2008) can be a more critical variable bridging government online and resistance to using social media. While people in free media societies consider government surveillance a privacy threat, those in censored societies might regard governmental threats concerning the resistance to government surveillance to be sufficiently harsh for their people to feel a fear of political suppression.

Third, differences in privacy perception between Western people and East-Asian people, can be explored in future research. In Western societies, the privacy variables can be more solid. While the Korean respondents may in differ in their SNS privacy concern levels, Westerners tend to see no such differences between SNS providers (Luther & Radovic, 2012).

Fourth, peer group interactions on social network services can be considered as a research variable (Kim et al., 2016). As the SNS activities represent interactive processes with other users, the peer groups' response to government surveillance might work as a great influencer of SNS attitudes and SNS switching intention. In the societies of high-context culture, peer group opinion regarding political issues could be critical factor determine to actions to avoid to expand media freedom.

Fifth, the service switching intention need to be further explored to explain the relationship between switching intention and switching behaviors. Although the Korean

government surveillance cases have been revealed to the public, the majority of the previous service users in South Korea kept using the surveilled SNS service, which was monitored by the government. If future research could target a critical period, in which most SNS users switch to an alternative service, it could help scholars uncover the relationships between switching intention and switching behavior.

Last, based on the results of SNS attitude in this research, an idea for future research can be suggested. The measurement of SNS attitudes failed to distinguish between attitudes toward future and present SNS's. In future research, the general attitude variable can be divided into two attitude variables. One of them is attitude toward SNS services presently being used, and the other is attitude toward which they intend to switch. When one's present SNS services is seen as lacking in privacy protection--and the alternative SNS has more advanced privacy protection functions--the attitude toward alternative SNS carriers could significantly predict SNS switching Intentions. Likewise, the attitude toward present SNS services could be negatively predicted by privacy concern. In addition, convenience and entertainment variables could predict attitude toward present SNS.

6.4. Conclusion

Online surveillance by Korean government seems to be a great burden for their domestic online network service providers. Although the economic development dictatorship had worked in the 1960's and 1970's–an era of massive Korean economic development--the entire Korean civil society overthrew the military dictatorship in the 1980s. Korea's revolution generation of the 1980s, both liberals and conservatives alike, seemed to fully understand that the military governments' interventionism could not function in a diversified society that was propelled by economic development. Unfortunately, the female Korean president, who is the first daughter of

the military dictator, Chung-hee Park, is dictating her government to control civil society and media. The old governing paradigm of interventionism is threating media freedom and the domestic actors in new South Korean media industries.

The research findings of this research imply that increases in government online surveillance news, development of secured SNS service and efforts to increase users' efficacy for privacy management are critical to avoid privacy threats caused by government online surveillance. First, privacy concern is the mediator bridging the Korean government's online surveillance and Koreans' SNS switching intention, while no significant direct effect on exposure to government online surveillance news on SNS switching intention was found. Second, convenience motivation and interaction variables significantly predict SNS switching intention, while entertainment motivation has no significant influence on SNS switching. Meanwhile, the three motivations--interaction motivation, convenience motivation and, entertainment motivation--are strong influences on media selection (Ha et al., 2014; Hunt, Atkin, & Krishnan, 2012). Last, the moderation effects on privacy management efficacy were found, while the moderation effect on extraversion is weak in explaining SNS attitudes of Korean users.

The research results imply that surveillance efforts by governments can be avoided with the help of new media developers, who provide more secured social network services. When the Korean government's online surveillance--facilitated by their president's complaints on the day of the sunken Ferry tragedy (Yoon, 2014)--, Korean SNS users found a way to keep their media freedom by switching to a German encrypted messenger service. Furthermore, increases in the number foreign social network service users (i.e. Facebook users) can also be explained by the research model of this study. Facebook, which is free from the online surveillance of South Korean government, has become more popular among Korean SNS users (Kim, 2015). By

switching to more secured services, the Korean SNS users could avoid surrendering their freedom of social network service, which made it possible for them to bypass the consumption of mass media messages in shaping a consensus of social agendas (Harlow, 2015). When SNS users can have access to new media technology of privacy protection--facilitated by media developer efforts-- they can decide to abandon the giant social network service providers, who are cooperating with government agencies to conduct the illegal or unpermitted government surveillance (Fernback, 2012).

Media developers, who ushered in the new media age, still have the power to advance media freedom. The governments' surveillance in new media communication, which increases new media users' freedom of expression, seems to be continuously spreading, because governments have effectively persuaded people to agree that on-going government online surveillance is critical to prevent the possible threats of terrorism (Brown & Korff, 2009). While the netizens have boasted about the increased media freedom propelled by new media developments, government agencies worldwide continue to develop advanced strategies to control new media communication as serious as citizens' privacy protection is threatened (Fernback, 2012). The alternative media--which can include surveillance circumvention tools (e.g., Mou et al., 2014)—will, nevertheless, help new media users to manage privacy threats from the media under government surveillance.

Table 1a. Principal Component Analysis: Exposure to Government Online Surveillance News

	Factor Loading
	Exposure to Surveillance News (*M*, *SD*)
1. I hear about television news stories on Internet surveillance by governments	.83 (3.13, 1.27)
2. I hear about radio news stories on Internet surveillance by governments	.81 (2.34, 1.36)
3. I hear about newspaper news stories on Internet surveillance by governments	.86 (2.59, 2.40)
4. I hear about magazine news stories on Internet surveillance by governments	.82 (2.13, 1.33)
5. I hear about Internet news stories on Internet surveillance by governments	.73 (3.50, 1.26)
Cronbach's Alpha	.87

Note: Exposure to Surveillance News = Exposure to government online surveillance news
Extraction method: principal component analysis.

Table 1b. Principal Component Analysis: Privacy Concern on SNS Use

	Factor Loading
	Privacy Concern on SNS Use (*M*,*SD*)
1. I feel insecure in posting personal information on my SNS pages	.72 (4.05, .83)
2. I feel insecure in posting personal information on my friend's SNS pages	.80 (3.86, .84)
3. I feel insecure in texting my personal information on SNS messenger service	.80 (3.60, .95)
4. It usually bothers me when social network service pages ask me for personal information	.83 (4.01, .88)
5. When social network services pages ask me for personal information, I sometimes think twice before providing it	.81 (3.94, .85)
6. It bothers me to give personal information to social network services	.75 (4.04, .89)
7. I'm concerned that social network services are collecting too much personal information about me	.81 (4.09, .85)
Cronbach's Alpha	.90

Extraction method: principal component analysis.

Table 1c. Principal component Analysis: Privacy Concern on SNS Providers

	Factor Loading
	Privacy Concern re: SNS Providers (*M, SD*)
8. Social network service providers should not use personal information for any purpose unless it has been authorized by the individuals who provided the information	.84 (4.66, .70)
9. Social network service providers should never sell the personal information in their computer databases	.86 (4.73, .65)
10. Social network services should never share personal information with other SNS providers unless it has been authorized by the users who provided the in formation.	.90 (4.68, .68)
11. Social network service providers should devote more time and effort to preventing unauthorized access to personal information	.90 (4.62, .70)
12. Computer databases that contain personal information should be protected from unauthorized access no matter how much it costs	.86 (4.58, .72)
13. Social network service providers should take more steps to make sure that unauthorized people cannot access personal information in their servers	.86 (4.60, .70)
Cronbach's Alpha	.94

Extraction method: principal component analysis.

Table 1d. Principal Component Analysis: Attitude toward SNS

	Factor Loading
	Attitude toward SNS (*M, SD*)
1. I like the function of status posting on social network service sites	.80 (3.54, .80)
2. I like the function of status notification of other users on social network service sites	.75 (3.70, .80)
3. I like the function of video clip upload on social network service sites.	.77 (3.58, .83)
4. I like the function of customized advertisements on my social network service sites	.48(dropped) (2.90, 1.02)
5. I like the function of picture upload on social network service pages	.76 (3.79, .81)
6. I like the instant messenger service on my social network service pages	.66 (3.82, .85)
7. I like the communication styles of social network services.	.76 (3.63, .79)
Cronbach's Alpha	.83

Extraction method: principal component analysis.

Table 1e. Principal Component Analysis: SNS Switching Intention

	Factor Loading
	SNS Switching Intention (*M*, *SD*)
1. I am considering switching from Facebook service to another social network service	.83 (2.85, .87)
2. I am considering opening an account in another social network service	.83 (2.76, 1.00)
3. The likelihood of my switching to another network service is high	.90 (2.67, .95)
4. I like the function of customized advertisements on my social network service sites	.90 (2.67, .97)
5. I am determined to switch to another social network service	.86 (2.30, 1.01)
6. I am determined to open an account in another social network service	.87 (2.32, 1.00)
Cronbach's Alpha	.93

Extraction method: principal component analysis.

Table 1f. Principal Component Analysis: Entertainment Motivation

	Factor Loading
	Entertainment Motivation (*M*, *SD*)
1. I would like to have some enjoyable and relaxing time	.50 (dropped) (4.40, .67)
2. I would like feeling fun	.85 (3.97, .71)
3. I would like feeling pleased	.83 (4.22, .65)
4. I would like to have something to entertain my mind	.77 (3.83, .81)
Cronbach's Alpha	.74

Extraction method: principal component analysis.

Table 1g. Principal Component Analysis: Interaction Motivation

	Factor Loading
	Interaction Motivation (*M*, *SD*)
1. I would like to see what other people said	.83 (3.55, .82)
2. I would like to see what is going on	.77 (3.82, .77)
3. I would like to express myself freely	.72 (3.73, .87)
4. I would like to meet someone with same interests with me.	.74 (3.93, .79)
Cronbach's Alpha	.76

Extraction method: principal component analysis.

Table 1h. Principal Component Analysis: Convenience Motivation

	Factor Loading
	Convenience Motivation (*M*, *SD*)
1. I would like to immediately access to others anywhere and anytime	.70 (3.78, .84)
2. I would like to gather information with less effort	.80 (3.96, .75)
3. I would like to feel convenient in using doing something	.79 (4.18, .68)
4. I would like to gather information without delay	.81 (4.17, .72)
Cronbach's Alpha	.77

Extraction method: principal component analysis.

Table 1i. Principal Component Analysis: Extraversion

	Factor Loading
	Extraversion (*M*, *SD*)
1. I am talkative	.70 (2.99, .97)
2. I am full of energy	.84 (3.31, .85)
3. I generate a lot of enthusiasm	.79 (3.42, .86)
4. I have an assertive personality	.71 (3.41, .91)
5. I am outgoing, sociable.	.82 (3.00, 1.00)
Cronbach's Alpha	.83

Extraction method: principal component analysis.

Table 1j. Principal Component Analysis: Privacy Management Efficacy

	Factor Loading
	Privacy Management Efficacy (*M*, *SD*)
1. I feel confident about exchanging files through Internet services	.67 (3.89, .96)
2. I feel confident about making changes to my computer setting	.77 (3.09, 1.08)
3. I feel confident about recovering a file I accidentally deleted	.77 (2.66, 1.08)
4. I feel confident about editing files	.81 (3.15, 1.05)
5. I feel confident about finding information on the Internet.	.71 (3.91, .87)
6. I feel confident in blocking spam or unwanted content on SNSs	.74 (3.40, .94)
7. I feel confident in adjusting privacy settings on SNSs	.83 (3.35, 1.00)
8. I feel confident in managing personal profiles on SNSs	.77 (3.29, .89)
Cronbach's Alpha	.89

Extraction method: principal component analysis.

Table 2. Correlation Coefficients between Variables

Variable (*M, SD*)	1	2	3	4	5	6	7	8	9	10
Exposure to Government Online Surveillance News (2.27, 1.07)	1	.20**	-.07	.25**	.27**	.15**	.28**	.11*	.27**	.30**
Privacy Concern on SNS Use (3.39, .68)	.20**	1	.44**	.13**	.26**	.13**	.22**	.22**	.11*	.03
Privacy Concern on SNS Providers (4.47, .60)	-.07	.44**	1	.20**	-.06	.18**	.18**	.22**	.04	.01
Attitude toward SNS (3.68, .61)	.25**	.13**	.20**	1	.18**	.36**	.46**	.38**	.29**	.31**
SNS Switching Intention (2.59, .83)	.27**	.26**	-.06	.18**	1	.15**	.30**	.09	.21**	.24**
Entertainment Motivation (4.01, .61)	.15**	.13**	.18**	.36**	.15**	1	.48**	.41**	.46**	.18**
Interaction Motivation (3.76, .62)	.27**	.22**	.18**	.46**	.30**	.48**	1	.55**	.46**	.27**
Convenience Motivation (4.02, .57)	.11*	.22**	.22**	.38**	.09	.41**	.55**	1	.32**	.32**
Extraversion (3.23, .70)	.27**	.11*	.04	.29**	.21**	.46**	.46**	.32**	1	.27**
Privacy Management Efficacy (3.35, .75)	.30**	.03	.01	.31**	.24**	.18**	.27**	.32**	.27**	1

Note: 1 = Exposure to Government Online Surveillance News; 2 = Privacy Concern on SNS Use; 3 = Privacy Concern on SNS Providers; 4 = Attitude toward SNS; 5 = SNS Switching Intention; 6 = Entertainment Motivation; 7 = Interaction Motivation; 8 = Convenience Motivation; 9 = Privacy Management Efficacy; 10 = Extraversion.

	Log-In Time	SNS Friends	Age	Family Income	Family Number	Working Hour
Exposure to Government Online Surveillance News	.04	.15**	-.06	.01	.02	.05
Privacy Concern re: SNS Use	.02	.01	-.01	-.02	.00	-.00
Privacy Concern re: SNS Providers	.00	.03	-.03	.04	-.06	-.03
Attitude toward SNS	.23**	.17**	-.07	.04	.10*	.07
SNS Switching Intention	.04	.04	.01	-.07	.01	.06
Entertainment Motivation	.04	.09	-.20**	-.04	.10	.10
Interaction Motivation	.14**	.19**	-.14**	.08	.08	.03
Convenience Motivation	.15**	.11*	-.10	.03	.07	.04
Extraversion	.10*	.18**	-.11*	.04	.00	.04
Privacy Management Efficacy	.10*	.19**	-.25**	-.01	.00	.04

Note: *$p < .05$; **$p < .01$; $N = 402$.

Table 3. Multiple Regression Results for Privacy Concern on SNS Use

Predictor	β	β
SNS Friends	-.03	-.03
Exposure to Government Online Surveillance News	.20***	.19***
Entertainment Motivation	.01	.00
Interaction Motivation	.11	.10
Convenience Motivation	.18*	.18**
Extraversion	-.02	-.03
Privacy Management Efficacy	-.10	-.09
Exposure to Government Online Surveillance News* Privacy Management Efficacy	-	.09
Adjusted R^2 (F)	.08 (5.93***)	.09 (5.64***)

Note: *$p < .05$; **$p < .01$; ***$p < .001$.
$N = 402$.

Table 4. Multiple Regression Results for Attitude toward SNS Use

Predictor	*β*	*β*	*β*	*β*	*β* *(High)*	*β* *(Low)*	*β* *(Low)*
Log-In Time	.14***	.13**	-		-	-	-
SNS Friends	.03	.02	-		-	-	-
Exposure to Government Online Surveillance News	.11*	.11*	-		-	-	-
Privacy Concern on SNS Use	-.01	.00	.10*	.10*	.10	.21**	.10
Entertainment Motivation	.17**	.16**	-		-	-	.09
Interaction Motivation	.23***	.22***	-		-	-	.30***
Convenience Motivation	.11*	.12*	-		-	-	.19**
Extraversion	-.02	.01	.28***	.30***	-	-	-
Privacy Management Efficacy	.13**	.13**	-		-	-	-
Privacy Concern on SNS Use*Extraversion	-	-.13**	-	-.14**	-	-	-
Adjusted R^2 (*F*)	.29 (18.56***)	.30 (18.00***)	.09 (20.25***)	.11 (16.76***)	-.01 (.04)	.04 (8.78**)	.26 (15.90***)

Note: *$p < .05$; **$p < .01$; ***$p < .001$.
N = 213 when *High. N* = 189 when *Low*. *N* = 402 when the other models.
High = High Extraversion. Low = Low Extraversion

Table 5. Multiple Regression Results for SNS Switching Intention

Predictor	β	β	β	β *(High)*	β *(Low)*
Exposure to Government Online Surveillance News	.12*	-	-	.20**	.05
Privacy Concern on SNS Use	.21***	.25***	-.28	.21***	.18*
Entertainment Motivation	.02	-	-	-.05	.08
Interaction Motivation	.24***	-	-	.29***	.20*
Convenience Motivation	-.18**	-	-	-.01	-.27**
Attitude toward SNS use	.01	-	-	.02	.02
Privacy Management Efficacy	.18***	.23***	.22***	-	-
Privacy Concern on SNS Use * Privacy Management Efficacy	-	-	.55**	-	-
Adjusted R^2 (F)	.17 (12.85***)	.12 (26.85***)	.13 (21.10***)	.23 (11.11***)	.04 (2.37*)

Note: *$p < .05$; **$p < .01$; ***$p < .001$.

N = 210 when *High*. N = 185 when *Low*. N = 402 when the other models.

High = High Privacy Management Efficacy. Low = Low Privacy Management Efficacy

Figure 1. Research Model: Influence of Government Surveillance on SNS use

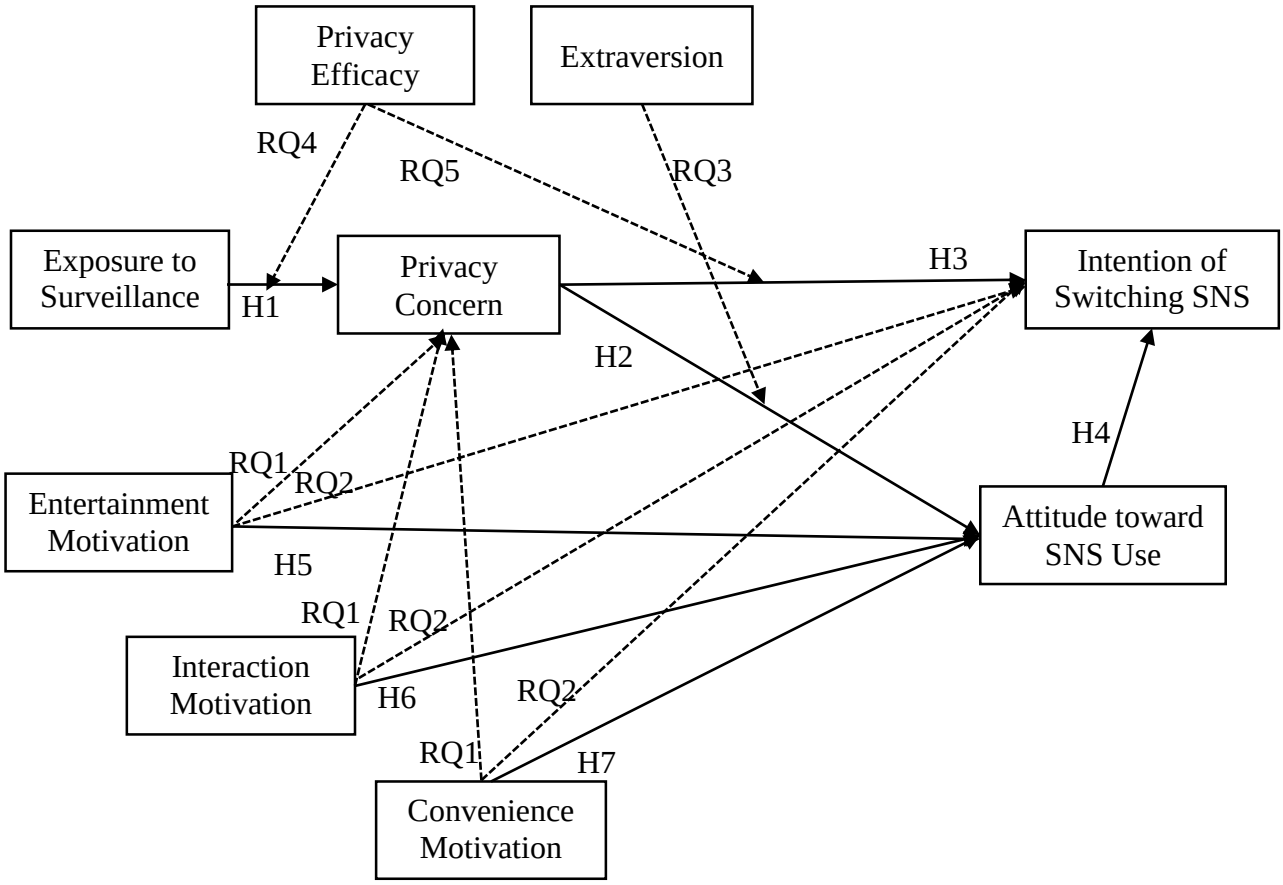
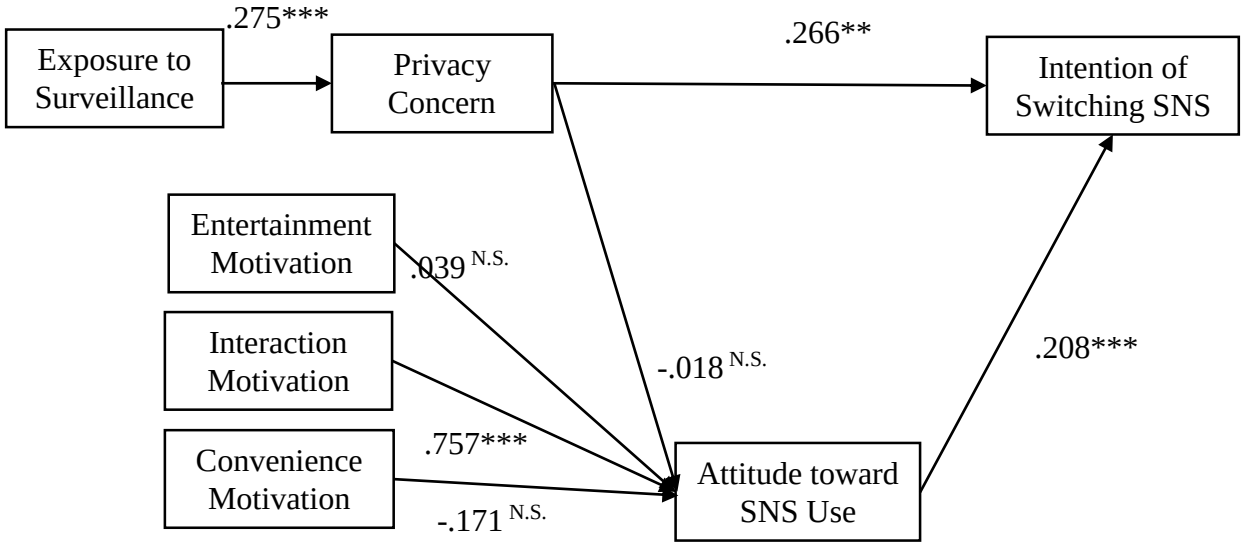
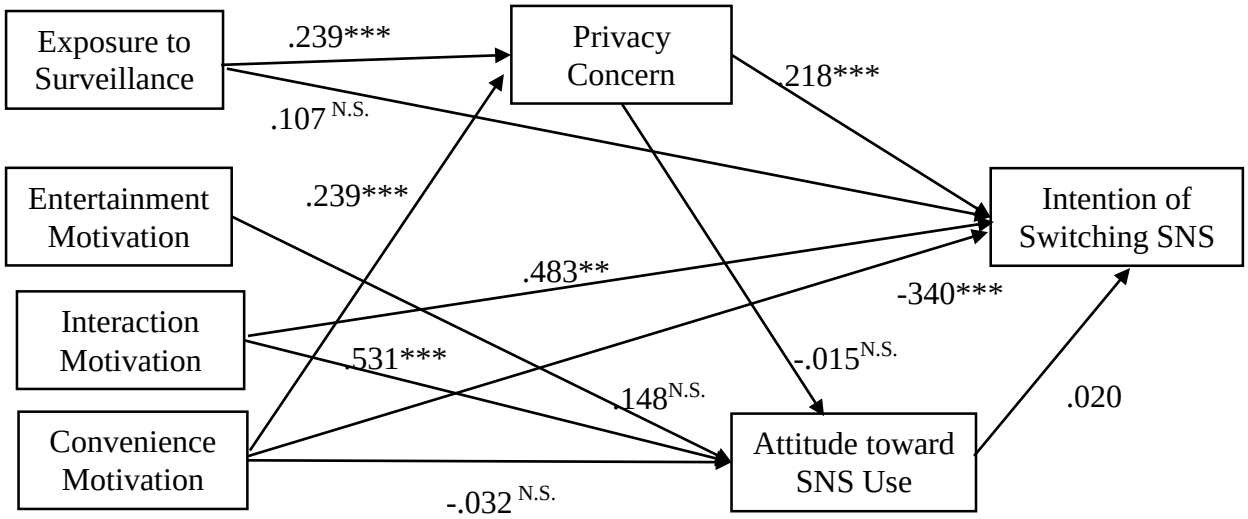


Figure 2. Hypotheses Tests in SEM: Influence of Government Surveillance on SNS use



Note: χ^2 = 821.059, p = .000, CMIN/DF = 1.576, CFI = .959, NFI = .897, RMSEA = .038
*p < .05; **p < .01; ***p < .001; *N.S.* = Not Significant.
N = 395.

Figure 3. Revised Model: Influence of Government Surveillance on SNS use

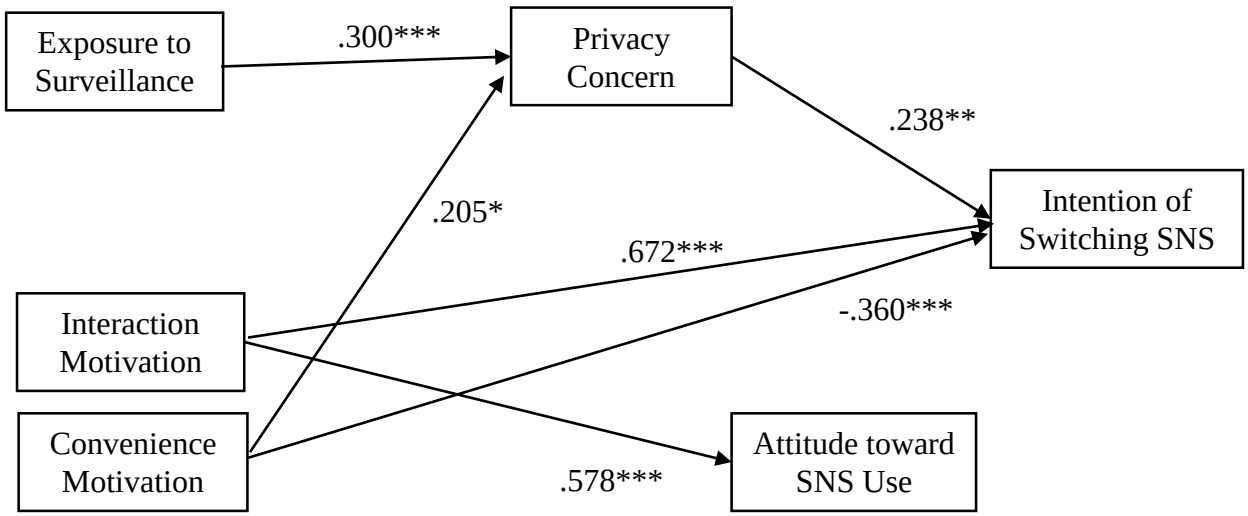


Note: χ^2 = 778.424, p = .000, CMIN/DF = 1.506, CFI = .901, NFI = .902, RMSEA = .036

*p < .05; **p < .01; ***p < .001; *N.S.* = Not Significant.

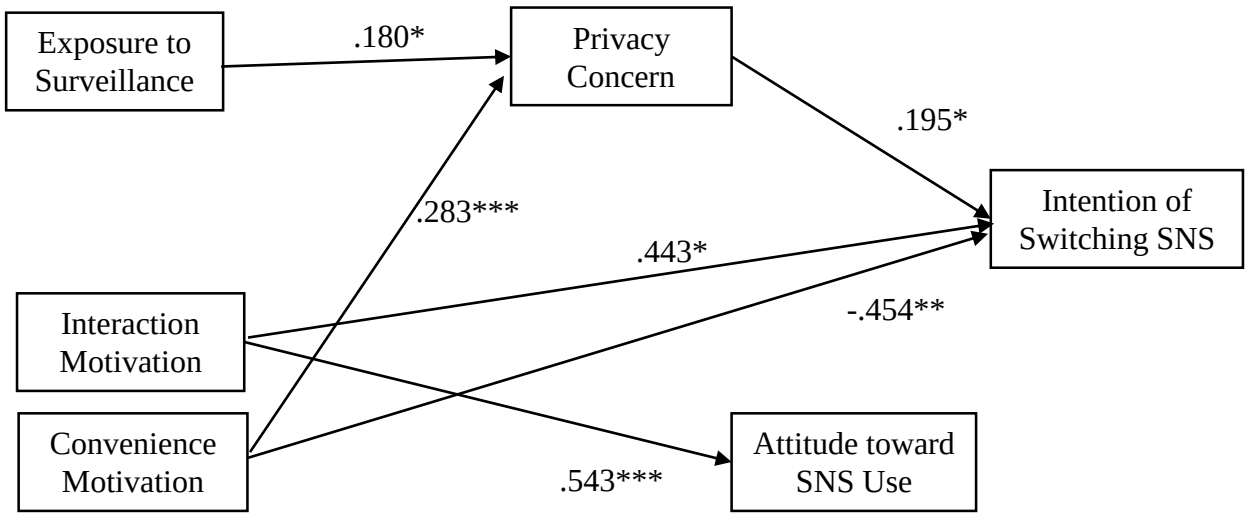
N = 395.

Figure 4. Influence of Government Surveillance on SNS use (High Efficacy)



Note: χ^2 = 645.285, p = .000, CMIN/DF = 1.504, CFI = .941, NFI = .844, RMSEA = .049
*p < .05; **p < .01; ***p < .001; N.S. = Not Significant.
N = 210.

Figure 5. Influence of Government Surveillance on SNS use (Low Efficacy)



Note: χ^2 = 449.716, p = .010, CMIN/DF = 1.165, CFI = .977, NFI = .861, RMSEA = .030
*p < .05; **p < .01; ***p < .001; N.S. = Not Significant.
N = 185.

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Appendix A

Questionnaire

This section is asking about your Social Network Service use such as Facebook and KakaoStory
1. How many times do you check your SNS a day? About _____ times
2. How many SNS friends do you have? About _____ people
3. Which SNS do you use most to communicate?
(1) KakaoStory (2) Facebook (3) Twitter (4) NaverBand (5) KakaoGroup

This section is asking about your 'exposure to news on government surveillance' (5-point scale: from 'never' to 'very often')
1. I hear about television news stories on Internet surveillance by governments
2. I hear about radio news stories on Internet surveillance by governments
3. I hear about newspaper news stories on Internet surveillance by governments
4. I hear about magazine news stories on Internet surveillance by governments
5. I hear about Internet news stories on Internet surveillance by governments

This section is asking about your general 'privacy concern on SNS use' (5-point scale: from 'strongly disagree' to 'strongly agree')
1. I feel insecure in posting personal information on my SNS pages
2. I feel insecure in posting personal information on my friend's SNS pages
3. I feel insecure in texting my personal information on SNS messenger service
4. It usually bothers me when social network service pages ask me for personal information
5. When social network services pages ask me for personal information, I sometimes think twice before providing it
6. It bothers me to give personal information to social network services
7. I'm concerned that social network services are collecting too much personal information about me
8. Social network service providers should not use personal information for any purpose unless it has been authorized by the individuals who provided the information
9. Social network service providers should never sell the personal information in their computer databases
10. Social network services should never share personal information with other SNS providers unless it has been authorized by the users who provided the information.
11. Social network service providers should devote more time and effort to preventing unauthorized access to personal information
12. Computer databases that contain personal information should be protected from unauthorized access no matter how much it costs
13. Social network service providers should take more steps to make sure that unauthorized people cannot access personal information in their servers

This section is asking about your 'attitude toward SNS' (5-point scale: from 'strongly disagree' to 'strongly agree')
1. I like the function of status posting on social network service sites
2. I like the function of status notification of other users on social network service sites

3. I like the function of video clip upload on social network service sites
4. I like the function of customized advertisements on my social network service sites
5. I like the function of picture upload on social network service pages
6. I like the instant messenger service on my social network service pages
7. I like the communication styles of social network services.

This section is asking about your 'switching intention of social network service' (5-point scale from 'strongly disagree' to 'strongly agree)
1. I am considering switching from Facebook service to another social network service
2. I am considering opening an account in another social network service
3. The likelihood of my switching to another network service is high
4. The likelihood of my opening an account in another social network service is high
5. I am determined to switch to another social network service
6. I am determined to open an account in another social network service

This section is asking about your 'entertainment motivation' (5-point scale from 'strongly disagree' to 'strongly agree')
1. I would like to have some enjoyable and relaxing time
2. I would like feeling fun
3. I would like feeling pleased
4. I would like to have something to entertain my mind

This section is asking about your 'interaction motivation' (5-point scale: from 'strongly disagree' to 'strongly agree')
1. I would like to see what other people said
2. I would like to see what is going on
3. I would like to express myself freely
4. I would like to meet someone with same interests with me.

This section is asking about your 'convenience motivation' (5-point scale: from 'strongly disagree' to 'strongly agree')
1. I would like to immediately access to others anywhere and anytime
2. I would like to gather information with less effort
3. I would like to feel convenient in using doing something
4. I would like to gather information without delay

Please answer the following questions about you (5-point scale: from 'strongly disagree' to 'strongly agree')
1. I am talkative
2. I am full of energy
3. I generate a lot of enthusiasm
4. I have an assertive personality
5. I am outgoing, sociable.

This section is asking about your computer use behaviors (5-point scale: from 'strongly disagree' to 'strongly agree')

1. I feel confident about exchanging files through Internet services
2. I feel confident about making changes to my computer setting
3. I feel confident about recovering a file I accidentally deleted
4. I feel confident about editing files
5. I feel confident about finding information on the Internet.
6. I feel confident in blocking spam or unwanted content on SNSs
7. I feel confident in adjusting privacy settings on SNSs
8. I feel confident in managing personal profiles on SNS

This section is asking about participants' information

1. What is your age?
2. What is you marital status?
    (1) Married
    (2) Single
    (3) Other
3. How many households do you have in your family?
4. Employment
    (1) Employed full-time
    (2) Employed part-time
    (3) Not employed
5. What is your race?
    (1) Korean
    (2) Chinese
    (3) Chinese-Korean
    (4) Other (_____)
6. What is your estimated household (family) income per month?
    (1) Under 2,000,000 KRW
    (2) 2,000,000 KRW to 5,000,000 KRW
    (3) 5,000,000 KRW to 7,000,000 KRW
    (4) 7,000,000 KRW or more
    (5) Don't Know/Refused
7. What is your gender?
    (1) Male
    (2) Female
8. What is your political ideology?
    (1) Very Conservative
    (2) Conservative
    (3) Moderate
    (4) Liberal
    (5) Very Liberal
9. Which party do you support?
    (1) SaeNuri (2) The Democrats (3) People's party (4) Justice party (5) Otheres

Appendix B

Questionnaire in Korean

다음은 SNS 이용에 관한 질문입니다. SNS 란 페이스북, 카카오스토리, 싸이월드와 같은 인터넷 서비스를 말합니다.

1. 귀하는 하루에 몇 번정도 SNS 를 열어보십니까? 약 ( )회
2. 귀하는 SNS 상에서 친구는 몇 명정도 입니까? 약 ( )명
3. 귀하가 가장 많이 사용하는 SNS 는 무엇입니까?
   (1) 카카오 스토리 (2) 페이스북 (3) 트위터 (4)네이버 밴드 (5) 카카오 그룹

다음은 '정부의 인터넷 감시'에 관한 뉴스를 보는 것에 관한 질문입니다. 얼마나 자주 접하십니까?

1. 나는 텔레비전에서 정부의 인터넷 감시에 대한 뉴스를 본다
2. 나는 라디오에서 정부의 인터넷 감시에 대한 뉴스를 듣는다
3. 나는 신문에서 정부의 인터넷 감시에 대한 뉴스를 본다
4. 나는 잡지에서 정부의 인터넷 감시에 대한 뉴스를 본다
5. 나는 인터넷에서 정부의 인터넷 감시에 대한 뉴스를 본다

다음은 SNS 사용할 때 느껴지는 사생활 걱정에 대한 일반 질문입니다.

1. 나는 SNS 에 개인 정보를 올리릴 때, 나의 사생활이 침해 당할까봐 걱정된다.
2. 나는 친구의 SNS 페이지에 개인적인 내용을 올릴 때, 나의 사생활이 침해 당할까봐 걱정된다.
3. 나는 SNS 를 통해 사적인 내용에 대한 문자로 보낼 때, 나의 사생활이 침해당할까봐 걱정된다.
4. 보통의 겨우, 나는 SNS 싸이트가 나의 개인 정보를 물어 볼 때, 나의 사생활이 침해 당할까봐 걱정된다.

다음은 SNS 이용에서 느낀 점에 관한 질문입니다.

1. SNS 이용에 있어서, 나는 나의 소식을 올릴 수 있는 기능이 좋다.
2. SNS 이용에 있어서, 나는 다른 사람들의 소식이 올라온 것을 알려주는 기능이 좋다.
3. SNS 이용에 있어서, 나는 비디오 클립을 올릴 수 있는 기능이 좋다.

4. SNS 이용에 있어서, 나는 내가 검색한 물건들의 광고를 보내 주는 기능이 좋다.
5. SNS 이용에 있어서, 나는 사진을 올릴 수 있는 기능이 좋다.
6. SNS 이용에 있어서, 나는 채팅 기능이 좋다.
7. 나는 SNS 를 통해 이루어지는 소통방식이 마음에 든다.

다음은 SNS 사용할 때 느껴지는 사생활 걱정에 대한 구체적인 질문입니다.
1. 나는 SNS 싸이트가 나의 개인 정보를 요구할 때, 즉시 응답을 못하고 머뭇거리게 된다.
2. 나는 SNS 에 싸이트에 개인 정보를 입력하는 것에 신경이 쓰인다.
3. 나는 SNS 회사가 나의 개인정보를 지나치게 많이 갖게 되는 것이 걱정 된다.
4. SNS 회사들은 사용자의 동의 없이 개인의 정보를 다른 목적으로 사용해서는 않된다.
5. SNS 회사들은 사용자들의 정보를 팔아서는 절대로 않된다.
6. SNS 회사들은 다른 인터넷 서비스 회사들과 사용자들의 정보를 허가 없이 공유하는 일을 절대로 해서는 않된다.
7. SNS 회사들은 권한이 없는 사람들이 사용자들의 정보에 접근하지 못하도록 예방하는데 더 많은 시간과 노력을 기울여야 한다.
8. 어떠한 비용이 들더라도, 권한이 없는 사람들이 SNS 데이터 베이스에 접근하는 것을 막아야 한다.
9. 권한이 없는 사람들이 SNS 서버있는 사용자들의 정보에 접근하지 못하도록 더 많은 보호 절차가 만들어져야 한다.

다음은 새로운 SNS 사용에 대한 생각을 묻는 직문입니다.
1. 나는 현재 사용중인 SNS 대신 다른 SNS 를 사용하는 것을 고려하고 있다.
2. 나는 다른 SNS 에 사용자 계정을 만드는 것을 고려하고 있다.
3. 나는 현재 사용 중인 SNS 대신 다른 SNS 를 사용하게될 가능성이 매우 높다
4. 나는 다른 SNS 에 사용자 계정을 만들게 될 가능성이 매우 높다.
5. 나는 현재 사용 중인 SNS 대신 다른 SNS 를 사용하기로 결정했다.
6. 나는 다른 SNS 에 사용자 계정을 만들기로 결정했다.

다음은 귀하의 여가 활동에 대한 질문입니다.
1. 나는 즐겁고 긴장이 풀리는 시간을 갖는 것을 좋아한다.
2. 나는 재미를 느끼는 것이 좋아한다.
3. 나는 기쁨을 느끼는 것이 좋아한다.

4. 나는 흥이 나게 하는 것들을 갖는 것을 좋아한다.

다음은 다른 사람들과의 상호작용에 대한 질문입니다.
1. 나는 다른 사람들이 한 말들이 무엇인지 알고 싶어한다.
2. 나는 무슨 일들이 벌어지고 있는지 알고 싶어한다.
3. 나는 나 나신에 대해 자유롭게 의사를 표현하고 싶어한다.
4. 나는 나와 관심사가 같은 사람들을 만나고 싶어한다.

다음은 편리한 것을 좋아하는 정도에 대한 질문입니다.
1. 나는 언제 어디에서건 다른 사람들과 지체 없이 연락이 되는 것이 좋다.
2. 나는 좀더 적은 노력으로 정보를 얻고싶다.
3. 나는 일을 하는데 있어서 편리함을 느끼고 싶다.
4. 나는 필요한 정보를 지체없이 얻고 싶다.

다음은 응답자에 관한 질문입니다.
1. 나는 말을 많이 하는 편이다
2. 나는 활력이 넘친다.
3. 나는 스스로 열정을 찾을 수있다
4. 나는 적극적인 성격이다
5. 나는 외향적이다.

다음은 컴퓨터 및 인터넷 사용에 관한 질문입니다.
1. 나는 인터넷을 통해 파일을 주고 받는 것에 관하여 자신이 있다.
2. 나는 컴퓨터 세팅을 바꾸는 것에 관하여 자신이 있다.
3. 나는 지워지 파일을 복구하는 것에 관하여 자신이 있다.
4. 나는 파일을 수정하는 것에 관하여 자신이 있다.
5. 나는 인터넷 정보 검색에 자신이 있다.
6. SNS 이용에 있어서, 나는 스팸처럼 원하지 않는 정보를 차단하는 것에 자신이 있다.
7. SNS 이용에 있어서, 나는 프라이버시 설정을 바꾸는데 자신이 있다.
8. SNS 이용에 있어서, 나는 나의 정보를 관리하는데에 자신이 있다.

다음은 통계분석을 위한 질문입니다.

1. 귀하의 몇 살입니까? (　　세)

2. 귀하의 배우자 여부는 다음 가운데 어디에 해당합니까?

(1) 결혼　　(2) 싱글　　(3) 기타

3. 귀하의 가족 구성원은 몇 명입니까? (　　명)

4. 귀하는 수입을 위해 한 주에 몇 시간 일하십니까?

(1) 주 40 시간 이상

(2) 주 20 시간 이상에서 30 시간 미만

(3) 주 10 시간 이상에서 20 시간 미만

(4) 주 10 시간 미만

5. 귀한의 국적은 다음중 어디에 해당 됩니까?

(1) 한국인　　(2) 중국인

(3) 조선족 동포　(4) 기타 (구체적으로:　　)

6. 귀한가 같이 사는 가족들이 버는 월 수입을 합하면 다음 중 어디에 해당됩니까?

(1) 월 200 만원 미만

(2) 월 200 만원이상 500 만원 미만

(3) 월 500 만원 이상 700 만원 미만

(4) 월 700 만원 이상

(5) 잘 모름

7. 귀하의 성별은 무엇입니까?

(1) 남성　　(2) 여성

8. 귀하의 정치적 성향은 다음 가운데 어디에 해당합니까?

(1) 매우보수적 성향

(2) 보수적 성향

(3) 중도 성향

(4) 진보적 성향

(5) 매우 진보적 성향

9. 귀하자 지지하는 어느 정당을 지지하십니까?

(1) 새누리당　(2) 더불어 민주당　(3) 국민의당　(4) 정의당

(5) 보기 가운데 없음 (6)지지정당 없음

Appendix C

Information Sheet

Information Sheet for SNS use and Government Surveillance

UCONN
UNIVERSITY OF CONNECTICUT

Principal Investigator: David J. Atkin, PhD.
Student: Tonghoon Kim
Title of Study: How Government Surveillance Modifies Social Network Service Use in South Korea

You are invited to participate in this survey of the influence of government surveillance on online social network (SNS) use. I am a graduate student at the University of Connecticut, and I am conducting this survey as part of my course work. I am interested in finding out any influence of exposure to government surveillance stories on intention of SNS service switching.

Your participation in this study will require completion of the attached questionnaire. This should take approximately 15 minutes of your time. Your participation will be anonymous and you will not be contacted again in the future. You will not be paid for being in this study. This survey does not involve any risk to you. However, the benefits of your participation may impact society by helping increase knowledge about the influence of government surveillance on SNS use.

You do not have to be in this study if you do not want to be. You do not have to answer any question that you do not want to answer for any reason. We will be happy to answer any questions you have about this study. If you have further questions about this project or if you have a research-related problem, you may contact me, Tonghoon Kim at 1-860-817-5105 or my advisor, Dr. David Atkin at (860) 486-3090. If you have any questions about your rights as a research participant you may contact the University of Connecticut Institutional Review Board (IRB) at 860-486-8802. The IRB is a group of people who review research studies to protect the rights and welfare of research participants.

Please click on the “I Agree to Participate” link below to indicate your willingness to participate in and access the survey questionnaire.

I Agree to Participate Thank you for your participation.

Appendix D

Information Sheet in Korean

―정부 감시와 SNS 사용에 관한 연구 안내문_____

UCONN
UNIVERSITY OF CONNECTICUT

연구 책임자: David J. Atkin, PhD.
연구원: 김동훈
연구제목: 대한민국 사례를 통해서 본, 정부 감시가 소셜네트워크(SNS) 사용에 미치는 영향에 관한 연구

귀하께서는 '정부감시가 SNS 사용에 미치는 영향'에 관한 설문에 참여 하실 수 있습니다. 위은 연구원은 미국 코네티컷 주립대학(Storrs, Connecticut, U.S.A.)에서 커뮤니케이션 박사 과정에 재학 중입니다. 본 연구의 주요 주제는 정부감시에 관한 뉴스에 노출되는 것이 SNS 서비스 이용에 어떤 영향을 미치게 되는 가에 관한 내용입니다.

설문에 소요되는 시간은 15 분정도 될 것으로 예상됩니다. 참가하시는 분의 실명은 기록되지 않습니다. 본 연구에 대한 참여는 보상이 제공되지 않는 자발적 참여 입니다. 본 연구는 어떠한 위험 요소도 내포하고 있지 았습니다. 다만, 본 설문에 참여 해주시는 것으로 정부감시와 SNS 사용의 관계에 대한 이해증진에 기여 하실 수 있습니다.

자발적인 의사가 없으신 경우에는 설문에 참여 하지 않으셔도 됩니다. 설문에 나온 모든 질문에 대답을 하지 않으실 수도 있습니다. 혹 본 연구에 대한 질문이 있으시다면 김동훈 연구원 (1-860-817-5105) 혹은 연구 책임자인 Dr. David Atkin a (860-486-3090)에게 문의하시지 바랍니다. 만약 연구 참여자의 권리 보호에 관한 질문이 있으신 경루'The University of Connecticut Institutional Review Board' (IRB: 1-860-486-8802)로 연락해 주시기 바랍니다. 'The University of Connecticut Institutional Review Board' 에서는 연구 참여자의 복지와 권리 보장을 검토하고 있습니다.

본 설문에 참여하시고자 하시는 분은 아래에 '연구에 참여합니다'를 선택해 주시기 바랍니다. 선택과 함께 설문으로 이어집니다.

연구에 참여 합니다

관심과 참여에 깊은 감사드립니다.

Appendix E

Recruitment Material

UCONN
UNIVERSITY OF CONNECTICUT

How Government Surveillance Modifies Social Network Service Use in South Korea

Hi, social network service users,

My name is Tonghoon Kim and I am a PhD student from the Department of Communication at the University of Connecticut. I am inviting you to participate in my research about government surveillance and Facebook use. You're eligible to be in this study because you have a Facebook account. This invitation message is being disseminated through a Facebook advertising service.

If you decide to participate in this study, you will click the link below. It will lead you to the survey pages operated by SurveyMonkey, an online survey system.

< A hyperlink for survey participation will be added here>

Remember, this is completely voluntary. You can choose to be in the study or not. If you'd like to participate or have any questions about the study, please email or contact me. The contact information will be seen in the first page of the survey.

Thank you very much.

Appendix F

Recruitment Material in Korean

UCONN
UNIVERSITY OF CONNECTICUT

대한민국 사례를 통해서 본, 정부 감시가 소셜네트워크(SNS) 사용에 미치는 영향에 관한 연구

소셜네트워크 사용자 여러분 안녕하세요

저는 미국 코네티컷 대학에서 커뮤니케이션 전공, 박사 과정 학생입니다. 현재, 정부의 감시가 소셜네트워크(SNS) 사용에 미치는 영향에 관한 연구를 하고 있습니다. 한국에 거주 중이신 SNS 사용자들께서는 이 연구에 설문 응답자로 참여해 주시기 부탁드립니다. 본 참여 안내문은 SNS 서비스를 통하여 배포되었음을 알려 드립니다.

본 연구에서 진행 중인 설문에 참여의사가 있으신 분은 아래의 링크를 눌러주세요. 미국 내에서 운영되는 서베이 몽키 싸이트에 올려지 설문으로 이동됩니다. 서베이에 관한 자세한 내용 및 연구자 연락처에 관한 내용은 설문 첫 페이지에서 확인하실 수 있습니다. 무엇보다 자발적인 참여 부탁드립니다.

감사합니다.