

Analysis of the Motivator of the Use of Social Network Services

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Abstract

With a focus on Facebook, the most popular social network service (SNS), this research tried to find out which type of motivation makes users to spend more time on the SNS and in the same vein, which type of motivation makes users to believe that they will continue to use the SNS. The result shows that the need for play (entertaining) and image as social reputation affect the current amount of use, while the needs for information search, building relationship, and entertainment would make them continue to use.

Keywords : Social Network Services (SNS), Motivator, Amount of Use, Intention for Repeated Use

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1. Introduction

Behind all human action underlie drives to act as such. Although the history of Social Network Service (SNS) is relatively very short compared to other information-related technology, the use of it has rapidly expanded across all countries, age group, gender, and culture. The use of SNS has ever increased since its introduction and has rapidly become one representative culture of digitally mediated society [Shirky, 2010; Botsman and Rogers, 2011]. The impact of SNS is widespread in various aspect of our society from friendship, informal communities, business and market, socio-political activities to religious activities. This research aims to understand the internal drivers which led the extensive diffusion of the use of SNS.

In the field of MIS, the most widely used model to analyze the usage activity of technology is technology acceptance model (TAM) suggested by Venkatesh and Davis [2000]. TAM focuses on the “acceptance” or “adoption” of a technology, which means the determination to use or to purchase a technological artifact (e.g. Lim et al., 2010). For this reason, TAM largely deals with the decision and implementation of the initial use of a technology new to a user. As we focus on the continuous act of use of SNS, different approach to understand the use of SNS should have been taken.

Borrowing models from consumer behavior of marketing, sometimes researchers in MIS hired the concept of use and “reuse” of a technology (e.g. Choi, 2012). In this stream of research, use represents purchase and reuse rep-

resents repeated purchase of the same product or brand. This approach is considered more appropriate to products assumed to face a sporadic decision to purchase the same or similar product such as hardware products or contract-based services with limited life-time. In the case of SNS such sporadic decision to continue to use do not occur for two reasons. First, SNS use does not involve a payment and thus, the concept of ‘purchase’ to reuse does not apply. Second, as the use of SNS is assumed to continue until the time either the service becomes not available due to the inability of the service provider or the user decide “not to continue to use” the service. For this reason, users will continue to use an SNS until they want to repeatedly use, without facing any explicit moment of making a decision.

For the reasons stated above, we decided to return back to theories that are used to explain the drivers of human action, the motivation theories. Thus this research focuses on the motivation of users that make users use and keep repeating to use an SNS.

2. Social Network Service

Social Network Service (SNS) is a service to support or facilitate an on-line extension of off-line network among people by helping them to share personal profile (Boyd and Ellison, 2007). The first SNS named sixdegrees.com was launched in 1997 and some local SNS such as cyworld.com was launched in the early of 2000s. However, major expansion of the use SNS goes to the middle of 2000s when such in-

ternationally known SNSs as Facebook, Twitter, and Linked In were launched.

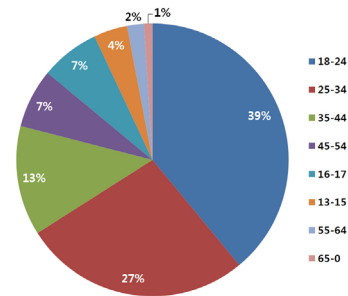
SNSs help users to conveniently post pictures, texts, or other contents so that members can share them easily. People use SNS as a window of communication to share personal opinion, experience, and situation as well as a tool develop and maintain the link with others. There are different types of SNS : community-based SNS, mini-homepage type SNS, blog, microblog, profile-based services. Depending of the type of SNS, the behavior of user tends to differ.

Companies try to use SNSs for marketing purpose as SNSs can be used to understand the behavior of consumers and to convey advertising information. The influence of SNS sometimes extended beyond social and economic arena into political activities.

This research aims to examine the relationship between the use of SNS and various types of psychological and social motivators to use such services. This research specifically focused on the use of Facebook, the most popular SNS in the world as well as in Korea. According to Socialbakers.com, which collects and announces statistics on the use of SNS, the largest number of users of Facebook resides in the USA; 154,760,400 or 49.89% of the whole population and 64.69% of Internet users (as of 2012. 3. 31) In Korea, the number of Facebook users is 6,697,900; 13.77% of the whole population and 16.98% of Internet users (as of 2012. 3. 31).

In the case of Korea, 58% of the users of Facebook are male. 39% of the users fall in the age group between 18 and 24, and 27% of the

users fall in the age group between 25 and 34 (see <Figure 1>).



source : Socialbakers.com.

<Figure 1> Use of Facebook in Korea by Age

3. Motivation to Use SNS

Motivation is defined as a process that psychological or physiological needs or deficiencies lead to drivers which in turn lead to incentives to act [Luthans, 2008]. Research on human motivation has a long history date back to 1940s and 1950s when Maslow suggested 'need hierarchy theory' in his book titled Motivation and Personality and Herzberg suggested 'two factor theory' in his book titled The Motivation to Work [Maslow 1943 and 1954; Herzberg et al., 1959]. Different naming and groupings of motives have been suggested since then by several researchers highlighting different aspects of motivation or focusing on different aspects of human activities.

In principle, motivation is a personal and individual psychological phenomenon. However, this individual motivation naturally include the need for social belongingness or affiliation as suggested explicitly by Maslow [1954], McClelland [1961], and Alderfer [1969]. As SNS is considered

as a tool or media to support or facilitate 'social' network or 'interaction' between two or more people, we can project that the social aspect of motivation should play a very important role. In this vein, analysis of the motivation to use a media is considered useful in understanding the patterns of the behavior of media users [Flanagin and Metzger, 2001]. We further consider that peer influence will play an important role in the use of SNS as people use SNS to maintain or expand social relations and communities.

Based on the rationale summarized above, we classify the motivators to use SNS into two groups; personal motivators and socially influenced motivators. Here, personal motivators are related both to the motivation to satisfy isolated personal needs such as enjoyment and to the motivation to maintain social relations. Socially influenced motivators include the externally-oriented needs to maintain social status, which should be affected by the evaluation of peers involved in the social network.

3.1 Personal Motivators

With regard to the use of communication media, Armstrong and Hagel [1996] suggested interest, fantasy, and relationship as the typical motivation to participate in on-line communities. According to Wang and Fesenmaier [2004] motivation to use on-line network services includes the functional or utilitarian motivation to acquire information, the entertaining motivation to pursue enjoyment, and the desire to express one's self.

It is worth to note that Wellman [1996] point-

ed out that people have an intrinsic desire to share and exchange information. In a research on the behavior of on-line word-of-mouth, Hennig-Thurau et al. [2004] extended the logic and identified such motivators for the involvement in on-line activities as altruistic motivation to help other consumers, self-expression motivation, and motivation to develop social relationship.

Based on the review of existing research, we include the needs for information acquisition, self-representation, relationship development, altruism and entertainment as personal motivator variables in this research.

3.2 Socially Influenced Motivators

Social influence is an important factor in the use of media. Social influence is the degree of influence the social expectation or peer pressure exerts on one's behavior within the context of the social community where one belongs [Venkatesh and Brown, 2001]. The expected evaluation of personal community affects one's behavior especially when one decides on the use of new and innovative media. Specifically the desired or expected image from peers or neighbors and subject norm affects the adoption of innovation [Venkatesh and Davis, 2000].

According to Ajzen and Fishbein [1975] subjective norm means the personal perception of others' opinion which is expected to form the referent criteria of the peer group or important individuals. Image implies the degree by which one's social reputation and communal status improve by the adoption and use of innovation

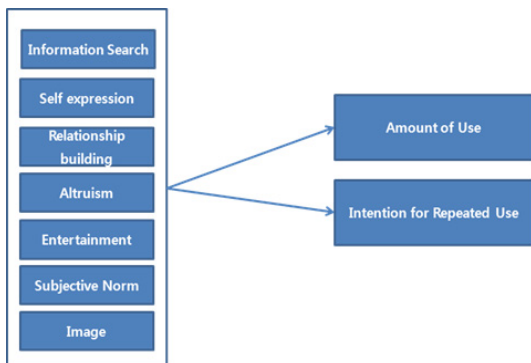
[Moore and Benbasat, 1991]. Venkatesh and Davis [2000] emphasized that information technology users tend to improve their social image within the reference group. Image is also related to one's subjective norm.

This research includes the subjective norm and image as social motivator variables.

4. Research Model and Method

4.1 Research Model

The seven personal and social motivators are hypothesized to affect the use of SNS. In total, the research model includes 7 independent variables and 2 dependant variables as summarized in <Figure 2>.



<Figure 2> Research Model

H1 : Personal and social needs are positively related to the amount of the use of Social Network Services.

H2 : Personal and social needs are positively related to the Intention for continued use of Social Network Services repeatedly.

4.2 Measurement of Variables

<Table 1> summarizes the operational definitions of the independent variables. In measuring the 7 independent variables, we included 2 items per each variable. Item descriptions used in the questionnaire is included in the Appendix along with the result of factor analysis of the variables.

<Table 1> Operational Definition of Independent Variables

	Variable	Definition
1	Information search	Need to acquire information and solve problem
2	Self expression	Motivation to use SNS to represent one's self
3	Relationship building	Motivation to use SNS as a tool to develop and maintain social relationship
4	Altruism	Motivation to use SNS to help others
5	Entertainment	Motivation to use SNS as a tool to pursuit entertainment and enjoyment
6	Subjective Norm	One's perception of the influence of the thought of important people around one about dos and don'ts
7	Image	One's perception of the improvement of social status within one's community by adopting a new technology or innovation

<Table 2> summarizes the operational definitions of the dependant variable. In designing the use of SNS, the dependent variable, we included both the current and continued future uses of SNS.

Current use of SNS is measured in two ways. In method 1, we measured the use by the aver-

age amount of time they spend to use SNS per week. We used a 10 point scale to ask the frequency of access the SNS per week (interval by 3 accesses up to 'over 30 times') and another 10 point scale to ask the average amount of time duration per each access (interval by 5 minutes up to 'over 50 minutes'). We used the multiplication of these two measures and the total amount of SNS use.

In method 2 to measure the amount of use, we asked the use of each of 7 major Facebook functions in 5-point self-reporting scale (from 'almost no use' to 'very much use'). The 7 major functions are;

- reading (posted texts),
- reply activity (including reply, 'like' and sharing),
- posting (text, picture, video),
- messaging (check, sending),
- relationship (find, invite, grouping, etc.)
- applications and games,
- personal information management (diary, profile).

To compute the total amount of use, we totaled the responses to the 7 items of functional uses.

The future use of SNS is considered to be reflected in respondents' intention to continue to use the SNS repeatedly as measured by 3 items

in 5 point scale. The 3 items include 1) intention to use Facebook more frequently, 2) intention to continue to use Facebook, and 3) intention to stop using Facebook (reverse coded).

5. Research Results

5.1 Nature of Sample and Validity of Measure

A questionnaire survey was administered to test the research model. The Data were collected from Facebook users in Korea using both Facebook itself and off-line contact. Total 350 responses were collected. As many of the responses included missing items, only 284 questionnaire responses were used for model test.

Analysis of the demographic nature of the sample shows that 56.3% of the respondents were male, 23.9% of the respondents were married, and 84.9% of the respondents were in their 20s. Educational level of the respondent sample was relative high; 66.9% of the respondents were college students and the rest were college graduates.

As shown in <Appendix> test of the validity of research variables using factor analysis showed the same factor structure as suggested by the research model.

Reliability test using Cronbach's α showed that reliability of all the variables fell within acceptable level (0.718~0.855) except two variables; information search and relationship building. Although the reliability of these two variables were below 0.6, these two variables were maintained for the purpose of the research intention.

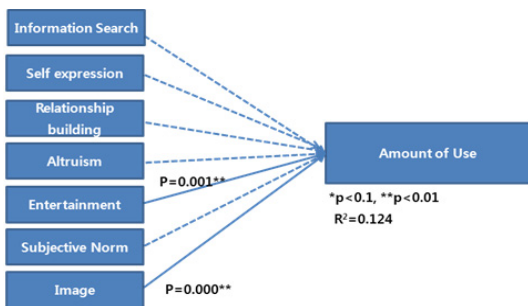
<Table 2> Operational Definition of Dependent Variables

	Variable	Definition
1	Amount of Use	Average amount of the time one spend to use SNS
2	Intension for Repeated Use	One's intention to continue to use the SNS

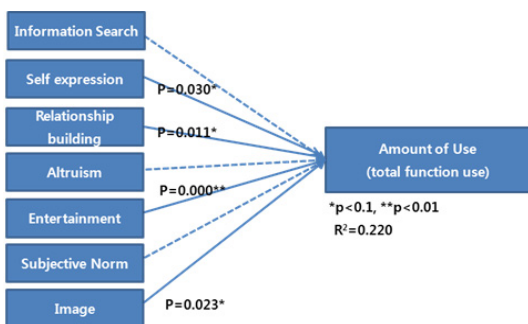
5.2 Results of Hypotheses Tests

The research model was tested using multiple regression analysis. The results of the test are summarized in <Figure 3a>, <Figure 3b>, and <Figure 4>. <Figure 3a> is the regression result on the dependent variable of the amount of the use of SNS as measured by method 1 (average amount of time to use Facebook per each week). Only two independent variables (entertainment and image) were found to significantly affect the amount of use.

<Figure 3b> is the regression result on the dependent variable of the amount of the use



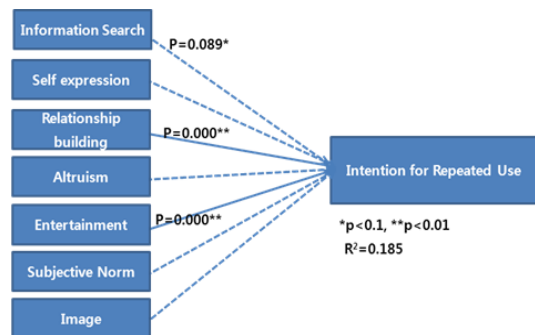
<Figure 3a> Regression Result on the Amount of Use (method 1 : self evaluation of the average amount of time to use Facebook per week)



<Figure 3b> Regression Result on the Amount of Use (method 2: aggregation of the use of 7 major functions of Facebook)

of SNS as measured by method 1 (aggregation of the 7 major functions of Facebook measured each by 5-point scale). Four independent variables were found to significantly affect the amount of use. The significant variables are the need for self-expression, needs for relationship building, entertainment, and personal image management.

<Figure 4> shows the result of regression result on the intention to continue to use the SNS. Two variables (relationship building and entertainment) were found to significantly affect the intention for continued use, while the motivation for information search showed a minor influence.



<Figure 4> Regression Result on the Intention for Repeated Use

6. Conclusion

This research attempted to examine the personal and social motivation to the use of Social Network Services. We examined the relationship between 7 motivation variables and the amount of use of SNS. The amount of use is operationalized both as current amount of use and as intention to continue to use. The current amount of SNS use was measured by the time

spent as well as perceived amount of use of major functions. We collected data from Facebook users in Korea.

The results of the research showed that the level of the needs for entertainment and social image development within the community affected the current amount of the use of SNS as measured by the amount of time spent. The result also showed that the needs for self expression, relationship development, entertainment, and image management significantly affected the current amount of SNS use as measured by the use of major SNS functions.

The result implies that certain aspect of both personal and social motivation serve as the determinant of the amount of the use of SNS. Specifically needs for entertainment and image management were found important in determining the amount of use regardless of the methods of measurement. We can consider these two motivators are the major drivers to the use of SNS.

On the other hand, the needs for self expression and relationship building were found important only when the amount of use was measured by the perceptual use by functions. On the one hand, the difference may reflect stronger association due to perceptual consistency which is related to the second way to measure dependent variable. On the other hand, the difference may reflect the difference between absolute amount of use and perceptual amount of use. Perceptual amount of use tend to related to the importance of use. If the use of SNS by a user relies heavily on small part of the major functions, the differences between

the two measures can increase.

If both type of measures of dependent variable (amount of use) are important in their own respects, future research should focus on identifying the implications of the difference.

The research also showed that the level of the needs for entertainment and relationship building affected the level of intention to use the SNS repeatedly. Interestingly, personal aspects of motivation dominate in determining the level of intention for repeated use of SNS and the effect of social influence is largely devaluated. The result implies that intention for continued use in the future will be determined by the users themselves while current use is partly influenced by social pressure. This result may reflect certain type of perceptual bias toward increased sense of control of future behavior.

Entertaining motivation is a factor that consistently affects both current use and future intention to use SNS. The importance of fulfilling the need for entertaining the users of SNS should be clearly emphasized. When viewed from the perspective of service providers, making the site interesting and playful is going to be important regardless of its connection or contribution to community networking or 'social network'.

As the influence of motivators other than entertainment were not consistent across current uses (measured in two different ways) and future intention to use, understanding the implications of the differences among dependent variables and differences in the association is left to be researched in the future. Future research should focus on the reason for the dif-

ference and the diminishing effect of social motivation. The difference may open a new opportunity to understand the dynamic aspects of SNS uses.

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<Appendix> Result of Factor Analysis

	Factor							
	Repeated Use	Altruism	Entertainment	Image	Subjective Norm	Self expression	Information search	Relationship building
Int2	.837	.098	.249	.065	.049	.120	.011	.014
Int3	.820	.077	.033	.060	.026	.021	.050	.064
Int1	.804	.133	.204	.079	.077	.049	.097	.085
Mo_8	.125	.854	.082	.149	.048	.099	.035	.052
Mo_7	.036	.745	.072	.156	.114	.179	.090	.260
Mo_10	.101	.006	.890	.051	.043	.047	.124	.082
Mo_9	.223	.098	.853	.017	.063	.005	.069	.150
Mo_13	.053	.211	.060	.842	.244	.153	.023	.098
Mo_14	.031	.157	.003	.840	.291	.154	.017	.026
Mo_11	.050	.071	.021	.162	.906	.074	.012	.001
Mo_12	.054	.074	.021	.343	.817	.067	.061	.082
Mo_4	.080	.072	.069	.126	.168	.886	.092	.118
Mo_3	.063	.343	.022	.183	.028	.779	.194	.100
Mo_1	.112	.015	.214	.016	.058	.024	.867	.168
Mo_2	.091	.563	.078	.118	.033	.226	.569	.099
Mo_5	.099	.167	.007	.163	.024	.190	.189	.857
Mo_6	.315	.221	.410	.250	.191	.044	.265	.471

Variable Items : (Int1~3 are used as method 1 part of dependent variable)

Int1 : intention to use Facebook more frequently

Int2 : intention to continue to use Facebook

Int3 : intention to stop using Facebook (reverse coded)

Mo_1 : use (SNS) to acquire various information from others

Mo_2 : use to find solution to a problem I have

Mo_3 : use to show my knowledge or ability to others

Mo_4 : use to be recognized of my existence

Mo_5 : use to meet others with similar interests and aptitudes to me

Mo_6 : use to develop relationship with others and communicate

Mo_7 : use to provide others with my knowledge and information

Mo_8 : use to help others in need of advice or information

Mo_9 : use to enjoy myself

Mo_10 : use to spend my spare time

Mo_11 : use because my acquaintances believe I have to use

Mo_12 : use because people important to me believe I have to use

Mo_13 : use because my use represents my status in my organization

Mo_14 : use because other users have good reputation in my organization

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