

## A Study on the Effects of SNS Fatigue and Ambivalent Attitude on the Intention on SNS Continual Use

Hee-Kyung Hong<sup>1</sup>, Su Young Han<sup>1</sup>, Jung-Won Lee<sup>2</sup>, Min-Seon Kim<sup>3</sup> and Kyeong-Seok Han<sup>4\*</sup>

<sup>1</sup>Dept. of Computer Science, Anyang University, 102 Samsungli, Buleunmyun, Ganghwagun, Incheon, Korea, 417-833

<sup>2</sup>CyberTech Inc. Daewoo Worldmark 102-1605, Hangang-De-Ro 211Gil, Yongsan GU Seoul, Korea, 140-011

<sup>3</sup>Technology Innovation Team, Hanwha S&C, Hanwha-Building 19F, Janggyo-Dong JungGu Seoul Korea, 100-797

<sup>4</sup>Dept. of Business, Soongsil University, 369, Sangdoro, Dongjackgu, Seoul, Korea, 156-743

<sup>1</sup>{micecarrot, syhan}@anyang.ac.kr, <sup>2</sup>froka.lno@gmail.com, <sup>3</sup>michelle777@hanwha.com, <sup>4\*</sup>kshan@ssu.ac.kr

### Abstract

*The popularization of smart devices and SNS as a new communication way promotes positive changes such as the user's participation in the communication with others and the knowledge sharing. Meanwhile, it also facilitates negative social problems such as the formation of unexpected social relations, the intrusion of privacy, the cyber violence and the polarization of communication. These negative changes go toward a new viewpoint that the excessive SNS use may cause the SNS user's fatigue. The purpose of this study is to invest how the SNS use motives and use patterns influence on the SNS user's fatigue and ambivalent attitude. Therefore this study intended to develop a model about the SNS user's social stress and ambivalent attitude influencing on the continual SNS use, and will empirically research this model in future studies.*

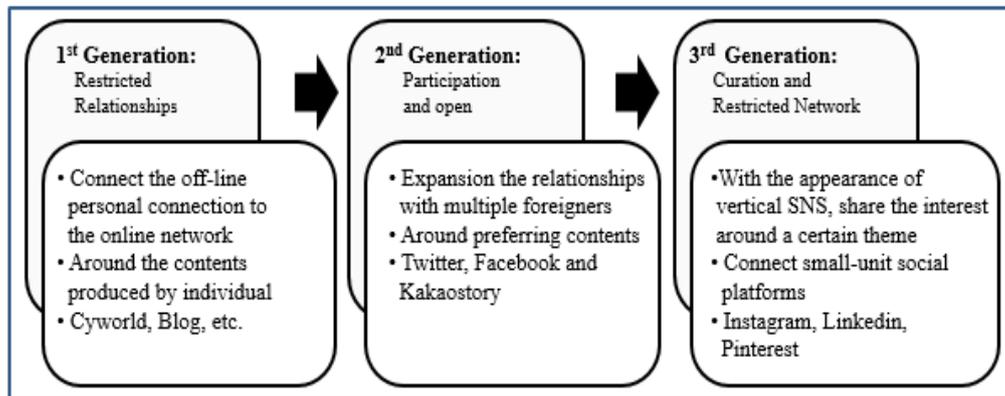
**Keywords:** social network service, SNS fatigue, social fatigue, ambivalent attitude, Intention on SNS continual use

### 1. Introduction

As the trend of SNS (Social Network Service) use for people to express themselves and to communicate with others is rapidly expanded, the popularization of SNS use as well as the expansion of smart devices has already brought considerable changes in each side of our lives. While the SNS use as a new communication way promotes positive changes like the participation in the communication with others and the knowledge share, but also promotes several, negative social problems like the not-wanting invasion of privacy resulting from the self-disclosure, the cyber violence, and the polarization of communication. Besides, the formation and expansion of unintended relationships network come to the social media users as a burden. The rapid development of 3rd-generation SNS can be a disproof implying the social media user's burden. Going beyond its 2nd-generation service where the open-type social network was its core point, SNS is now being evolved into the 3rd generation SNS which are so-called 'Curation' enabling the communication with strangers on the basis of their interests and the restricted network service. The 1st generation SNS can be translated as the online-relationships being moved from the off-line relationships such as the Cyworld or the Blog service, and the 2nd generation SNS refers to the twitter or the Facebook having expanded the user's online relationships into

the relationships with unspecified multiple persons on the Internet. The 3rd generation SNS is the user-customized service and its expansion scope of relationship is restricted to the user's preferring fields [1, 2]. In the 3rd generation SNS, the features of 1st generation SNS and 2nd generation SNS are delicately mixed. Like the open-type SNS of 1st generation, the 3rd generation SNS can make a friendship with anyone, but gathers people being interested in a certain theme or having similar interests. In the 3rd generation SNS, the user expands his/her relationship scope online, but does not see unnecessary information to him/her. In addition, in the 3rd generation SNS, the communication is developed around photos and videos rather than texts. The Instagram, the LinkedIn, the Pinterest and the Tumblr are representative examples of 3rd generation SNS.

Recently there was a report that the number of users moving into the 3rd SNS leaving from the twitter or the Facebook was increased, and the Instagram, a 3rd generation SNS announced that its world monthly active users were exceeded over 300 million once as of November, 2014. This is a number exceeding the twitter users (284 million ones). The 3rd generation SNS currently boasts its amazing growth rate around the U.S.A. As an individual's opinion posted on an open-type SNS has the potential to be opened to unspecified, multiple people, so the risk of privacy-exposure and the feeling of fatigue due to information overflow can be considered as a cause that SNS users move to the 3rd generation SNS.



**Figure 1. Evolvement of SNS**

The purpose of this study is to investigate how the SNS user's various use motives and use patterns influence on the user's SNS fatigue and ambivalent attitude by expanding into undesirable relationships. So the relevant researches of this study explore the SNS user's SNS use motive and use patterns, his/her SNS fatigue and fundamental causes and his/her ambivalent attitude. In the Chapter 3, this study suggested a model about the user's intention on the SNS continual use by his/her SNS use fatigue and ambivalent attitude and some hypotheses. This study is meaningful in that it established the foundation to enable some empirical researches about this model in future studies and devised the ways to pursue sound, healthy SNS use.

## **2. Theoretical Background and Relevant Researches**

### **2.1. SNS User's Use Motives and Use Patterns**

According to the Cheil Worldwide Inc.'s report that classified the SNS use types by SNS use motive into the major-trend follower type, the information-worker type, the expansive relationships type (Madangbal type in Korean), the self-satisfaction type, the profit-pursuit type, and the information-amusement type, the major-trend follower type was appeared as the most common type with 30% of surveyed users, and followed the

information-worker type, the expansive relationships type (Madangbal type in Korean), and then the upcoming star type in order [3].

The contents summarizing some of existing researches about the SNS user's use motives are seen in the Table 1.

**Table 1. Studies about SNS User's Motives**

| Researcher                 | Motives for SNS Use  |
|----------------------------|--|
| Schaefer & Coral (2008)[4] | Maintenance of relationships, expansion of personal connections, formation of relationships, information retrieval, entertainment, sociable activity   |
| Jinah Seol(2014)[5]        | Human information retrieval, conversation, maintenance of relationships and contact, share of contents, expression of self-identity  |
| Yujung Kim(2011)[6]        | Expression of self-identity, social interaction, availability, sociable exchange with friends, friend's information retrieval, good use of leisure, management of personal connection, escapism, participation, get away from loneliness |
| Hyung-suk Kim(2012)[7]     | Motive for acquiring information and knowledge, the motive for maintaining the communicate relationships, the motive for proposing the user's opinion or information   |

As shown in Table 1. The motive for maintenance of relationships, the motive for sociable exchange with friends, the motive for participation and the motive for maintenance of communicative relations are key words relevant to the maintenance of continual relationship. The expansion of connections, the formation of relationships, the contact and the management of personal connections are key words related to the formation of new personal connections on the Internet. The sociable activity, the conversation, the sociable exchange with friends, the social interaction, the motive for maintaining communicative relations are the key words related to the mutual communication. Therefore, if classifying the SNS user's SNS use motives into the three (3) categories, the motives can be classified into the expansion of personal connections, the maintenance of relationships, and the mutual communication. According to King & Emmons' study about the SUS user's SNS use patterns, it was identified that as the hours using a smart phone got increased, the user's age was younger, and the number of friends were more, then the SNS user devoted more emotional investment to the SNS use, resulting in the increase of their fatigue on the SNS use [1]. This can be interpreted as that the SNS's attribute for the management of personal connections or the maintenance of relationships triggers more fatigue sense to the SNS user. Besides, it was found that as the user's age got older, the concern about the user's over indulgence in the SNS use was also increased [1]. That may arise some ambivalent feeling from the SNS user.

## 2.2. Ambivalence

Various relationships being connected on the SNS cause the collision of mutually oppositional, positive and negative feelings, that is, the ambivalent feeling from the SNS user due to the psychological pressure that the use should manage more personal connections or share more knowledge.

In the classic conflict theory, the ambivalence was defined as the response being emerged from a person when he/she faced various alternatives having same uses and attractions even though they are opposite in their relation. That is, the ambivalent feeling is the feeling conflict being experienced while controlling the user's desire to express his/her own feeling.

Bleuler subdivided the ambivalence into voluntary, intellectual and emotional concepts. Ambivalence is a cause of schizophrenia and can't integrate the double-sidedness being internalized in an object due to the relaxation of correlation, and from this aspect, the ambivalent feeling was classified from the three domains, and of them, the emotional ambivalence was recognized as the most pathological [5, 8, 9].

**Table 2. Bleuler's Classification on the Ambivalent Feeling**

| Division of Ambivalence | Conflict Situation  |
|-------------------------|---|
| Voluntary               | Situation that the subject wants to eat and does not want to do so at the same time                         |
| Intellectual            | Situation that the subject wants to propose a certain suggestion and doesn't want to do so at the same time |
| Emotional               | Situation that the subject loves one and hates the same person  |

The definitions applying Bleuler's subdivided classification of ambivalent feeling to the social network environment are seen in the Table 3.

**Table 3. Conflict Situations on the SNS According to the Bleuler's Classification of Ambivalent Feeling**

| Division of Ambivalence | Conflict Situations on the SNS Environment  |
|-------------------------|---|
| Voluntary               | Situation that the subject worries about the SNS use itself   |
| Intellectual            | Situation that the subject wants to express him/herself through some texts or photos and does not want to do so at the same time  |
| Emotional               | Situation that the subject feel two oppositional feelings while expressing him/herself for the mutual interaction with the other(s) and the maintenance of relationships. |

The emotional ambivalence is the feeling which one feel the both opposing feelings like love and hate toward an object simultaneously, and after judging how the predicted results after expressing the ambivalent emotion influence on the oneself, his/her attitude toward the ambivalence may be differently expressed. As the worry that the expressed emotion will bring some negative results is more, the possibility to control oneself is more plausible although more conflicting between his/her desire to express the emotion and his/her worry about the result of expressed emotion. Hence, there exist individual difference even in terms of the emotion expression and the conflict experience [10].

SNS users experience motional fatigue and ambivalent feeling in the psychological state that they cannot clearly set one or the other side during the process of keeping their conversations and managing their personal relations network with using several forms of media. Thus, the social fatigue related to the SNS use is not irrelevant to the ambivalence meaning the collisions of mutually opposing feelings.

### 2.3. Social Fatigue and Causal Factors

According to the report announced by the Samsung Research in 2008, the term indicating the 'the difficulty felt in installing and operating more complex digital devices and catching up with the explosively increasing online information was defined as the 'digital fatigue' [11]. In the same context with the report, this study defines the side effect of SNS use like the personal information leakage, the privacy invasion, the social pressure, the undesirable relationships, and the burden on using social media as the 'social fatigue'.

Thanks to the rapid popularization of Internet and smart devices, the communication environment is continually changing, and the social interactions in social media environments have continually been increased. However, as the social fatigue is deepened among the SNS users recently, there are appeared the signs that the growth acceleration in the join rate of representative SNS such as the Facebook and the twitter becomes slower and the SNS-service use frequency is reduced This trend was the most distinctively appeared in the twitter, a social network service boasting the quick delivery of information as its greatest strength, and there happened the phenomenon that the number of twits was reduced in the fourth quart of 2013 for the first time [12]. According to the results o of a recent study investigating the relationships on the online communities targeting some SNS users, it was found that as the users' communication interaction time got increased, the users' social fatigue were increased together. Besides, according to a survey conducted by the Job Korea-Albamon, it was appeared that 63% of Korean university students felt some social fatigue from their SNS use [13].

In case of the Facebook, it was revealed that as the hours using a smart phone got increased and the user's age was younger, then the SNS user devotes more emotional investment to the SNS use, resulting in the increase of their fatigue on the SNS use [6]. This can be interpreted that the SNS's attribute for the management of personal connections or the maintenance of relationships triggers more fatigue sense to the SNS user.

According to previous studies, as the factors causing the social fatigue, there are existed the self-disclosure, the social interaction, the knowledge-share activity, the formation of undesirable relationships, the social pressure, the burden on the SNS use, the personal information leakage and the worry about privacy invasion. However this study summarized the factors causing the social fatigue on the basis of Kiyong Kwak and Hyojun Kim (2011), as seen in the Table 4 [14].

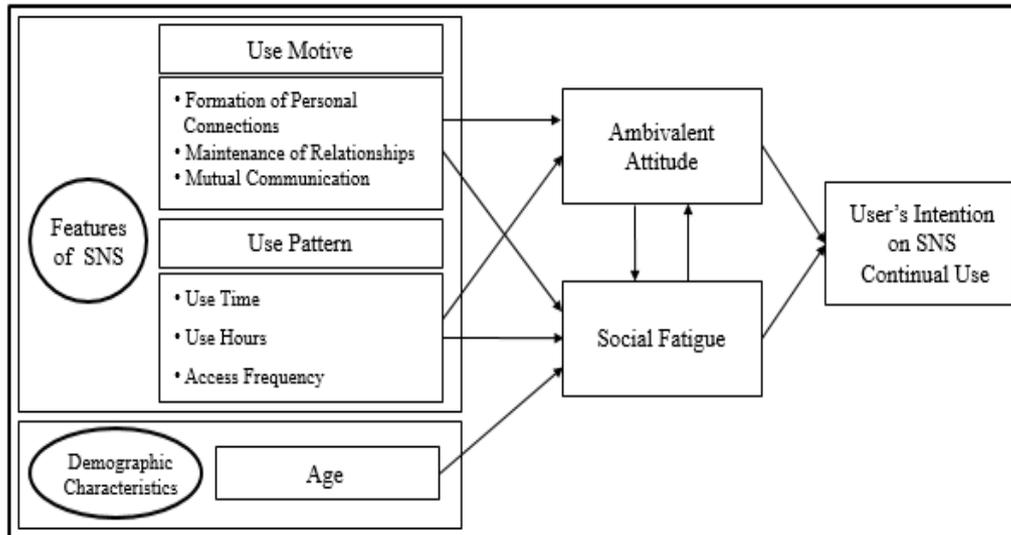
**Table 4. Causal Factors of Social Fatigue**

| Causal Factors  | Definition   |
|---|--|
| Worry about the personal information leakage and the privacy invasion | Fatigue for personal information leak and worry about invasion of privacy by social media use Fatigue causing from the worry about the personal information leakage and the privacy invasion being happened while performing activities on social media. |
| Social pressure   | Fatigue caused from an undesirable behavior or expression by the surrounding atmosphere or social pressure.  |
| Undesirable relationships   | Fatigue caused from the connection with unwanted person  |
| Burden on the social media  | Fatigue caused from the time and the efforts spent on activating and keeping the social media.   |

### 3. Research Model and Hypotheses

#### 3.1. Research Model

Based on the relevant studies being dealt in the Chapter 2, this study developed a model about the social fatigue and the attitude toward the ambivalence influencing on the User's intention on SNS continual use, and suggested the model as seen the Figure 2.



**Figure 2. Research Model**

### 3.2. Research Hypotheses

This study classified the SNS user's use motives into the formation of personal connections, the maintenance of relationships, and the mutual communication, and the user's SNS use patterns into the use time, the use hours, and the access frequency, and then defined them as the features of SNS. Also, based on the fact that as the user's age got increased, the worry about the excessive indulgence in the SNS use was also increased, this study included the age as a demographic feature in the measurement items.

With assuming that the features of SNS depending on the SNS use motives and its use patterns and the demographic feature depending on the age might be correlated with the social fatigue and ambivalent attitude, this study tried to identify the correlations among the variables. And with assuming that there might be a correlation between the ambivalent attitude and the social fatigue, this study also tried to identify the correlation between the both variables. Finally, with assuming that the ambivalent attitude and the social fatigue might be correlated with the User's intention on SNS continual use, this study tried to identify these correlations.

In this context, this study suggested the following research questions and hypotheses on the basis of the research model seen in the Figure 2.

Research Question 1: Are the SNS user's SNS use motives and the SNS use patterns correlated with the ambivalent attitude?

Hypothesis 1-1: The SNS use motives will affect some positive (+) influence on the ambivalent attitude to the SNS.

Hypothesis 1-2: The SNS use patterns will affect some positive (+) influence on the ambivalent attitude toward the SNS.

Research Question 2: Are the SNS user's SNS use motives and the SNS use patterns correlated with the social fatigue?

Hypothesis 2-1: The SNS use motives will affect some positive (+) influence on the social fatigue.

Hypothesis 2-2: The SNS use patterns will some positive (+) influence on the social fatigue.

Research Question 3: Is the degree of social fatigue different depending on the SNS user's age?

Hypothesis 3-1: The SNS user's age will affect some positive (+) influence on the social fatigue.

Research Question 4: Is there any correlation between the ambivalent attitude and the social fatigue?

Hypothesis 4-1: The ambivalent attitude will affect some positive (+) influence on the social fatigue.

Hypothesis 4-2: The social fatigue will affect some positive (+) influence on the ambivalent attitude.

Research Question 5: Do the ambivalent attitude and the social fatigue influence on the user's intention on SNS continual use?

Hypothesis 5-1: The ambivalent attitude will affect some positive (+) influence on the user's intention on SNS continual use.

Hypothesis 5-2: The social fatigue will affect some positive (+) influence on the user's SNS continual use.

### 3.3. Variable Measurement Operational Definitions of Research Variables and Relevant Studies

The research variables and their operational definitions to be proposed in the model of this study will be drawn from relevant studies and they will be shown in the Table 5.

**Table 5. Research Variables and Their Operational Definitions**

| Research Variable                     | Operational definition  | Relevant Studies  |
|---------------------------------------|---|---|
| Use motives                           | Degree recognizing whether the social fatigue and the ambivalent situation are happened as the result from the continual use of SNS although the user wants to use social media services for forming the personal connections, maintaining the relationships and communicating mutually | Schaefer & Cora(2008) [4],<br>Jinah Seol (2014) [5],<br>Yujung Kim(2011) [6]    |
| Use patterns                          | Degree recognizing whether the social fatigue and the ambivalent situation are happened depending on the use time of social media, the use hours, and the access frequency  | Jinah Seol (2014) [5],<br>Kim Myung-su & Lee Dong-ju (2012) [11]                |
| Age                                   | Degree recognizing the social fatigue resulting from voluntarily inputting some time and emotions in the use of social media depending on the user's age  | Jinah Seol (2014) [5],<br>KISA (2013) [1]                                       |
| Social fatigue                        | Degree recognizing the digital fatigue resulting from the excessive inconvenience and stress felt while using social media  | Hyunji Lee & Donghun Jung(2013) [15],<br>Kim Myung-su & Lee Dong-ju (2012) [11] |
| Ambivalent attitude                   | Degree hesitating the use of social media because the user wants to frankly express his/her own feelings on social media but is afraid of the outcome to be created from the frank feeling-expression   | Hae-yeon Choi & Kyung-han Min (2007) [16],<br>Jinah Seol (2014) [5]             |
| User's intention on SNS continual use | Behavior will that the user recognizes the negative aspects of social media currently being used and stops his/her use of the social media or if the SNS use environment is improved, the user will continue on using the SNS.  | Hyunji Lee & Donghun Jung(2013) [15],<br>Kim Myung-su & Lee Dong-ju (2012) [11] |

#### 4. This Study's Meaning and Future Tasks

Although most of existing studies were developed in focusing on the positive use of SNS, but recent studies tend to focus on the side-effect factors resulting from the excessive use of SNS. And while existing studies identified the relationships between the social fatigue and the intention on SNS use-stop or SNS continual use, or researched the factor of social fatigue itself, but they did not pay attention on the correlation between the ambivalent attitude toward the SNS use and the social fatigue.

This study summarized the side effects results from the SNS use as the concept of social fatigue, and considered that the SNS continual use was the fundamental cause of social fatigue. Thus, this study subdivided the causal factor creating the social fatigue into the personal information leakage, the worry about privacy invasion, the social pressure, the undesirable social relations, and the burden on the social media use. This study researched how these factors causing the social fatigue were correlated with the SNS user's ambivalent attitude and the user's social fatigue. Consequently, this study developed a research model

Consequently this study developed a research model in order to identify whether the SNS user's ambivalent attitude and the social fatigue influence on the user's intention on SNS continual use, and tried to verify the proposed hypotheses through an empirical analysis in future.

Hence it is expected that this study will pursue some differentiation from previous studies by analyzing a new variable of ambivalence as well as the social fatigue influencing on the user's intention on SNS continual use and the influence factors on the ambivalence. Besides, it is expected its future research will provide strategic implications to minimize the SNS user's social fatigue and the ambivalent situation to the SNS service providers by verifying the hypothesis of this study through an empirical research about the hypothesis. Through such efforts, this study is meaningful in that it set the foundation for future research and devised some ways to pursue sound, healthy SNS use.

There are implications for forming the basis of following research and making a plan to support the healthy using of SNS. Future studies also need to research the user's intention moving from the 2<sup>nd</sup> generation open-type SNS to the 3<sup>rd</sup> generation close-type SNS depending on the user's social fatigue and the ambivalent attitude toward the SNS.

#### References

- [1] L. J. Myung, Y. J. Yul, J. S. Jung, L. J. Hwan and Y. J. Min, "Survey on the Internet Use Executive", Korea Communications Commission and the Korea Internet & Security Agency (KISA), vol. 12, (2013), Seoul, Korea.
- [2] H.-K. Hong and M.-S. Kim, "Improvement Study on the Key Issues of Domestic SNS Analysis", Journal of the Korea Society of Information Technology Policy & Management, vol. 6, no. 2, (2014).
- [3] Admankim, "Cheil Worldwide Inc.", Survey on the internet use executive of Korean, (2012), <http://blog.naver.com/luckykimm/100108965192>, 7.10.
- [4] Schaefer, Cora, Y. Kim and H.-K. Shin, "(V.T.), A Study on the Exploring Positioning of Social Network Service Type about Use Motivation of SNS", The Korean Academic Correlation of Business Administration, 6, (2013), pp. 289-302.
- [5] J. Seol, "An Exploratory Study on Social Media User's Ambivalent Attitudes", Journal of Internet Computing and Services (JICS), (2014) April, pp. 87-94, Seoul, Korea.
- [6] Y. Kim, "Fulfillment study and use of the social networking service: Focused on Facebook", Media, Gender & Culture, vol. 20, (2011), pp.71-75.
- [7] H.-S. Kim, "A Study on Use Motivation of SNS and Communication Behavior", Journal of the Korea Academia-Industrial cooperation Society, vol. 13, no. 2, (2012), pp. 548-553.
- [8] E. Bleuler, "Dementia praecox or the group of schizophrenias", New York: International Universities Press. Original work published, (1911).
- [9] Danbi, "Children outside the classroom, meet with the book", (2011), <http://blog.naver.com/PostView.nhn?blogId=eksql753&logNo=150125333973>, 11.29.
- [10] H. Y. Choi and K. H. Min, "A Comparative Study on the Validation of Korean Version of Emotional Ambivalence Scale and Suppression Concepts", Korean Journal of Social and Personality Psychology, vol. 21, no. 4, (2007), pp. 71-89.

- [11] K. Myung-Su and L. Dong-Ju, "The Role of Digital Fatigue and Flow in SNS Use", *The e-business studies*, vol. 13, no. 1, (2012), pp. 67-87.
- [12] I. Se-jung, "'Twitter' It is going down the wings by the SNS fatigue", (2014), <http://news.kmib.co.kr/article/view.asp?arcid=0008013567&code=11151100>, 02.08; *Kookmin Ilbo*.
- [13] Miraejihang, "Job Korea Albamon, 63% of college students Feeling fatigued by the SNS", (2013), [http://www.ezday.co.kr/bbs/view\\_board.html?q\\_id\\_info=1288&q\\_sq\\_board=5129687](http://www.ezday.co.kr/bbs/view_board.html?q_id_info=1288&q_sq_board=5129687), 08.01.
- [14] K.-Y. Kwahk and H.-J. Kim, "The Effects of Social Network Stress on Social Media Switching Intention", *Korean Correlation of Industrial Business Administration (KAIBA)*, vol. 2011, no. 6, (2011), pp. 83-114.
- [15] H. Lee and D. Jung, "Study on the use of Twitter and Facebook suspended", *Korean society for Journalism & Communication Studies*, vol. 57, no. 4, (2013), pp. 269-293.
- [16] H.-Y. Choi and K.-H. Min, "A comparative study on the validation of Korean version of emotional ambivalence scale and suppression concepts", *Korean Journal of Social and Personality Psychology*, vol. 21, no. 4, (2007), pp.71-89.

## Authors



**Hee-Kyung Hong**, she received the BA in 1998, pedagogy M.A(electronic calculation Areas) in 2003 from Sookmyung Women's University, Seoul, Korea. From March 2014 she is PhD course in IT Policy Management at Soongsil University, Seoul, Korea. Currently she serves as adjunct professor at the Anyang University. Her interests include the database, IT Education, Social Network, etc.



**Su Young Han**, he received the B.S., M.S. degree and Ph. D degree from Hanyang University, Seoul, Korea in 1991, 1993 and 2004 respectively, all in electronic engineering. Currently, he is a professor of Department of Computer Science at Anyang University, Korea. His interests include multidimensional signal processing, wavelets, coding and watermarking.



**Jung-Won Lee**, he received Bachelor of Science from Korea Military Academy in 1983, Public Administration M.A Yonsei University Graduate School Seoul, Korea in 1998, and received MBA, St. Martin University, WA, USA. In 2012. From March 2014, he is PhD course in IT Policy Management at Soongsil University. His interests include IT policy, model federation, IT security, etc.



**Min-Seon Kim**, he received Computer Science BA and M.S from Soongsil Seoul, Korea in 1998, 2003. She received MBA from Han yang Cyber Business School. After having worked in the Samsung Electronics, NHN Service, Tui Consulting, currently she works in Hanhaw S & C. Her interests include IT policies and strategies, PMO, software engineering, methodology and quality, big data, IoT, etc.



**Kyeong-Seok Han**, he received 1979 Seoul National University, BA, 1983 MBA Seoul National University, Seoul, Korea. He received MIS Ph.D. from Purdue University, IN in 1989 and served as an assistant professor at University of Houston, TX, USA. Since March 1993, he has served as Professor of Business Administration Soongsil University, Seoul, Korea. His interests include Technical MIS, Digital Economy, e-Business, ERP, Agent-Based Simulation, e-commerce, SME informatization, business consulting, corporate financing policies