

The Analysis of Relations between Subjective Happiness and Computer Usage in South Korea

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Abstract

South Korea's information equipment use index as like using computer is high level among East Asian countries. This research calls attention to the central problem as to the relations with internet, mobile phone usage and subjective happiness in South Korea by using the data of 2006 Asia Barometer. Using information equipment has two aspects: the tool usage (use email or messages) and the usage that except of the purpose of instrumental. Inform2 indicates the instrumental internet using, mobile phone usage and inform1 indicates the other usage. The result is that the inform1 has negative relations with subjective happiness but inform2 does not. This main subject could supported to some extent that instrumental internet using which only serves as a convenient tool is just extension of real life but the other usage makes another world in virtual space. The virtual space gives some experiences to individual and that experiences effect on their self. As a result, it can be interpreted that the spending more time in cyber space makes influence to the self-discrepancy in the real space. But in this study, survey question was not specific so, to obtain a more accurate analysis results, additional studies will be needed.

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I . Introduction

After 2000s, the development of internet which has been the symbol of informationization, has made great change on communication paradigm, as it has been the representation of compressive spatio-temporality. Computer Mediated Communication(CMC) has quite distinct character from prints, radio, television, and movies which can be characterized as one-way media. CMC make people interact and destruct the typical conception of communication(Dotton, Rogers and Jun, 1987). CMC media users in information society is not only participate in the world made by media, and make contents but also they create new social relationships. Subsequently, virtual space become new community, individuals present their own characters and because of their concrete experience, it make virtual human relationships. As a result, virtual space has emerged as a sphere where satisfy one's want beyond real space's order and norm. Virtual space is not a space of imaginative, but an active place. So, virtual space has continuing relationship with the real space. For these reasons, people want to find another self of them and get vicarious satisfaction in virtual space. But when these things happened, there may be some side effects such as virtual space addiction, self disorder, and mental health problem.

In this paper, I discuss the difference between the real space and cyber space, with the terms of self discrepancy. Some researches such as Pars and Folyd(1996) elucidated that in virtual space, people make relationships that are quite similar to the relationship which take place in real space. Virtual space is no more a fictitious community. It is a community where real meetings are hold, and the people who participate in that community experience psychological changes. This continued use of computers is connected with the individual's psychological motivation(Eighmey and McCord, 1998). As a result, some needs that are not satisfied in real space erupted in virtual space and the self discrepancy between real space and virtual space can be happened. But empirical research testing this social fact, was still not taken.

This paper aims to analyze this social fact with putting internet usage as main independent variables, and measures the correlation with real space's subjective happiness, life enjoyment, and accomplishment. In general happiness covers emotion, thoughts, physical condition and

degree of distress and reflects the quality of life. Even though the subjective happiness is somewhat broad conception, with using this term we can find the degree of one's distress, thinking of suicide and the fulfillment. According to the Korea Internet and Security Agency's survey(2010), Korean youth's internet usage is 99.9%. And the whole population usage ratio is 77.8%. The research attempted to explain the social impact of this broad usage, merely focused on digital divide, internet addiction, gaming addiction, or deviant, and criminal phenomena. The sociological empirical research which is taken on the standpoint of social psychology, especially focusing on quality of life, subjective happiness is not sufficient. The earlier researches verified that one's mental state is changed via computer usage, and the impact of virtual space is wide as it is broadly located in social psychology such as self-esteem, ego-identity, personal relationship. Thus this paper focuses on the internet usage which influences distinctively to the people depending on their using purpose and analyzes the impact of internet usage on real life..

There are some arguments that the deepening of information age makes negative impact to the self. For illustration, there is 'Facebook depression', which refers to the condition that may adversely affect troubled teens who obsess over the online networking site. Watching photos of happy looking people having great times on their friends' Facebook pages, someone may feel worse if they think they do not measure up. It can be even more painful than sitting alone in a crowded school cafeteria because Facebook provides a skewed view of what is really going on. Sometimes virtual space provides a skewed and distorted view, and people who lose their judgment may be deprived and withered. Comparing one's self of real space with virtual space's others, there may be gap in self perception and this may exert a bad influence to the real life.

This paper classifies the using of information media into two categories. First one is instrumental using such as e-mail checking and mobile phone messaging. Second is all the other web-surfing other than instrumental using. After classifying the media usage, this paper argues that according to media usage category, the individual's subjective happiness may diverge. And also seeking to clarify the core mechanism in it, this paper pays attention to the enjoyment and accomplishment which are the variables that measure the change of self discrepancy, with analyzing its mediating effect.

II . Theoretical Backgrounds and Earlier Researches

1. Subjective Happiness

The terms of subjective happiness has been used together with subjective quality of life, psychological well-being, psychological happiness, subjective well-being and life satisfaction etc. in many fields. Generally, subjective happiness is considered to the best worth in our lives. In recent years, it came out into the open that objective indicators have no particular relations with individuals life satisfaction or happiness(Diener, 2000), subjective quality of life is considered members of a society's feelings of subjective, psychological well-being and happiness.

Subjective happiness has two aspects : One aspect is a position of emphasizes cognitive evaluation and the other is a position of emphasizes emotional evaluation. The former means that how positively evaluate and judge, by the results of comparing own life with another person or own frame of reference. This aspect emphasizes a cognitive evaluation. The latter aspect emphasizes that emotional evaluation which means individuals' feeling of happiness, gladness and positive or negative emotions such as anxiety, saddening and contentment(Rask et al, 2003). Accordingly, if we accept the happiness means quality of life and subjective well-being, that would imply subjective quality, cognitive and emotional quality all together(Cheng and Furnham, 2003). Happiness is emotional status that quite subjectively evaluated variable factor, not continuous and it could change along a surrounding environment at any time. Accordingly, subjective happiness appropriate scale to analyze current status. In this context, this paper focusing on the subjective happiness among various scales which predict subjective current status of individuals.

2. Self-discrepancy Theory and Subjective Happiness

It is cognitive theory, behaviorism theory, psychoanalytic theory, biomedical theory that explain the cause of depressed emotions. Out of these, general theory, explaining the mood might be cognitive theory. This theory argues that the emotions and behaviors are determined by the granted meaning to the stimuli than environmental stimuli itself. That is, we experience various negative events such as death, disease, unemployment. It is different the

way that gives meaning to a same stimuli person by person. And this differences lead to a different emotional responses and behavior. A subjective interpretation for social situation perform a function as a trigger of physiological responses(Cockerham, 2005 : 137). Therefore, negative self-discrepancy schema is very important to a feeling of happiness.

The self is built and function in the sociocultural context in that reason it could be called a sociocultural product(Bruner, 1990). The self which is the base of a self-discrepancy schema is composed of self-concept that is cognitive aspect, self-esteem that is emotional aspect and self-presentation that is behavior aspect. And self-concept has three aspects : real self, ideal self and ought self(Higgins, 1987). Based on this, self-discrepancy theory suggests principal of causing personal emotions. According this theory, a gap of self among real self, ideal self and ought self arouses different emotions. For examples, differences between real self and ideal self brings about a feeling of disappointment, a feeling of helplessness and in this case, even in small mistakes they blame themselves and losing their interest in activities of pleasure and ordinary. As well, gap between real self and ought self brings about guilty conscience or a sense of humiliation(Higgins, 1989). According to previous studies, the self-discrepancy is related with behavior and health. Patients of anorexia nervosa feel a gap between real self and ought self and patients of bulimia nervosa experience a distinction between real self and ideal self(Higgins, Vookles, and Tykocinski, 1992). There are some features that patients with depression perceive a gap of real self and ideal self, the other side patients of anxiety perceive a gap of real self and ought self. (Strauman, Lemieux, and Coe, 1993). Like this, according to the theory of self-discrepancy, if there are some perceived differences among the various kinds of self, it could lead to negative emotional responses.

Then, what is the reason of these gaps among real self, ideal self and ought self? This can be deducted from self-perception schema. This schema is not innate but learning from society.

3. The Degree of Using Internet

Information society is a type of social system. In this society, information is the main means of production and operated by information dimension not just labor or capital dimensions. In information society, the problems occurred in the production and distribution process not caused by information itself. Actually, internet usage is rapidly increased and the problems are occurred related it. For example, internet dependence and impulse control problem etc. and worst of all it leads to death. Goldberg(1996) suggested that on the authority of DSM-IV material dependence standard, he regulated it to internet addiction disorder. According to this, it could occur obsession to use, withdrawal symptoms, tolerance with internet usage likewise alcoholism. There are the view of internet overuse is problem of impulse control that suggest to internet overuse is using internet compulsively likewise gambling addiction. Sometimes, they using internet to avoid problems, to forget unpleasant feelings, unhappiness in real space. In this case, users psychological problems lead to behavior of internet usage over again and they could loss one's sense of control. It could be expressed Pathological Internet Use, users could not control of their impulse and desires for internet usage. Long time use of internet excessively brings the experiences personal relationship problems or the problems occurring in a domain of working in real space.

There are two main motive in a internet usage : one argues that motivate of virtual identity ; the other opts for motivate of escape from reality. Motivate of virtual identity means that someone want to identify the existence oneself and he needs respect and recognition from other people in virtual space. Strong self-absorption desire cause high possibility of discrepancy between with ideal self and real self and this discrepancy brings high tendency to escape from depression or negative self-cognition(Baumeister, 1998). So, the desire of escaping from the self is increased and they feel the hopelessness for their future and weaken behavior inhibition ability. However, those increase self-discrepancy when they come back to the real space. Motivate of escape from reality means they could forget the stress in real space and emotional release by using internet. When they use internet for this purpose, they could feel the fulfillment at once but they experience maladjustment in real space and get stress more in the long term it makes them to absorb in internet again.

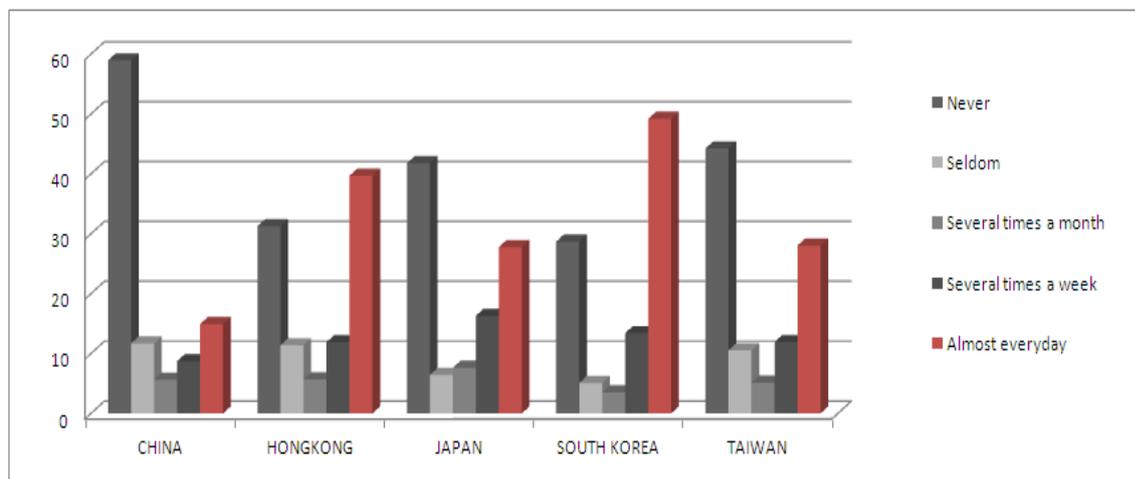
Accordingly, the aim here is to explore the relations with internet usage and subjective happiness in real space and that could be explained by enjoyment or accomplishment. For analysis, we categorize two types of the degree of informationization. We assume that the subjective happiness has the positive correlation with the instrumental using of information equipment like e-mail whereas the negative correlation with the degree of using internet. And we'll try to explain it by enjoyment and accomplishment in a real space.

III. The subject and Hypotheses

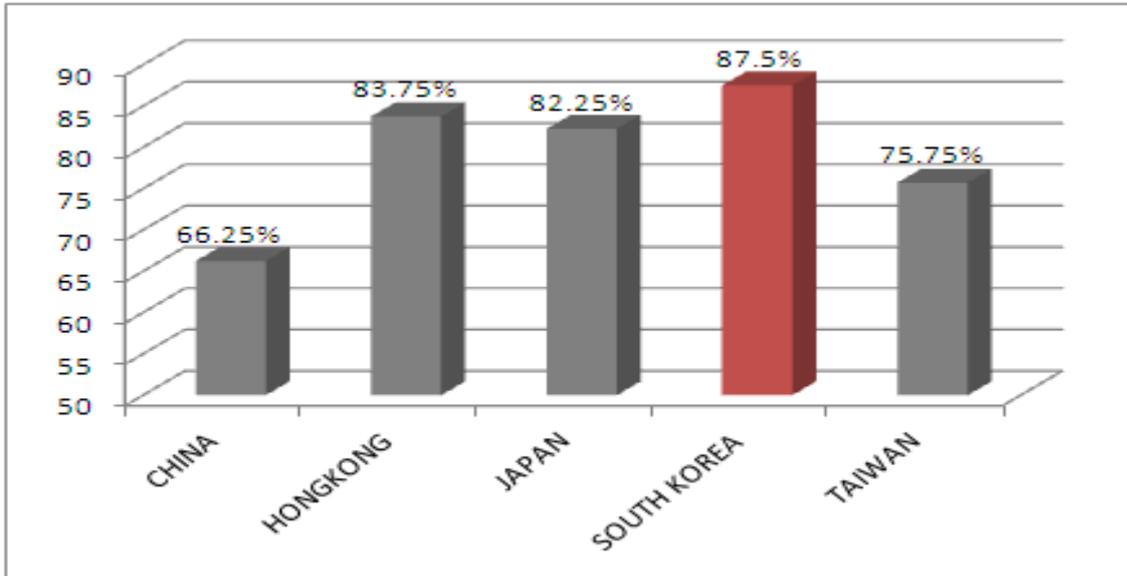
1. Informationization level among East Asia countries

In exploring the questions of the effect of using internet on subjective happiness, this paper will be limited to consideration of South Korea. According to the survey of Information Society Index(ISI) in 2004 by IDC(International Data Corp: a company of investigate to market in America), which covered 53countries, South Korea ranked 8th. South Korea was included toe 10 position that was the only case in the Asian-Pacific region. Other than Korea, Hong Kong is ranked 11th, Australia 12th, Japan 18th, and Taiwan is ranked 20th. In Asia Barometer data, also, South Korea records the top score on using internet or mobile phone consistently among other East Asia countries.

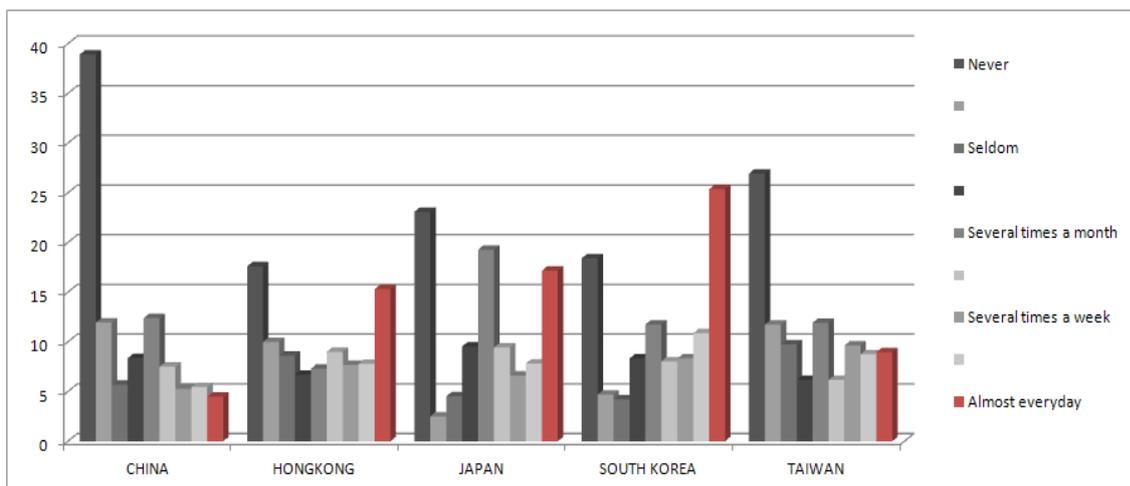
<Figure 1> The level of the using computer for internet in China, Hong Kong, Japan, South Korea and Taiwan



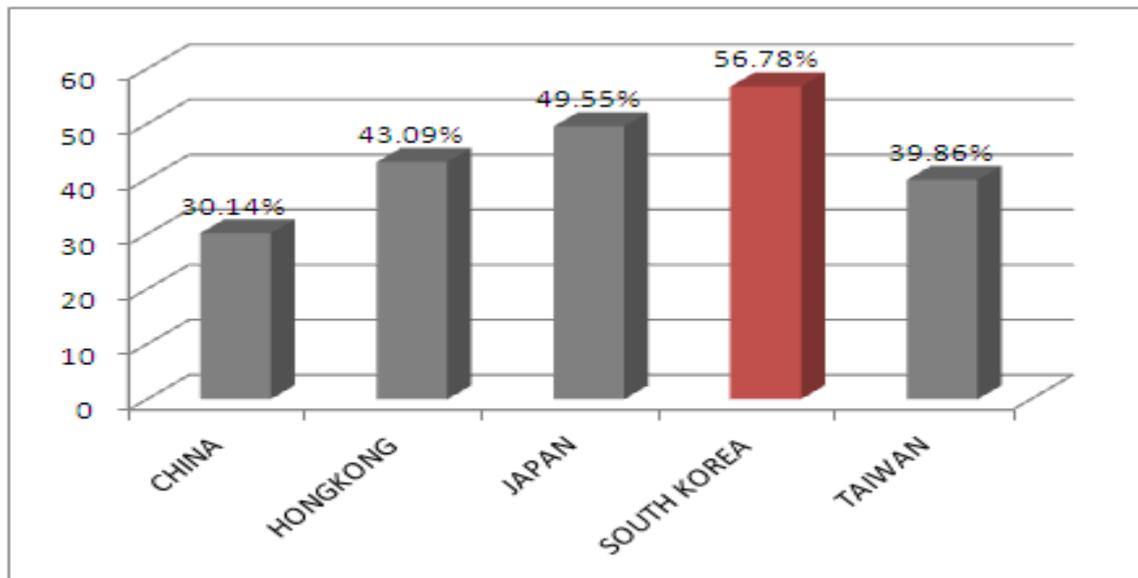
<Figure 2> The average of the using computer for internet in China, Hong Kong, Japan, South Korea and Taiwan



<Figure 3> The level of the instrumental usage of information equipment in China, Hong Kong, Japan, South Korea and Taiwan



<Figure 4> The average of the instrumental usage of information equipment in China, Hong Kong, Japan, South Korea and Taiwan



2. multiple regression analysis (the case of South Korea)

In general, the previous studies, considering of the effect of socio-demographic variables such as education, income, marital status etc. on the dependent variables. So, these variables are controlled in this research by that reason. Four main hypotheses are examined in this study.

Hypothesis 1. The higher degree of inform1 leads to the lower level of the subjective happiness.

Hypothesis 2. The higher degree of inform2 leads to the higher level of the subjective happiness.

Hypothesis 3. The negative effect of inform1 on the subjective effect is explained by real life factor such as enjoyment.

Hypothesis 4. The negative effect of inform1 on the subjective effect is explained by real life factor such as accomplishment.

IV. Data, Variables and Methods

1. Data

This study uses 2006 Asia Barometer Data.

2. Variables

Control variable : Age, Sex, Marital status, Education, Income

Independent variable : inform1, inform2

Mediate variable: Enjoyment, Accomplishment

Dependent variable : Subjective Happiness

Subjective Happiness is assessed by asking respondents one question: "All things considered, would you say that you are happy these days". Responses are coded 'Very unhappy(0), Not too happy(1), Neither happy nor unhappy(2), Quite happy(3), Very happy(4)'.

Informationization has two aspects: Instrumental usage(inform2) and the other use(inform1). Inform1 is measured in response to the question, "How often do you view Internet web pages using computers". Response are coded "Never(0), Seldom(1), Several times a month(2), Several times a week(3), Almost everyday(4)". Inform2 is a two item index measured as the mean response to two questions: "How often do you read or write e-mails using computers" and "How often do you read or write messages using mobile phones". Responses are coded "Never(0), Seldom(1), Several times a month(2), Several times a week(3), Almost everyday(4)". The responses are averaged to produce an index of inform2, which has a .735 alpha reliability.

Enjoyment is measured in response to the question, "How often do you feel you are really enjoying life these days". Responses are coded 'Never(0), Rarely(1), Sometimes(2), Often(3)'.

Accomplishment is measured in response to the question, "How much do you feel you are accomplishing what you want out of your life". Responses are coded 'None(0), Very little(1), Some(2), A great deal(3)'.

Control variables are *age*, *sex*, *marital status*, *education* and *income*. *Age* is coded in number of years. *Sex* is dummy variable coded 0 for males and 1 for females. The reference group is male. *Marital status* is dummy variable coded 0 for married, 1 for widowed, 2 for divorced/separated and 3 for single. The reference group is married. *Education level* is coded 'no formal education(0), elementary school/junior high school/middle school(1), high school(2), professional school/technical school(3), university/graduate school(4).

3. Method

For analysis, multilevel regression analysis was conducted using SPSS 12.0. In addition, we can analyze the effect of mediate variables on subjective happiness directly or indirectly by hierarchical regression analysis.

V. Results

First of all, <Table 1> shows the descriptive statistics of focal variables in this study. The average of age is about 42 and of each informationization is 2.51, 2.27. The mean of subjective happiness is 2.53. Also, the enjoyment and accomplishment mean are 1.83 and 1.49.

Following <Table 2> and <Table 3> is that subjective happiness, enjoyment and accomplishment regressed on the control variables and independent variables. We can examine Hypothesis 1, Hypothesis 2 by these tables.

<Table 1> Descriptive Statistics of Focal Variables (mean and standard deviations)

Variables	Mean	Standard deviation	N
Age	42.02	13.22	1023
Education	3.09	.97	1022
Income	2.97	2.15	991
inform1	2.51	1.75	1020
Inform2	2.27	1.48	1021
Subjective Happiness	2.53	.90	1020
Enjoyment	1.83	.74	1019
Accomplishment	1.49	.64	1017

Note: inform1, inform2, subjective happiness is coded from 0 to 4(5-points scale).

: enjoyment, accomplishment is coded from 0 to 3(4-points scale).

First of all, the results of the control variables are as follows. Female is more happy and enjoyable than male which is reference group. And the more income is related with high level of subjective happiness and enjoyment. On the other hand, subjective happiness and enjoyment are declines with age. The subjective happiness is lower in the group of divorced and single people than the group of married. These results are correspond to the existing researches.

The results indicate that the inform1 correlates negatively with subjective happiness, enjoyment and accomplishment (regression coefficient: $-.054$, $-.053$, $-.041$). As expected, more using internet is related with the lower subjective happiness, enjoyment and accomplishment in the real life. Therefore, Hypothesis 1 is supported.

Hypothesis 1. The higher degree of inform1 leads to the lower level of the subjective happiness.

Hypothesis 2. The higher degree of inform2 leads to the higher level of the subjective happiness.

<Table 2> Subjective happiness, enjoyment, accomplishment and inform1 (Unstandardized regression coefficients with standard errors)

	Dependent variable: Subjective happiness model 1	Dependent variable: enjoyment model 2	Dependent variable: accomplishment model 3
Female	.189*** (.059)	.141** (.049)	.028 (.043)
Age	-.012*** (.004)	-.008** (.003)	-.001 (.003)
Widowed	.113 (.175)	-.065 (.145)	-.229† (.128)
Divorced	-.501* (.211)	-.181 (.175)	-.024 (.158)
Single	-.437*** (.092)	-.231** (.077)	-.189* (.067)
Education	.049 (.041)	.054 (.034)	.058† (.030)
Income	.047*** (.014)	.030** (.011)	.040*** (.010)
inform1	-.054* (.022)	-.053** (.018)	-.041** (.016)
Constant	2.886*** (.255)	2.011*** (.211)	1.370*** (.186)
R ²	.112	.098	.073
N	984	983	981

† P<.10* P<.05** P<.01*** P<.001 (2-tailed tests)

Note: inform1, inform2, subjective happiness is coded from 0 to 4(5-points scale).

: enjoyment, accomplishment is coded from 0 to 3(4-points scale).

<Table 3> shows the correlation with the inform2 and subjective happiness. It is contradict result with inform1. The inform2 is positively related with subjective happiness, enjoyment and accomplishment. In other words, using e-mail or messages with other people makes people happier subjectively and more enjoyable, more accomplishable. The reason of this is that the inform2 is the use of information equipment instrumentally and that is the extension of the real life not in virtual space. Therefore, the Hypothesis 2 is supported.

<Table 3> Subjective happiness, enjoyment, accomplishment and inform2 (Unstandardized regression coefficients with standard errors)

	Dependent variable: Subjective happiness model 1	Dependent variable: Enjoyment model 2	Dependent variable: Accomplishment model 3
Female	.181** (.058)	.136** (.048)	.023 (.043)
Age	-.012*** (.004)	-.006* (.003)	.000 (.003)
Widowed	.122 (.173)	-.063 (.142)	-.209† (.126)
Divorced	-.516* (.211)	-.201 (.174)	-.037 (.158)
Single	-.439*** (.092)	-.227** (.076)	-.187** (.067)
Education	.049 (.041)	.036 (.034)	.054† (.030)
Income	.045*** (.014)	.026* (.011)	.038*** (.010)
inform2	.063* (.026)	.094*** (.022)	.056** (.019)
Constant	2.606*** (.258)	1.660*** (.212)	1.137*** (.188)
R ²	.111	.106	.072
N	985	984	982

† P<.10* P<.05** P<.01*** P<.001 (2-tailed tests)

Note: inform1, inform2, subjective happiness is coded from 0 to 4(5-points scale).

: enjoyment, accomplishment is coded from 0 to 3(4-points scale).

<Table 4> The relationships with using internet(inform1) and subjective happiness
: the mediating effects (Unstandardized regression coefficients with standard errors)

	Dependent variable : subjective happiness			
	model 1	model 2	model 3	model 4
Female	.189*** (.059)	.081 (.045)	.170*** (.053)	.087* (.044)
Age	-.012*** (.004)	-.006* (.003)	-.012*** (.003)	-.007* (.003)
Widowed	.113 (.175)	.163 (.133)	.249 (.158)	.215 (.130)
Divorced	-.501* (.211)	-.358* (.160)	-.516** (.195)	-.366* (.161)
Single	-.437*** (.092)	-.251*** (.071)	-.322*** (.084)	-.219** (.069)
Education	.049 (.041)	.006 (.031)	.010 (.037)	-.005 (.031)
Income	.047*** (.014)	.024* (.010)	.023 (.012)	.016 (.010)
inform1	-.054* (.022)	-.011 (.017)	-.029 (.020)	-.006 (.016)
Enjoyment		.786*** (.029)		.684*** (.032)
Accomplishment			.606*** (.040)	.266*** (.036)
Constant	2.886*** (.255)	1.303*** (.202)	2.072*** (.236)	1.146*** (.199)
R ²	.112	.488	.282	.514

† P<.10* P<.05** P<.01*** P<.001 (2-tailed tests)

<Table 4> shows the mediating effect of enjoyment and accomplishment which explain the negative correlation with the inform1(using internet) and the subjective happiness. In the model1, the regression coefficient of subjective happiness depending on the inform1 is significant. That is, using internet correlates negatively with subjective happiness. Adjusting for enjoyment in model2 makes the coefficient associated with inform1 essentially vanish. Thus, the negative correlation with using computer of internet web pages and subjective happiness could be explained by the enjoyment in the real space. This is similar of the result of model3 which is mediating effect of accomplishment. Model 3 of Table 4 shows the regression of subjective happiness on inform1, adjusting for accomplishment. The coefficient

becomes insignificant with adjustment for accomplishment. We could assume that the accomplishment in the real life explains the much of relations between inform1 and subjective happiness. Model4 adjusted for enjoyment and accomplishment together and the result is similar with model2 and 3. Therefore, Hypothesis 3 and Hypothesis 4 are supported. .

VI. Discussion and Conclusion

This article has attempted to know that the relationship with using internet and subjective happiness. As deepening informationization, virtual space which is made with use of internet or mobile phone generalized in our lives. The interest of virtual space has increased and related studies have been done in many research fields. But most researches tend to be focused on the advantages, abuse of internet using, differences or relations between real space and virtual space itself. Nowadays, virtual space is admitting to a real existence space and that space may be considered potential space in which we could take various activities. We separated real space and virtual space each has different characteristics. When we spend more time in virtual space, the self in real space is affected by virtual space. By dwelling upon this, I explored how it would effect on real life and wholly subjective happiness. It would be a meaningful approach to the research on the effect of social psychology or quality of life to internet usage is still in its early stage. As it were, we built a hypothesis that if people using internet more and more except of instrumental usage for real life, it may lead to self-discrepancy between the self in the real space and the virtual space and this self-discrepancy decreases enjoyment in real life. This suggestion could be more supported by the separated analysis of inform1 and inform2. High level of inform1 effect on real life negatively but inform2 carry out instrumental function and this function increases the convenience in real life.

We analyzed a case of South Korea because of the highest level of informationization among East Asia countries. Results have shown that the more using internet leads to the less level of subjective happiness. This means that using internet decreases sense of reality or bring the gap between virtual space and real space. This could take the self-discrepancy. If the self-discrepancy increase, it makes us feel confused about what is real and what is not. The gap between one's expectations and the reality gets bigger and bigger and we feel unsatisfied about real life eventually, this decreases overall subjective happiness. Overuse of internet lead to the level of enjoyment and accomplishment lower, it also, eventually decreases subjective happiness. Like this, the self fall into confusion between with real space and virtual space. In other words that could be mean that the self is immature or decrease

self-esteem. It could be occurring the dependency instead of solve one's problems for oneself.

Accomplishment which is the subjective judgment about ability to perform some tasks for oneself is the important factor that occurring some behavior and it influences to makes happiness as well. Degree of accomplishment is related with level of effort and ability to overcome a obstacle because it influences to the patterns of behavior, interpret of behavior result or following behavior. However, when someone overuse of internet, the standard of a accomplishment, enjoyment could increase or perception of self could change. Someone who has a difficulty in real life, get lower self-esteem and more and more spend time in virtual space. This mechanism brings about internet addiction(Lee and Jeon, 2004). Overuse of internet websites influences to the feeling in real space, then create the self newly in virtual space to increase self-esteem and to feel the accomplishment or enjoyment feelings. Again and again, this is connected to vicious circle of internet addiction. Clearly, this interpretation is speculative, and considerable work needs to be done.

There are, however, a number of problems that remain to be explored. For this study to be complete, more is needed than what can reasonable be included in this paper. Also, this is limited to consideration of South Korea. Further studies on different countries assessments are needed.

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