Abstract

The purpose of this study is to examine the difference in motivations of using avatars by communication types. The objective of usage between Internet Relay Chat (IRC) and Instant Messenger (IM) users are different. i.e., IRC users are anonymous to each other, whereas those of IM are not. Avatars are used in these services as agents of users’ identity and self-disclosure. Our hypotheses were verified that users have different sense of self-identify and self-disclosure between avatars in these two different types of communication media (IRC and IM). The moderation effect of gender was significant for both IRC and IM. However, age had the mixed moderation effect on IRC and IM.

Keywords: Avatar, Self-identity, Self-disclosure, Internet-relay chat, Instant Messenger.

1. Introduction

On text-based communications, users can express their identity with ID, nickname, and profile. Recently, avatar which is manipulative graphic character on Internet has appeared as the main instrument to express user’s identity with the substantial progress of information technologies [Lanier, 1996]. Avatars have special meanings as symbol of identity in the cyberspace that is not necessarily identical to that of real word [John 1999]. The representative successful example for the sake of profitability is the service of avatar. The avatar market has steadily grown for the last three years with the market size of 24 billion won in 2001, 80 billion won in 2002, and 134.7 billion won in 2003. In 2001, avatar was selected as one of the ten-hit products in Korea [www.seri.org]. Avatar had been used as user’s symbol of identity in websites such as IRC, online game, and portal community between unknown people. In 2003, MSN instant messenger - popular communication tool between friends, coworkers, and family - started the messenger avatar service in Korea. Because avatar on Internet is quite a unique phenomenon in Korea, most of empirical studies in our reference were conducted by Korean researchers (Kim, 2001; Choi, 2002; Hu, 2002). In summary, the important reasons why people use avatars in communication on cyberspace include building their own identities and disclosing them to counterparts.

Previous researches about virtual community focused on the effect of anonymity on people’s behavior and relationship. Recently, more attention has been paid to how the off-line’s social relationship proceeds over cyber-space. The main purpose of IRC is to meet new people in virtual community, whereas IM is used to maintain close relationship with friends, coworkers, and family. We will investigate how such different characteristics of relationship between users influence the usage of avatars at each service.

Identification of different usage of avatars between IRC and IM can help design the appropriately featured avatar services at each service, which in turn can enhance the customer’s loyalty and satisfaction, and increase company’s profit.

2. Theoretical Backgrounds and Literature Review

2.1 Self-Identity
According to Erikson [1959], self-identity (or ego) is beyond the simple recognition of the stable, constant, and consecutive facts of oneself. It contains the unique characteristics of oneself formed by social interactions, developed continuously by time and place, and distinguished from other people's [Dignan, 1965; Giddens, 1991; Suh, 1988]. Self-identity in reality is pretty limited and constrained. Anonymity on cyberspace, caused by invisibility, helps define the on-line identity in quite different meaning from that of the real life. People disclose their new identities in free and diverse ways on Internet because they don’t need to show their real identities. The real body contributes to fix up the self-identity. However, invisibility in cyberspace frees users from their own body, and therefore, facilitates developing a new identity because body is the fundamental condition and environment for every human-being [Giddens, 1991].

Then, is the online identity totally unrelated to the actual identity of real world? Jordin[1999] indicates that online identity is fluid, so it is not necessarily identical to that of offline. However, he contends that online identity is flexibly connected to the offline identity. MacKinnon[1995] introduces three different levels of self-description: i.e., the transparent expression of oneself, which is identical to the real, the translucent expression of oneself, which is somewhat similar to the real, and the opaque expression of oneself, which is totally different from the real. From the discussion so far, anonymity itself doesn’t make a totally unrelated identity from the real life. The figures and appearances could be different from the real, but the self-identity on cyberspace could be an ideal type or an unconscious self-image missed in the real life. Building a cyber-identity could be a process of being mature and shaping a real self-identity. Thus, even though the appearance of self-identity in cyberspace is very different from that of real life, cyber-identity is not totally unrelated from the real, and can arguably represent a facet of numerous real identities.

Goffman[1959] found that a person develops multiple identities in various ways. Identities in cyberspace may look complex because they could represent different social roles and positions, but contain some consistency among themselves. More opportunities exist unexplored if we can understand the diverse linkages between the multiple identities on cyberspace and the real identity. We could use the cyberspace as the forum to help develop diverse cyber-identities that Internet users want to change as their situations change.

2.2 Self-disclosure

Self-disclosure refers to the process of telling another person about oneself, and honestly sharing thoughts and feelings that may be very personal and private [Jourard & Lasakow, 1958]. Jourard (1974) emphasized the importance of self-disclosure for the intimate relationship with another person. Shapiro, Krause & Traux[1969] stated, “Self-disclosure delivers own information to others with verbal and non-verbal behaviors.”

Self-disclosure can have diverse patterns according to different situational contexts. Such situational contexts include personal characteristics, relationships, and topics [Jourard & Lasakow, 1958; Pederson & Hisbee, 1989; Rivenbark, 1971; and, Gilbert, 1976].

In cyberspace, self-disclosure is not only the basic activity to build oneself but also an important occasion that triggers interaction with other people. The degree of other people’s recognition of someone depends on the degree of his/her self-disclosure because there is no physical body on cyberspace. In the personal relationship on anonymous cyberspace, self-disclosure is more important than location and attractiveness that matter for the face-to-face interaction [Merkle & Richardson, 2000]. Kiesler[1999] indicates that cyberspace can attract more self-disclosure because people on cyberspace feel less anxiety about other’s assessment, less concerns of heart-break, and less burdens to look nice to others.
Self-disclosure is also very active in cyberspace for the communication with close people. Sproull & Kiesler[1986,1993] conclude that the small-sized CMC groups are more honest and free in conversation than the groups in the face-to-face relationship. According to Goffman[1959], people use certain ways of self-disclosure that fit to the contexts. In other words, they choose the appropriate ways in revealing themselves, considering the objectives in conversation (such as courtship, show off, sympathy, fear, or respect). Overall, self-disclosure is not uniform in terms of patterns and degrees.

3. Research Hypotheses

3.1 Research Hypotheses

Giddens[1991] indicated that physical body is associated with self-identity. He also described that the wardrobes are not separate from the social identity, and symbolize gender, class, and position. Likewise, avatars represent user’s various aspects of identifies in various forms. People make avatars that resemble themselves, or those of extravaganza, or the opposite ones. They constantly transform their avatars, and make another one that has completely different appearance.

Previous studies have approached self-identity in cyberspace with the focus on anonymity. However, such approach is not effective for avatar service of IM where users communicate by real names. Jordin[1999] indicates that resources for building self-identity must be different at each place in cyberspace. For example, the avatars in Email are different from those in MUD. IM users would not make avatars dissimilar from the real identity because IM is the place to keep communication with people in close relationship. On the contrary, avatars of IRC can have the imaginary features because users may not concern any restrictions of real world, and communicate with strangers on anonymity. Thus, our first hypothesis is as follows.

H1-1: There will be a difference in self-identity between usage of IRC avatars and usage of IM avatars. (IM avatars have more real self-identity than IRC avatars (IRC avatars have more imaginary self-identity than IM avatars).

Self-disclosure can be diverse according to the context, relationship, topics, and time-lapse. Sussman & Sproull[1999] indicate that CMC can increase honesty and accuracy compared to telephone and face-to-face meeting in delivering negative information. The degree of self-disclosure differs according to the counterpart in communication (Gilbert, 1976; Jourard & Lasakow, 1958; Pederson & Hisbee, 1989; Rivenbark, 1971). People disclose more information about themselves to close people such as friends, spouse, and parents. Kim[1992] states that the degree of self-disclosure is in proportion to the degree of intimacy of personal relationship. Consequently, we make the following hypothesis.

H1-2 There will be a difference in self-disclosure between usage of IRC avatars and usage of IM avatars. (IM avatars have more self-disclosure than IRC avatars.)

Numerous studies concluded that gender and age are important factors on online behaviors including usage of avatars (e.g., Choi, 2000; Kim, 2001; Kim, 2001; Son, 2002). H2 There will be a difference in usage of IRC avatars and IM avatars between different ages.

4. Research Method

4.1 Construct Variables

2-1. Gender will make difference on self-identity between usage of IRC avatars and IM avatars.
2-2. Gender will make difference on self-disclosure between usage of IRC avatars and IM avatars.
H3 There will be a difference in usage of IRC avatars and IM avatars between different ages.
3-1. Age will make difference on self-identity between usage of IRC avatars and IM avatars.
3-2. Age will make difference on self-disclosure between usage of IRC avatars and IM avatars.
The measures of self-identity were based on the Dignan[1965]’s Ego Identity Scale. Dignan[1965] made 150 questions representing distinctiveness, self-importance, role-expectation, stability, goal orientation, self-consciousness, and personal relationship. We modified six questions for realistic and imaginary identity.

The measures of self-disclosure were adapted from the JSDQ (Jourard Self-Disclosure Questionnaire) of Jourard[1971b]. We chose and modified twelve questions for four factors of this construct.

We operationalized gender by females and males, and age by teens, twenties, and thirties.

4.2 Research Design
Data were collected by surveys from users of IRC avatars and IM avatars. We surveyed twelve sample groups consisting of two kinds of avatar, two gender, and three age groups. As for the samples of IRC avatar users, we approached Sayclub (www.sayclub.com) and could get their email addresses. Among the samples of IM avatar users, twenties and thirties were collected from the intimate friends of the first author of this study who were using MSNplus. For teenager’s data, we visited two high schools and asked for the participation of the students in those schools. We also collected data of these age groups by uploading our questionnaire on the bulletin board of various community sites. We originally collected 268 data but decided to use 243 data that had sincere and valid replies.

5. Data Analysis and Hypothesis Test
5.1 Reliability and Validity
The items’ reliability was evaluated by Cronbach’s alpha. Cronbach’s alphas were 0.77, 0.69, 0.75, 0.69, 0.71, and 0.81 for fantasy, reality, hobby, capability, opinion, and attraction, respectively. All these numbers are well above the recommended threshold of 0.7 in social science (Nunnally, 1978).

Validity test was necessary because we modified the items from the previous studies to fit to our research context. Separate factor analysis with Varimax rotation was performed for each of self identity and self-disclosure to test whether items load onto their respective constructs. Two factors were extracted as we purported. The factor named “Fantasy identity” consists of items that reflect the better appearance, imaginary figure, and multiple identities. The factor named “Reality identity” consists of items that describe the efforts to reflect real appearance and characteristics. Four factors were extracted in accordance with our original purpose, and all the items were loaded on their respective factors. Based on the contents of these items, we named four factors as hobby, opinion, capability, and attraction.

5.2 Hypothesis Test
We ran MANOVA with the factor scores of self-identity and self-disclosure as dependent variables. The reasons why we use factor scores of self-identity and self-disclosure are that they consist of multiple factor structure, and may well be assessed by true value (excluding measurement errors). We used MANOVA instead of t-test because MANOVA is better when the dependent variables consist of multiple sub-layers and have substantial correlations with each other. Before we advance to hypothesis test, we tested the assumptions of MANOVA in our data-set: correlations between dependent variables, equality of covariance matrix, and multivariate normal distribution. All these assumptions were satisfied. Wilk’s λ was used for the MANOVA test.

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<th>Effect</th>
<th>Wilk’s</th>
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Significant differences were found on self-identity and self-disclosure between two different types of avatar (Wilk’s $\lambda=0.834$, $F=23.799$, $p<0.001$). In the subsequent analysis of variance (ANOVA) on self-identity, the realistic feature was prominent for IM avatars ($F=28.046$, $p<0.001$), whereas the fantastic feature was prevalent in IRC avatars ($F=15.727$, $p<0.001$). Consequently, the hypothesis 1-1 was supported.

MANOVA test was also conducted for the effect of anonymity on the usage of avatars in terms of four factors of self-disclosure: hobby, capability, opinion, and attraction (Table 1). Significant differences were found on these four dimensions between two different types of avatar (Wilk’s $\lambda=0.945$, $F=3.454$, $p<0.01$). In the subsequent ANOVA, hobby and attraction were more prominent in IM avatars, whereas opinion and capability were similar between IRC avatars and IM avatars. Consequently, the hypothesis 1-2 was supported.

Table 1 presents the moderation effect of gender and age on the differences between IM avatars and IRC avatars in terms of self-identity and self-disclosure. The moderation effect of gender was significant for both IRC and IM ($Wilk’s \lambda=0.972$, $F=3.329$, $p<0.05$ for self-identity, and $Wilk’s \lambda=0.950$, $F=3.125$, $p<0.05$ for self-disclosure). Therefore, hypothesis 2-1 and 2-2 were supported.

Table 1

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<tr>
<th>Anonymity</th>
<th>Self-identity</th>
<th>Self-disclosure</th>
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<td></td>
<td>Lambda</td>
<td>Lambda</td>
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<tr>
<td>Anonymity</td>
<td>Self-identity</td>
<td>0.834</td>
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<tr>
<td>Anonymity</td>
<td>Self-disclosure</td>
<td>0.945</td>
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<td>The Moderation Effect of Gender</td>
<td>Self-identity*gender</td>
<td>0.972</td>
</tr>
<tr>
<td>The Moderation Effect of Gender</td>
<td>Self-disclosure*gender</td>
<td>0.950</td>
</tr>
<tr>
<td>The Moderation Effect of Age</td>
<td>Self-identity*age</td>
<td>0.877</td>
</tr>
</tbody>
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Figure 1-1 demonstrates that females expressed the fantastic identity on IRC avatars more than males, whereas there was no gender effect on the realistic identity on IM avatars. Figure
1-2 shows that females expressed the capability feature on IRC avatars more than males, whereas such gender effect was not prominent on IM.

Table 1 displays the mixed results on the moderation effect of age on self-identity and self-disclosure. The moderation effect of age on self-identity was not significant, so hypothesis 3-1 was not supported. However, it was significant for both IRC and IM (Wilk’s $\lambda=0.877$, $F=3.967$, $p<0.001$), supporting hypothesis 3-2. Especially, the moderation effect of age on self-disclosure was prevalent in the factors of opinion and capability. Figure1-3 displays that twenties and thirties expressed more opinion in IRC and IM, respectively, more than any other age groups at each avatar. Figure1-4 displays that capability on IRC avatars was expressed most explicitly for thirties, whereas capability on IM avatars was prominent for teenagers.

6. Conclusion

As for self-identity, avatars of IM contained more features of the realistic characteristics than avatars of IRC, whereas avatars of IRC reflected the ideal, imaginary, and fantastic characteristics of self-identity compared to avatars of IM. Because users of IRC are more anonymous than those of IM, users feel more like to build and express the imaginary self-identity by avatars in IRC than in IM. The realistic characteristic of IM avatars must be related to the nature of IM as CMC media where communication counterparts are already familiar to each other.

From the finding of the four factors composing self-disclosure, we conclude that communication with close people on cyberspace exchanges more affective contents than with strangers. This conclusion makes sense, provided that close friends are the usual dialogue counterparts for private and personal stuffs. Meanwhile, the dialogue on cognitive aspects is not that different between strangers and close people. Therefore, we further state that in overall, self-disclosure is more candid and free between close people than between strangers on cyberspace. Previous studies have focused on comparing the degree of self-disclosure for strangers between different media: off-line vs. CMC, and conclude that cyberspace facilitates more self-disclosure for strangers than the off-line media. Our study, however, compared the degree of self-disclosure between different CMCs that have different level of anonymity. Female’s preference for the ideal, imaginary, and fantastic expression of avatars was more explicit at IRC than at IM. In other words, females preferred to enjoy the fantastic expressions of avatars with strangers than with close people. As for self-disclosure, females preferred to express capability by IRC avatars. This finding implies that females still feel uncomfortable with exposing their own capabilities in real name due to other’s attention.

Age has the moderation effect on only self-disclosure. To the contrary of common guess, teenagers did not have noteworthy uniqueness in avatar usage because avatars became popular across all different generations. We investigated the moderation effect of age on self-disclosure in more details by component factors, and found that its moderation effect was prominent for the opinion and capability factors. Opinion was the prominent motivation for twenties’ usage of IRC avatars and thirties’ usage of IM avatars. Capability was the prominent motivation for thirties’ usage of IRC avatars and teenagers’ usage of IM avatars. Thirties, who are sensitive and active to social issues, used IM avatars in expressing their own opinions than IRC avatars. This finding reflects well that IM is a realistic communication media. Meanwhile, thirties feel burdensome to express their own capabilities to their close people, so they relied on IRC avatars for this concern. To the contrary, teenagers used IM avatars to express their capabilities as show-off to their close people.

Our findings on the different usage patterns of IRC avatars and IM avatars have the following implications. First, anonymity makes difference in building and expressing avatars. IRC users create and express avatars in an experimental way due to the secure anonymity in the
communication media. However, IM user could not overcome the limitation of the realistic characteristics of IM. Second, the characteristics of relationship between communication partners make difference in expressions of avatars for each other. IRC users usually don’t know the real appearance of their counterparts, and thus don’t feel like to disclose their real characteristics. So, they use ideal, imaginary, and fantastic avatars in IRC. IM users communicate with their close people, so feel like to disclose the detailed personal information to each other.

Internet users respect their own characteristics, and demand more control and power than before, so they don’t accept any unconditional enforcement upon themselves. They lead the offline trends. Consequently, the avatar services cannot make success without enough deliberation of online cultures in terms of users’ purposes, psychology, and usage. The fit between avatar services and aforementioned online cultures can be the critical success factor for avatar business. Indiscreet imitating of other avatar services should be replaced with deliberate consideration of such online cultures.

References