

윤리의식: SNS상의 수동적 개인정보 침해와 능동적 개인정보 침해

Ethical Consciousness: Passive Privacy Intrusion versus Active Privacy Intrusion on a SNS

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요 약

사람들은 SNS를 일상적으로 사용하고 있다. SNS를 사용함에 있어 사람들은 의도적이든 그렇지 않든 자신의 개인정보를 노출하고 있다. SNS는 사람들이 자주 볼 수 없는 사람들과 소통할 수 있게 하는 등 장점을 제공하긴 하지만, 어두운 면도 가지고 있다. SNS 사용자 중에 일부는 정보제공자의 동의없이 SNS상에 있는 개인정보를 도용하기도 해 사회적인 문제로 대두되고 있다. 본 논문은 SNS상의 개인정보 침해에 영향을 미치는 요인에 대한 연구이다. 본 논문에서 SNS상에서 개인정보 침해는 수동적과 능동적 침해로 나눈다. 수동적 침해는 정보제공자의 동의 없이 정보를 수집하는 것을 말하는 것이며 능동적 침해는 정보제공자의 동의없이 정보를 유포하는 행위를 말한다. 본 연구를 통해 낮은 윤리의식이 수동적 침해와 능동적 침해를 즐거움으로 생각하는 것에 긍정적으로 영향을 미친다는 결과를 도출했다. 또한 낮은 윤리의식을 가진 사람일수록 다른 사람의 개인정보를 수집하는 것에 호기심이 많다는 결론도 도출했다. 본 연구는 낮은 윤리의식 이외에도 즐거움, 호기심, 개인정보 침해의 피해자로서의 경험과 가해자로서의 경험 그리고 타인의 개인정보를 수집하거나 유포할 수 있다는 자기효능감이 수동적 그리고 능동적 개인정보 침해에 미치는 영향을 설문 자료를 통해 조사하였다.

키워드 : 개인정보 침해, SNS상의 개인정보, 수동적 개인정보 침해, 능동적 개인정보 침해, 윤리의식

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I. Introduction

People have adopted Social Networking Sites (SNSs) as a part of their daily lives. When a person uses SNSs, (s)he discloses her/his personal information such as name, gender, age, interests, pictures, or regions, jobs, and schools (s)he has been (Taddicken, 2014). SNS service providers offer platforms that users can easily upload their information so that the users can create a great amount of content. For example, on Facebook, users are clicking “like” about 4.5 billion times per a day, five new profiles are created every second, and 300 million photos are daily uploaded (source: Facebook). As many people have enjoyed SNSs, they intentionally or unintentionally disclose their private information to others in order to make and keep relationships. Although using SNSs can provide benefits to a person such as maintaining relationships with people who does not see often, it has negative aspects. Someone can use one’s disclosed information without the acknowledgement of the information owner. For example, when a woman uploaded pictures of her luxurious car on her Instagram in South Korea, a man who could access to her Instagram decided to rob her. Then, he searched and found out her home and work addresses by going through her various SNSs. Fortunately, when he stalked her and waited for a chance to rob her, he was caught and sentenced more than three years in prison. Although the woman simply updated her daily life, the disclosed information on her SNSs became a source of her being targeted in the robbery.

As the example illustrates, the privacy intrusion on SNSs has become a social problem and needs attention. According to Personal Information Protection Commission (PIPC) in Korea, the numbers of cases asked by individuals and organizations about privacy intrusion are more than three hundred forty thousand

cases between September 2020 and May 2022 (PIPC, 2022). It means that there are more than five hundred cases per day. Privacy intrusion has become one of universal crimes committed by many people (Lee, 2020). The 99.6 percent of SNS users concern about their privacies on SNSs and the 67% percent of these SNS users confess that they have collected other people’s private information on SNSs without letting the information owners know about it in South Korea (KISA, 2014; KISA, 2011). It implies that every SNS user can be a victim of SNS privacy intrusion. On the other hand, every SNS user can possibly be a SNS privacy intruder as well. With this nature of a SNS, it is logical to have two perspectives of a privacy intruder and a victim on SNSs. Many studies have focused on the perspective of a privacy victim on SNSs (e.g., Won and Seo, 2017). However, we will focus on the perspective of a privacy intruder on SNSs, because studying factors affecting intention of a privacy intruder on SNSs can provide a way to understand the behavior of an intruder and possibly suggest a way to decrease SNS privacy intrusions. Furthermore, we divide a SNS privacy intrusion into two: simply collecting one’s private information on SNSs without letting the information owner knows as a passive intrusion and distributing one’ private information on SNSs without her/his agreement as an active intrusion. Although a person, who is a passive intruder, does not have a harmful intention, the consequence of a mishandle of the collected information can be devastating to the information owner.

Since private information is easily accessed on SNSs, it has become easy for one to intrude someone else’s privacy on SNSs (Won and Seo, 2017). One cannot fully control her/his information once (s)he discloses private information on SNSs. The disclosed information rather becomes a part of public goods, even though the owner does not want. It means that people’s ethical

consciousness about public goods can affect their intentions to use those goods. In the SNS context, a person who feels less guilty about searching and collecting others' private information without letting the information owner know has lower ethical consciousness. According to the survey by Korea Internet and Security Agency (KISA), the 46.1 percent respondents answered that they have searched and collected other people's private information for fun or curiosity. Furthermore, some people answered that they searched and collected others' private information to exaggerate their abilities of doing so (KISA, 2011). This survey result indicates that one may intrude the privacies of others on SNSs for fun or curiosity, or to exaggerate his/her ability without feeling guilty. Therefore, it is important to investigate how low ethical consciousness plays a role in intruding privacy on SNSs. We will focus on individual's ethical consciousness that may influence on enjoyment and curiosity of intruding others' private information. In addition, we will also investigate how one's perceived ability of collecting and distributing others' private information is related to the intention of intruding others' privacies.

We consider SNS users' experience of intruding someone's private information and experience of being a victim of a privacy intrusion as well. Since SNS users have easily witnessed and experienced privacy intrusions on SNSs (Lee and An, 2013), people could learn from experiences such as acting or being a victim of violence, wrongdoing, and crime, which is called a social learning (Akers, 1973).

The results show that factors differently influence one's intention to collect and distribute someone's privacy information. Curiosity has the strongest relation with intention to collect someone's personal information. Then, self-efficacy and enjoyment follows as the second and third factors. Meanwhile, the experience

of distributing someone's personal information has the strongest relation with intention to distribute someone's personal information.

We contribute to the relevant literature through this study. First, this research reveals factors related to SNS users' intention to intrude someone's privacy. Second, this paper expands the definition of ethical consciousness from offline to online regarding privacy intrusion. Moreover, this research will alarm about the caution of privacy intrusion to SNS users when they are online. Fourth, this research classifies privacy intrusions into passive intrusion (collector) and active intrusion (distributor). Fifth, we identify the different relations between antecedents and the passive intrusion versus between antecedents and the active intrusion.

This paper is organized into five parts including this introduction. Next, we review the relevant literature including concept of privacy, Internet ethical consciousness, and motivation. After data collection and method are described, hypotheses are tested with structural equation modelling. Finally, the analyses and contributions are explained in conclusion and limitation.

II. Literature Review

2.1 Concept of Privacy and Privacy Intrusion

One of original privacy definitions is a right to let alone, which guarantees personal freedom in a private space (Warren and Brandeis, 1890). The meaning of privacy has changed over time. With the development of Information and Communications Technologies (ICTs), people are virtually connected over Internet and they intentionally or unintentionally upload their private information on Internet anytime anywhere with their mobile devices. This cyber space can be called

a virtual private space. However, it is very different from a physical private space, because it is not clear what the boundary of a virtual private space is. According to Westin (1967), informational privacy refers to one's right to determine when, how, and how much (s)he discloses her/his information when (s)he communicates with others. Privacy in the information age refers to one's right to control the accesses of others to her/his private information (Noh and Choung, 2010). Furthermore, the definition of a virtual privacy includes one's right to actively behave to control her/his private information over Internet (Oh and Yu, 2011).

People have expressed their concerns on virtual privacy since they used Internet (Yun *et al.*, 2019). When individual personal information was mainly collected by an organization and company in 1990s and in the early 2000s, people concerned about the information privacy practices of organizations (Belanger *et al.*, 2002; Smith *et al.*, 1996). In this period, people started to use Internet for simple subscription services (e.g., exchanging emails, reading news, etc.) and e-commerce. Those users therefore concerned on misuses of their personal information by organizations that they directly contacted. They also concerned that these organizations mishandled their information by passing it to second and third parties (Conger *et al.*, 2013).

Since the mid-2000s, the emergence and development of a SNS and mobile technologies enabled people to participate in generating content that individuals as well as organizations could access (Ellison *et al.*, 2007). In this circumstance, users especially, SNS users became more aware of information privacy that could be intruded by other individuals as well as that could be mishandled by organizations (Xu *et al.*, 2008). In the SNS context, it is not easy for an individual to control the accesses of others into her/his SNSs. SNS users tend to disclose their private information when they create accounts through making personal profiles.

Moreover, a Social Network Site (SNS) itself encourages users to expose their private lives by asking users to upload where they are; what they think; etc. Although users can decide a certain level of access to their postings from others, they can't fully control for a potential intruder to access their postings (Won and Seo, 2017). Reflecting this social phenomenon, more literature on privacy information breach by individuals has appeared (e.g., Won and Seo, 2017). For this reason, we need to rely on people's ethics in a certain degree. For example, when a person walks to street, we do not expect that (s)he just walks into our house without our permission and collect our personal information (for example, our pictures in a living room). Although people fully understand and have a certain level of ethics not to invade someone's privacy in a real life, the same people may have a different level of ethics in online activities. Therefore, we research how ethical consciousness can influence enjoyment and curiosity of collecting or distributing someone's information.

2.2 Internet Ethics and Ethical Consciousness

Internet ethics is a normative basic system to form Internet culture, referring a necessary standard to develop a quality of life online (Chu, 2003). Moreover, it is a moral system to decide right or wrong behavior on utilizing information and telecommunication technologies in information age (Chu, 2001). Internet ethics is developed from a basic ethics in real life and influence people to reflect and use Internet (Kim and Kang, 2010). However, one can develop Internet ethics different from her/his basic ethics in real life, because of anonymity and ambiguous boundary of privacy on Internet. For example, when a person visits someone's house, (s)he does not look thorough a photo album and a personal memo book of the owner without having

a permission. However, people can easily access to others' photos and writings on SNSs, download them, and sometimes distribute them without any acknowledgement and permission of the information owner. This difference between in real world and online world may be influenced by low ethical consciousness on Internet.

This low ethical consciousness on Internet is not easily improved (Korea Communications Standards Commission, 2012). It means that people who have low ethical consciousness tend to collect or distribute others' private information on SNSs without the acknowledgement and agreement of an information owner. According to KISA (2011), the 67 percent of Internet users have participated in collecting or distributing others' private information on SNSs. Furthermore, those users answered that they mostly intruded other's privacies on SNSs 'for enjoyment and curiosity'. This answer illustrates that the lack of ethical consciousness is positively related to the enjoyment and curiosity of a SNS privacy intruder. Thus, we hypothesize that low ethical consciousness is related to the enjoyment of the passive and active intrusions.

H1a: Low ethical consciousness is positively related to enjoyment in collecting private information of others on SNSs

H1b: Low ethical consciousness is positively related to enjoyment in distributing private information of others on SNSs

For curiosity, we hypothesize that low ethical consciousness is positively related to curiosity in collecting private information of other SNS users. However, we do not hypothesize the relationship between low ethical consciousness and curiosity in distributing private information of others on a SNS, because curiosity refers to a desire to explore and learn new information of

things or people itself (Koo and Ju, 2010). According to the information-gap-theory, curiosity increases when there is a gap in one's knowledge to know (Kitkowska *et al.*, 2020; Loewenstein, 1994). Thus, curiosity may encourage a person to collect information to fill this gap, but this is not related to distributing others' private information.

H2: Low ethical consciousness is positively related to curiosity in collecting private information of others on SNSs

2.3 Motivation

Motivation is an inner state that makes us energize and sustain certain behavior to achieve specific goals (Pizam *et al.*, 1979, p. 195). Motivation is one of attributes that make us do or not do particular behavior (Broussard and Garrison, 2004, p. 106). This motivation has specific functions; activating function what arouses an action, directive function what determines a direction of behavior, adjusting function what controls an action for the purpose, and reinforcing function what affects a degree of behavior (Byeon, 2005).

Researchers have divided motivation into intrinsic and extrinsic motivation (Deci, 1975; Deci and Ryan, 1985; Lepper and Green, 1978). Intrinsic motivation, for instance, interest or self-efficacy, makes us conduct an activity to gain pleasure and satisfaction by ourselves without external compensation (Deci and Ryan, 1985; Gottfried, 1990). However, extrinsic motivation is about people to act for external drives, such as rewards or social recognition. Intrinsic motivation more stimulates people to devote themselves to behave than extrinsic motivation, even though both motivations work mutually (Deci and Ryan, 1985). Moreover, people who are motivated intrinsically try to gain their goals more than extrinsically motivated one (Gottfried,

1990). Thus, our research is focusing on intrinsic motivation such as interest or self-efficacy on intruding other SNS users.

2.3.1 Interest

Interest, which is one of the intrinsic motivations, refers to the psychological state of participating or the tendency to participate in certain objects, events, or ideas over time (Hidi and Renninger, 2006). In general, interest controls personal behavior, caused by relationship between individual and surrounded environment (Hidi and Renninger, 2006; Krapp, 2002; Schiefele, 1999). Each person can recognize a same object differently depending on her/his interest. Furthermore, interest is regarded as an important attribute that organizes one's degree of perception toward an object, event, or idea in time (Krapp, 2002; Schiefele, 1999).

Hidi (1990) classified interest as individual interest and situational interest. *Individual interest* is defined as one's preference on a specific area or activity. Interests consisting of different levels of enjoyment and curiosity are various depending on individuals. Furthermore, this individual interest affects her/his behavior, because interest is developed gradually and remained steadily. Therefore, enjoyment and curiosity as individual interests have positive relations with one's attitude (Ainley and Ainley, 2011; Schiefele, 1999; Turner and Silvia, 2006).

According to Childers *et al.* (2002), enjoyment affects attitude toward behavior. Especially, the perceived enjoyment is defined as the degree of enjoyment in realizing oneself, regardless of the performance of a tool (Carroll and Thomas, 1988). Venkatesh (1999) demonstrated that perceived enjoyment has a closed relationship with continuous behavioral intention as an internal motive source. For example, a person can simply like threatening others because of psychological

pleasure called enjoyment (Blackwell, 2009). Thus, the following hypotheses are developed.

H3a: Enjoyment is positively related to intention to collect private information of others on SNSs.

H3b: Enjoyment is positively related to intention to distribute private information of others on SNSs.

Curiosity is the desire to acquire new sensual experiences, information and knowledge that are motivations of an exploratory behavior (Litman and Spielberger, 2003). Moreover, curiosity affects the way that human beings perceive and navigate new information (Koo and Ju, 2010). According to Loewenstein (1994), curiosity is derived from the desire to narrow down the gap between what (s)he knows and what (s)he wants to know. Accordingly, this gap stimulates individual's curiosity. Thus, curiosity about information what individual wants to know affects intention to collect personal information.

H4: Curiosity is positively related to the intention to collect personal information of someone.

On the other hand, the other type of interest is a *situational interest*. It refers to a react stimulated by a certain situation or experience (Renninger *et al.* 2014). In other words, situation can trigger one's interest and it generates his/her further behavior (Schiefele, 1991). Situational interest occurs temporarily and immediately by a certain stimulation or situation (Renninger *et al.*, 2014). For example, SNS users can easily witness and experience privacy intrusion on SNSs (Lee and An, 2013). Interestingly, people could learn from experiences such as acting or being a victim of violence, wrongdoing, and crime, which is called

a social learning (Akers, 1973). A stimulated person, who has intruded someone's personal information, has been intruded by someone, or has just witnessed this kind of behavior on SNSs, can develop a certain pattern. According to the study, the victimization experience of cyberbullying is the biggest factor of the perpetration of cyberbullying (Sung *et al.*, 2006). Thus, H5 and H6 are established as below.

H5a: Experience of privacy being intruded by others is positively related to the intention to collect personal information of someone.

H5b: Experience of privacy being intruded by others is positively related to the intention to distribute personal information of someone.

H6a: The experience of intruding others' privacy is positively related to the intention to collect personal information of someone.

H6b: The experience of intruding others' privacy is positively related to the intention to distribute personal information of someone.

2.3.2 Self-efficacy

Self-efficacy, which is one of the intrinsic motivations, is about judgment of how well one can implement and use a certain tool to deal with a prospective situation (Bandura, 1977; Bandura, 1982). It is one's confidence in her/his ability to perform a task and to stimulate positive attitude toward behavior. Self-efficacy affects individual's execution of an action. This factor has been used since the adoption and use of a computer. For example, self-efficacy affects intention to use and adopt computer (Compeau and Higgins, 1995). People who have low self-efficacy on using a computer have low possibility to use Internet in the future than those who have high self-efficacy (Hsu and Chiu, 2004). In general, self-efficacy affects one's intention and behavior (Bandura, 1982). In other words, when a

person regards him-/herself as a capable person to collect or distribute someone's personal information, (s)he tends to do so in practice.

H7a: Self-efficacy is positively related to the intention to collect personal information of someone.

H7b: Self-efficacy is positively related to the intention to distribute personal information of someone.

2.4 From Collecting Information to Distributing the Collected Information

According to Situational Theory, involvement is used to figure out the degree of relation between a certain subject and an individual (Bloch, 1981). Involvement refers to one's immersion on the certain topic (Bloch, 1981). High involvement means high personal interest, engagement, perception in term of the relevance and consequences of a certain topic or object (Sherif and Cantril, 1947; Antil, 1984). Involvement can change from low to high when a person learns more about a topic or object (Greenwald and Leavitt, 1984). We consider the intention to collect someone's personal information on SNSs as a low involvement of intrusion. It is true that one can look for someone's information to prepare a meeting or a casual event. In this situation, this involvement tends to be temporal and a low degree of relation between an information seeker and an information owner. On the other hand, the intention to distribute someone's information on SNSs is a high involvement of intrusion, because one, who tends to distribute someone's personal information, is likely to know that this activity is illegal. In spite of recognizing this illegal aspect, (s)he distributes someone's personal information because of her/his

high interest and engagement toward the information owner. Although one can collect someone's personal information on SNSs with a low involvement at the beginning, this involvement can change as a surrounding environment and one's interest change. If her/his involvement changes from low to high, (s)he can use her/his collected information to distribute without the information owner's acknowledgement.

H8: The intention to collect someone's personal information is positively related to the intention to distribute it.

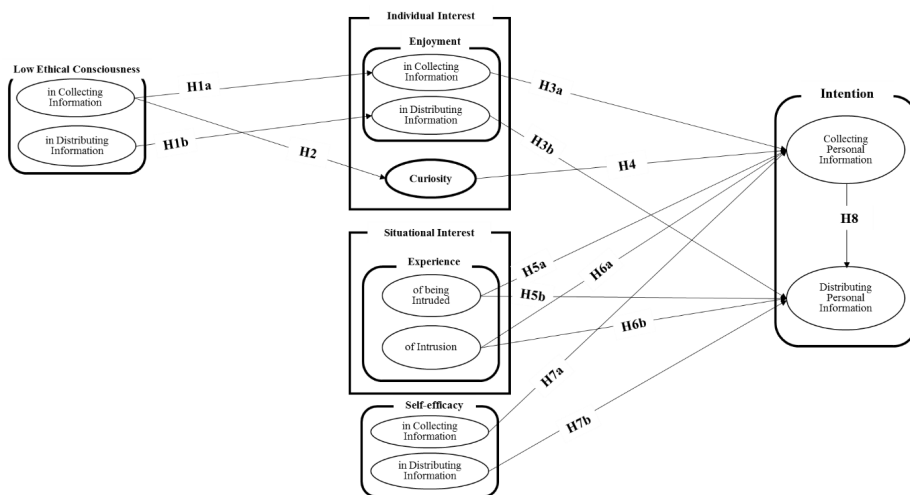
The research model proposes that low ethical consciousness affects the elements of intrinsic motivation. Based on the theoretical background, we divide intrinsic motivation into three parts; individual interest, situational interest, and self-efficacy. Individual interest includes enjoyment in collecting and distributing information and curiosity. Moreover, we consider experience of intrusion and being intruded as situational interests. Apart from interest, we include self-efficacy in collecting information and distributing information

as the other intrinsic motivation. Moreover, all those kinds of intrinsic motivations will influence on intention to collect and distribute personal information respectively. <Figure 1> shows the relation in detail.

III. Methodology

3.1 Data Collection

We conducted survey to empirically investigate how the various factors affect privacy intrusion intention. The main target is 20s who heavily use SNSs. According to KISA (Korea Internet and Security Agency)'s survey, the 87 percent of 20s answered that they used SNSs, which was the highest usage rate among all age groups (KISA, 2014). In addition, the 72 percent of 20s answered that they participated in collecting or distributing someone's personal information on SNSs, which was also the highest rate among all age groups (KISA, 2011). More than the 50 percent of 20s have experienced privacy intrusion in year 2018 (PIPC, 2019). Thus, we target 20s who are most familiar with SNSs among all age groups.



<Figure 1> Research Model

We conducted a pilot survey with 20 university students to test whether survey questions were appropriate to measure each construct. After analyzing the result of the pilot study, inappropriate survey questions were modified or deleted.

After the pilot process, we distributed the online survey through Google Docs to SNS users from November 6 to December 7, 2015. At the same time, 130 copies of the questionnaire were distributed to SNS users in 20s. Furthermore, 38 copies were collected in March 25. We collected 162 copies among 168

copies, and inappropriate 7 copies were discarded. As a result, we have collected 155 valid copies from offline survey and 50 copies from online survey to test the proposed research model. <Table 1> shows demographic information of data cases.

3.2 Measurement

We adopted and reformulated measurements from research papers (See <Table 2>). The survey questions are 5-Likert scale.

<Table 1> Demographic Information of the Research Sample

Characteristics	Options	Case	Percent (%)
Gender	Male	91	44.4%
	Female	114	55.6%
Age	Below 20	2	1.0%
	20~29	201	98%
	30 and above	2	1.0%
Education	High school or below	4	2.0%
	Associate's or bachelor's degree	164	80.0%
	Master's degree or higher	37	18.0%
Number of the SNS accounts	1	112	54.6%
	2	60	29.3%
	3	28	13.7%
	4	2	1.0%
	>5	3	1.5%

<Table 2> Definition of Variables

Variable	Definition	Reference
Self-efficacy	Capacity and confidence in oneself to collect or/and distribute other people's privacy information on SNSs	Bandura (1977, 1986), Ifinedo (2014)
Curiosity	Curiosity about other people's personal information or private life on SNSs	Agarwal and Karahanna (2000), Ahn <i>et al.</i> (2014)
Enjoyment	Enjoyment acquired as violating the privacy of others on SNSs	Ahn <i>et al.</i> (2014), Van der Heijden (2004)
Low Ethical Consciousness	Permissive attitude to a privacy intrusion on SNSs (e.g. I think it is somewhat allowable to search someone's personal information on SNSs, I think it is somewhat allowable to write articles/comments about someone on SNSs)	Cho (2013)
Experience	Experience violated privacy of others on SNSs / experience of the violation of privacy by others	Bandura (1986), Korea Internet and Security Agency (2011)
Intention	Intention to intrude the privacy of others on SNSs	Ahn <i>et al.</i> (2014), Ajzen (2002), Ifinedo (2014), Son (2013)

Intention of Collecting Personal Information refers to one's intention to look for, collect, and store someone's personal information on SNSs without the acknowledgement of the information owner.

Intention of Distributing Personal Information means one's intention to distribute someone's personal information on SNSs without the acknowledgement of the information owner.

IV. Empirical Analysis

We used Smart PLS (Partial Square Least) for analyzing data and validating research model. PLS is an applicable research method for an exploratory study (Teo *et al.*, 2003). In order to validate the measurement model, we analyzed internal consistency, convergent validity, and discriminant validity. We also tested the structural model and analyzed the goodness of fit, explanatory power, path coefficient, and significance of the hypothesis of the model through path analysis.

4.1 Measurement Model Test

For the analysis of PLS structural equation model, we verified convergent validity, internal consistency and discriminant validity about our constructs and measurement items.

This research tested factor loading and T-value to verify the convergent validity of measurement items belonging each construct by using the bootstrap method of PLS. If the loading value of each item exceeds 0.7, researchers interprets that it is valid (Fornell and Larcker, 1981). Gefen and Straub (2005) suggests that T-values for all the items have to exceed 1.96. Higher than 0.7 of the composite reliabilities (CR) of all constructs indicates a baseline (Thompson *et al.*, 1995). Moreover, many scholars mentioned that the baseline of Averaged Variance Extracted (AVE) of each construct is 0.5 (Fornell and Larcker, 1981; Chin, 1998). Cronbach α , over 0.7, widely used for reliability verification (Nunnally, 1987). Therefore, as can be seen in <Table 3>, our research model identified internal consistency.

<Table 3> Convergent Validity and Internal Consistency

Constructs	Items	Loadings	AVE	Composite Reliability	Cronbach α
Curiosity	CU1	0.864	0.820	0.948	0.926
	CU2	0.901			
	CU3	0.930			
	CU4	0.925			
Intention of Collecting Personal Information	ITC1	0.831	0.724	0.913	0.873
	ITC2	0.875			
	ITC3	0.886			
	ITC4	0.809			
Intention of Distributing Personal Information	ITD1	0.900	0.844	0.942	0.908
	ITD2	0.948			
	ITD3	0.908			
Low Ethical Consciousness in Collecting Information	LEC1	0.917	0.856	0.922	0.832
	LEC2	0.934			
Low Ethical Consciousness in Distributing Information	LED1	0.908	0.793	0.920	0.869
	LED2	0.914			
	LED3	0.848			

〈Table 3〉 Convergent Validity and Internal Consistency(Continued)

Constructs	Items	Loadings	AVE	Composite Reliability	Cronbach α
Enjoyment in Collecting Information	NJC1	0.897	0.788	0.937	0.910
	NJC2	0.878			
	NJC3	0.913			
	NJC4	0.862			
Enjoyment in Distributing Information	NJD1	0.807	0.781	0.955	0.944
	NJD2	0.889			
	NJD3	0.892			
	NJD4	0.894			
	NJD5	0.905			
	NJD6	0.913			
Self-efficacy in Collecting Information	SEC1	0.811	0.694	0.931	0.913
	SEC2	0.783			
	SEC3	0.765			
	SEC4	0.853			
	SEC5	0.885			
	SEC6	0.894			
Self-efficacy in Distributing Information	SED1	0.840	0.678	0.862	0.764
	SED2	0.903			
Experience of being Intruded	XPB1	0.859	0.733	0.932	0.909
	XPB2	0.870			
	XPB3	0.824			
	XPB4	0.894			
	XPB5	0.832			
Experience of Intrusion	XPI1	0.843	0.739	0.934	0.911
	XPI2	0.857			
	XPI3	0.878			
	XPI4	0.901			
	XPI5	0.815			

This study uses cross loading to prove discriminant validity. According to Chin (1998), discriminant validity is satisfied when factor loading on each item is higher than other items. <Table 4> indicates discriminant validity.

The inter-construct correlation matrix (<Table 5>) shows the comparison by inter-correlations among la-

tent variables and corresponding square roots of AVEs. Each square root of AVE is greater than its correlation with any of the other constructs (Fornell and Larcker 1981). The lowest square root value of the AVE (0.833) is higher than the highest correlation coefficient value (0.663). Thus, this research model satisfied convergent and discriminant validities.

<Table 4> Loadings and Cross-loadings

Construct	Items	CU	ITC	ITD	LEC	LED	NJC	NJD	SEC	SED	XPB	XPI
Curiosity	CU1	0.864	0.46	0.040	0.408	0.142	0.59	0.303	0.107	0.098	0.127	0.153
	CU2	0.901	0.461	0.010	0.424	0.177	0.592	0.242	0.118	0.114	0.083	0.110
	CU3	0.930	0.399	0.024	0.500	0.255	0.609	0.322	0.125	0.095	0.146	0.171
	CU4	0.925	0.386	0.051	0.487	0.202	0.630	0.340	0.175	0.094	0.184	0.193
Intention of Collecting Personal Information	ITC1	0.407	0.831	0.141	0.335	0.090	0.335	0.089	0.285	0.144	0.196	0.183
	ITC2	0.362	0.875	0.284	0.356	0.125	0.357	0.137	0.211	0.114	0.212	0.225
	ITC3	0.422	0.886	0.392	0.364	0.146	0.417	0.178	0.278	0.135	0.258	0.344
	ITC4	0.394	0.809	0.342	0.387	0.214	0.346	0.115	0.227	0.222	0.222	0.312
Intention of Distributing Personal Information	ITD1	-0.009	0.285	0.900	0.077	0.393	0.142	0.352	0.025	0.024	0.239	0.430
	ITD2	0.045	0.344	0.948	0.100	0.423	0.193	0.391	0.072	0.052	0.344	0.510
	ITD3	0.052	0.341	0.908	0.099	0.400	0.162	0.437	0.021	-0.007	0.394	0.544
Low Ethical Consciousness in Collecting Information	LEC1	0.434	0.394	0.106	0.917	0.346	0.484	0.249	0.142	-0.003	0.089	0.067
	LEC2	0.494	0.393	0.082	0.934	0.322	0.532	0.216	0.165	0.068	0.147	0.141
Low Ethical Consciousness in Distributing Information	LED1	0.251	0.118	0.303	0.342	0.908	0.373	0.520	0.029	0.076	0.033	0.250
	LED2	0.266	0.221	0.421	0.381	0.914	0.423	0.511	0.028	0.064	0.103	0.278
	LED3	0.061	0.124	0.454	0.241	0.848	0.237	0.531	-0.075	-0.073	0.184	0.374
Enjoyment in Collecting Information	NJC1	0.570	0.328	0.159	0.515	0.364	0.897	0.441	0.087	0.126	0.069	0.146
	NJC2	0.544	0.364	0.127	0.424	0.277	0.878	0.329	0.103	0.109	0.063	0.129
	NJC3	0.639	0.440	0.142	0.555	0.313	0.913	0.451	0.041	0.066	0.068	0.138
	NJC4	0.573	0.393	0.220	0.444	0.419	0.862	0.524	0.107	0.113	0.040	0.156
Enjoyment in Distributing Information	NJD1	0.275	0.042	0.336	0.131	0.408	0.332	0.807	-0.045	0.006	0.189	0.230
	NJD2	0.265	0.088	0.387	0.206	0.491	0.419	0.889	-0.144	-0.068	0.184	0.298
	NJD3	0.324	0.159	0.400	0.210	0.572	0.396	0.892	-0.081	0.022	0.223	0.394
	NJD4	0.284	0.149	0.335	0.240	0.506	0.479	0.894	-0.022	0.040	0.098	0.250
	NJD5	0.299	0.183	0.405	0.241	0.548	0.494	0.905	-0.043	0.043	0.131	0.312
	NJD6	0.316	0.185	0.414	0.280	0.560	0.484	0.913	-0.062	0.021	0.126	0.381
Self-efficacy in Collecting Information	SEC1	0.137	0.229	-0.097	0.210	-0.082	0.053	-0.174	0.811	0.546	0.059	0.001
	SEC2	0.119	0.205	-0.073	0.161	-0.097	0.074	-0.112	0.783	0.530	0.128	0.023
	SEC3	0.031	0.175	-0.020	0.093	-0.044	0.070	-0.065	0.765	0.466	0.093	0.018
	SEC4	0.122	0.185	0.099	0.113	0.054	0.065	-0.017	0.853	0.557	0.053	0.082
	SEC5	0.128	0.318	0.114	0.119	0.070	0.090	-0.028	0.885	0.541	0.008	0.063
	SEC6	0.160	0.296	0.122	0.139	0.017	0.097	-0.010	0.894	0.579	0.148	0.146
Self-efficacy in Distributing Information	SED1	0.084	0.198	0.015	0.049	-0.028	0.071	-0.098	0.589	0.840	0.007	-0.022
	SED2	0.112	0.179	0.025	0.020	-0.009	0.097	-0.036	0.562	0.903	0.008	-0.001
Experience of being Intruded	XPB1	0.144	0.169	0.321	0.122	0.193	0.039	0.237	0.043	-0.027	0.859	0.541
	XPB2	0.213	0.233	0.327	0.104	0.156	0.115	0.139	0.063	0.013	0.870	0.576
	XPB3	0.131	0.268	0.248	0.119	-0.004	0.049	0.071	0.164	0.007	0.824	0.526
	XPB4	0.128	0.255	0.343	0.153	0.122	0.089	0.187	0.082	0.053	0.894	0.636
	XPB5	0.014	0.202	0.300	0.050	0.040	-0.011	0.127	0.057	0.004	0.832	0.547
Experience of Intrusion	XPI1	0.081	0.179	0.476	0.068	0.298	0.095	0.306	0.113	0.079	0.613	0.843
	XPI2	0.119	0.299	0.478	0.065	0.247	0.133	0.239	0.090	0.010	0.608	0.857
	XPI3	0.100	0.301	0.456	0.160	0.262	0.089	0.278	0.041	-0.010	0.576	0.878
	XPI4	0.233	0.319	0.477	0.113	0.327	0.171	0.366	0.045	0.016	0.575	0.901
	XPI5	0.206	0.277	0.447	0.085	0.323	0.197	0.345	0.028	0.038	0.477	0.815

〈Table 5〉 Discriminant Validity

	CU	ITC	ITD	LEC	LED	NJC	NJD	SEC	SED	XPB	XPI
CU	0.905										
ITC	0.467	0.851									
ITD	0.034	0.354	0.919								
LEC	0.503	0.425	0.101	0.925							
LED	0.215	0.173	0.441	0.360	0.891						
NJC	0.658	0.432	0.182	0.550	0.385	0.888					
NJD	0.333	0.157	0.431	0.250	0.586	0.494	0.884				
SEC	0.145	0.294	0.042	0.167	-0.008	0.092	-0.075	0.834			
SED	0.111	0.182	0.024	0.038	-0.024	0.114	0.013	0.643	0.823		
XPB	0.149	0.264	0.361	0.129	0.120	0.068	0.179	0.095	0.014	0.856	
XPI	0.173	0.322	0.543	0.115	0.339	0.160	0.357	0.073	0.030	0.663	0.860

CU = Curiosity; ITC = Intention of Collecting Personal Information; ITD = Intention of Distributing Personal Information; LEC = Low Ethical Consciousness in Collecting Information; LED = Low Ethical Consciousness in Distributing Information; NJC = Enjoyment in Collecting Information; NJD = Enjoyment in Distributing Information; SEC = Self-efficacy in Collecting Information; SED = Self-efficacy in Distributing Information; XPB = Experience of being Intruded; XPI = Experience of Intrusion

4.2 Structural Model Test

In PLS, we are able to evaluate goodness of fit through R^2 value. If R^2 value is more than 0.1, it is likely to have explanatory power more than 10% (Falk and Miller, 1992). This study shows that R^2 value for intention to collect someone's personal information on SNSs is 0.351 and R^2 value for intention to distribute someone's personal information on SNSs is 0.392. Thus, this study explains 35.1% of intention to collect someone's personal information on SNSs and 39.2% of intention to distribute the information on SNSs.

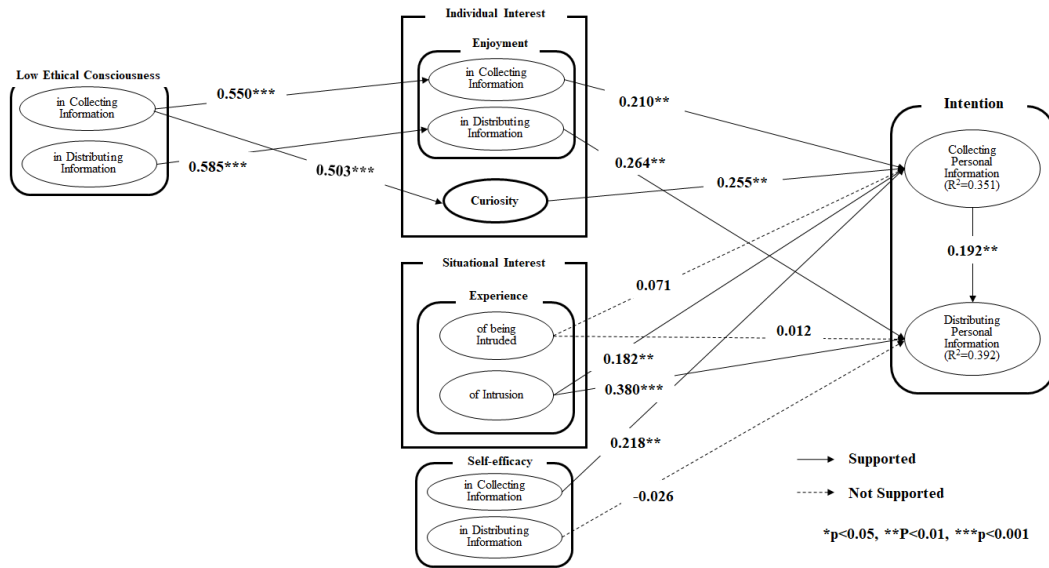
4.3 Hypothesis Tests

Low ethical consciousness is positively related to enjoyment (H1a, $\beta = 0.550$, $\rho < 0.001$) and curiosity (H2, $\beta = 0.503$, $\rho < 0.001$) in collecting someone's personal information on SNSs. Low ethical consciousness is positively related to enjoyment (H1b, $\beta = 0.585$, $\rho < 0.001$) in distributing someone's personal in-

formation on SNSs.

Moreover, regarding passive intruders (collectors), enjoyment (H3a, $\beta = 0.210$, $\rho < 0.01$), curiosity (H4, $\beta = 0.255$, $\rho < 0.01$), experience of intruding someone (H6a, $\beta = 0.182$, $\rho < 0.01$), and self-efficacy (H7a, $\beta = 0.218$, $\rho < 0.01$) are positively related to intention to collect someone's personal information on SNSs. However, experience of being intruded has no relation with intention to collect (H5a, $\beta = 0.071$, ns).

On the other hand, for active intruders (distributors), enjoyment (H3b, $\beta = 0.264$, $\rho < 0.01$), experience of intruding someone (H6b, $\beta = 0.380$, $\rho < 0.001$), and intention to collect someone's personal information (H8, $\beta = 0.192$, $\rho < 0.01$) are positively related to intention to distribute someone's personal information on SNSs. Meanwhile, experience of privacy being intruded (H5b, $\beta = 0.012$, ns) and self-efficacy in distributing information (H7b, $\beta = -0.026$, ns) are not related to intention to distribute someone's personal information on SNSs. <Figure 2> shows the test result of hypotheses.



<Figure 2> Model Testing Results

V. Conclusion and Limitation

5.1 Hypotheses Analyses

<Table 6> shows the results of Hypotheses. This study examined factors affecting privacy in-

trusion on SNSs. As a result, we proved various valuable results. First of all, low ethical consciousness influences with enjoyment and curiosity. In depth, low ethical consciousness positively affects enjoyment in both of collecting and distributing someone’s personal information on SNSs (H1). It means that a person who

<Table 6> Hypotheses Results

	Relationship	Result
H1a	Low Ethical Consciousness in Collecting Information → Enjoyment in Collecting Information	Supported (β=0.550)
H1b	Low Ethical Consciousness in Distributing Information → Enjoyment in Distributing Information	Supported (β=0.585)
H2	Low Ethical Consciousness in Collecting Information → Curiosity	Supported (β=0.503)
H3a	Enjoyment in Collecting Information → Intention to Collect Personal Information	Supported (β=0.210)
H3b	Enjoyment in Distributing Information → Intention to Distribute Personal Information	Supported (β=0.264)
H4	Curiosity → Intention to Collect Personal Information	Supported (β=0.255)
H5a	Experience of being Intruded → Intention to Collect Personal Information	Not Supported (β=0.071)
H5b	Experience of being Intruded → Intention to Distribute Personal Information	Not Supported (β=0.012)
H6a	Experience of Intrusion → Intention to Collect Personal Information	Supported (β=0.182)
H6b	Experience of Intrusion → Intention to Distribute Personal Information	Supported (β=0.380)
H7a	Self-efficacy in Collecting Information → Intention to Collect Personal Information	Supported (β=0.218)
H7b	Self-efficacy in Distributing Information → Intention to Distribute Personal Information	Not Supported (β=-0.026)
H8	Intention to Collect Personal Information → Intention to Distribute Personal Information	Supported (β=0.192)

has the low ethical consciousness actually tend to passively (collecting) enjoy and to actively (distributing) intrude others' privacies on SNSs. Furthermore, a person who has the low ethical consciousness also tends to raise her/his curiosity of collecting someone's private information on SNSs.

As shown in theoretical background, curiosity is related with attitude and attitude is synonym of ethical consciousness (Koo and Ju, 2010; Litman and Spielberg, 2003). In other words, while the literature doesn't mention that what is precedence between ethical consciousness and curiosity, this study illustrates that low ethical consciousness could be prior to curiosity especially for a wrongdoing (H2).

Apart from low ethical consciousness, enjoyment affects intention to collect and distribute someone's personal information on SNSs (H3). As the literature shows that an individual perpetrates others' privacies for enjoyment (Blackwell, 2009), this study extends the range of perpetration to online beyond offline.

Curiosity also impacts on intention to collect someone's personal information on SNSs (H4). In short, curiosity to know someone is an important variable on intention to collect someone's private information.

Experience of being intruded, which means the experience of being a victim of privacy intrusion, doesn't affect intention to collect or distribute others' personal information (H5). However, experience of intruding others' privacies, which means the experience of being a perpetrator, impacts on intention to collect and distribute others' personal information (H6). Through comparing the results of Hypothesis 5 and Hypothesis 6, a person who has a privacy intrusion experience tend to intrude others' privacies again and again. However, a person, who has been a victim of SNS privacy, is likely to be aware of the damages that the privacy intrusion causes and tends to avoid it.

Self-efficacy influences on intention to collect oth-

ers' private information on SNSs, but not on intention to distribute others' private information. It is interpreted that collecting someone's personal information as a passive intrusion can be secretive until it is found out. Unless this passive intruder mis-manage the collected information or reveals the collection of someone's personal information by her/himself, others may not know about this behavior. As self-efficacy is one's confidence in her/his ability to perform a task (Bandura, 1977; Bandura, 1982), finding someone's personal information on SNSs can be a way to self-prove her/his ability. On the other hand, the result shows that self-efficacy and distributing someone's personal information do not have any significant relationship. It implies that SNS users do not think that distributing someone's personal information on SNSs is not a way to proof their abilities to perform a task.

Intention to collect someone's personal information positively influences on intention to distribute the information. It has not been known whether a person collects someone's personal information with the intention to distribute it or not. With this result, we can say that individuals with intentions to collect someone's personal information maybe have a level of intentions to distribute it. Once information is collected, it could be distributed whenever a collector wants.

5.2 Contributions and limitations

Through these findings, our research has various theoretical and practical contributions as followed. First, most of studies on privacy intrusion have been focused on victims, but we investigated the factors from the intruding perspective. In order to prevent or minimize SNS privacy intrusion, it is important to identify the factors from the intruding perspective. With these identified factors, SNS providers can design applications safer and authorities can make better

policies.

Second, our study proves low ethical consciousness influences on intrinsic motivation such as enjoyment and curiosity. Ethical consciousness can be improved through education (Ivanov *et al.*, 2018). Thus, as a social etiquette and norm, respecting one's privacy can be a part of education to boost ethical consciousness. Furthermore, policymakers can develop a policy for privacy intruders to mandatorily take a course related to this issue.

Thirds, this study expands the range of ethical consciousness from offline to online, verifying low ethical consciousness would affect one of the important computer crimes. This finding contributes to urge researchers to study various computer crimes connecting to ethical consciousness.

Fourth, we classified a privacy intrusion into two types: passive intrusion (collection) and active intrusion (distribution). As shown, collection and distribution of someone's privacy information are differently affected by various factors. Curiosity has the strongest relation with intention to collect someone's personal information. Then, self-efficacy and enjoyment follows as the second and third factors. Meanwhile, the experience of distributing someone's personal information has the strongest relation with intention to distribute someone's personal information. The strongest factor of active intrusion is alarming, because it is a crime. Thus, researchers and practitioners need to further investigate this active intrusion intention and behavior.

There are some limitations of this paper. First, since this study is an empirical study conducted on people in their twenties, the findings are limitedly applicable to SNS users in their twenties. Second, since this paper explores intrinsic motivation, it is not clear how extrinsic motivation and other environmental factors interacting with intrinsic motivation will influence people's privacy intruding behavior on SNSs. Third, since this

study is cross-sectional, we could not observe how ethical consciousness could differently influence people's privacy intruding behavior depending on a given time and place. It would be interesting to study the changes of ethical consciousness by different regions over time.

Privacy intrusion has intensified over various age groups. We encourage researchers to investigate SNS users' privacy intrusion over all age groups. Although intrinsic motivation drives people to act more than extrinsic motivation, researchers also need to include extrinsic motivation in future, because extrinsic motivation can control and regulate privacy intruders' behavior on SNSs. Moreover, it will be interesting to study an environmental perspective. Since people can change their behavior depending on their surroundings. Environmental factors can influence people's ethical consciousness.

Recently, people's commenting behavior on SNSs has become a social issue. Negligent comments on someone's SNSs, especially on celebrities can bring about a tragic ending such as committing a suicide. Thus, we need to study people's commenting behavior on SNSs from ethical consciousness, motivational, and environmental perspectives. Nonetheless, this research with empirical analysis brings interesting results from the intrusion perspective.

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Ethical Consciousness: Passive Privacy Intrusion versus Active Privacy Intrusion on a SNS

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Abstract

People have adopted Social Networking Sites (SNSs) as a part of their daily lives. When a person uses SNSs, (s)he intentionally or unintentionally discloses her/his personal information. Although using SNSs can provide benefits to a person such as maintaining relationships with people who does not see often, it also opens a dark side. Someone can use one's disclosed information without the acknowledgement of the information owner. It is called a privacy intrusion on SNSs, which has become a social problem and needs attention.

This study examined factors affecting privacy intrusion intention on SNSs. This study classifies privacy intrusions into passive intrusion (collector) and active intrusion (distributor). The results reveal that low ethical consciousness positively affects enjoyment in both of collecting and distributing someone's personal information on SNSs. A person who has the low ethical consciousness also tends to raise her/his curiosity of collecting someone's private information on SNSs.

Apart from low ethical consciousness, this study discloses how enjoyment, curiosity, experience of being a victim of privacy intrusion, experience of intruding others' privacies, and self-efficacy of collecting or distributing others' private information are related to passive or/and active privacy intrusion on SNSs with survey data.

Keywords: *Privacy Intrusion, SNS Privacy, Personal Information, Passive Privacy Intrusion, Active Privacy Intrusion, Ethical Consciousness*

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충북대학교 경영대학원에서 석사학위를 수여 받았다. 주요 관심분야는 정보보호, 정보보안이다.



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