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SELF-PRESENT BY AVATARS IN MULTIPLAYER ONLINE ROLE-PLAYING GAMES: THE INFLUENCE OF SELF-ESTEEM, ONLINE DISINHIBITION, AND VIRTUAL SELF-DISCREPANCY

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Abstract

Playing Multiplayer Online Role-Playing Games (MMORPGs) is now a popular leisure activity for some people. Players spend significant energy and money on it. In MMORPGs, players can customize their avatars as virtual identities to present themselves in the virtual world. Avatars are important when playing MMORPGs. However, few previous studies focus on the psychological determinates for avatar presentation in MMORPGs. In this study, we used an online questionnaire of 337 participants to explore the antecedent factors influencing avatar presentation. The current study considers the influence of self-esteem, online disinhibition, and self-discrepancy on self-present and the influence of self-present on avatar presentation of idea self, stand out, and following a trend. The empirical survey result reveals the self-discrepancy between virtual and physical self are relative negatively with self-esteem and positive with online disinhibition. The self-present are influence by both self-discrepancy and online disinhibition. Besides, self-present perception will lead to avatar presentation. The current study provides contributions about confirming the antecedents of avatar presentation that may be serve as fundamental for future research on online game behavior.

Keywords: Multiplayer Online Role-Playing Games (MMORPGs), Online game, Avatar, Self-esteem, Online disinhibition.

1 INTRODUCTION

Academics are curiosity on why people are fascinated to MMORPGs. Yee (2006) advocated three motivations for playing online games: achievement, social, and immersion. Players get achievement by conquering the assigned mission. For the social motivation, they interact with other players to express their feelings or emotions to others by text or graphical representation (Dunn & Guadagno, 2012). Due to the anonymity characteristic of Internet, players can present their true feelings more easily than they do in the physical world. Besides, some MMORPG players immerse in the virtual world created by MMORPG. Most, if not all, MMORPGs allow players to customize their avatars. Avatars of MMORPGs present a creative platform for identity construction in computer-mediated communication (Vasalou & Joinson, 2009). Players can show themselves by avatar presentation. Avatars begin to serve as a substitute for ordinary online identity.

Avatars are important when playing MMORPGs. A considerable number of studies have focused on avatar presentation of MMORPGs. Vasalou and Joinson (2009) used an experiment study to examine how players customize avatars for self-presentation purposes in blogging, dating and gaming websites. Dunn and Guadagno (2012) explored the influence of gender, personality, and self-esteem on virtual self-presence in the form of virtual self-discrepancy. Jin and Park (2009) investigated the self-related process in Wii, an avatar-based game console.

In this study, we aim to test the antecedents of avatar presentation in MMORPGs. We explore if avatar presentation is relative with players' self-presentation. Players with high self-presence tend to use avatars to present their real or ideal selves. Besides, this study further investigate how self-esteem, online disinhibition, and virtual self-discrepancy influent the players' avatar presentation. The study aims to provide an overall understanding of why players shape their avatars, which may have further contributions to this field.

2 LITERATURE REVIEW

2.1 Avatar Presentation

Avatar refers players' representation of their virtual selves in virtual space of MMORPG. According to Bartle (2004), Avatar is the title of the one of the pioneer graphics-based massively multi-player online games introduced in 1979. Creators of Habitat (one of famous MMO in early stage) called the graphical representations of players "avatars", which offered some limited customization abilities (Rheingold, 2000). The customization of the avatar has become a trend. Almost all MMORPGs have avatar customization function for players to choose their avatars' genders, hair style, face looking, body sharp, clothes, accessories, weapon, and profession such as warrior, knight, or witch.

For recent years, research about avatar presentation has raised. Researchers have long been interested in the link between online identity and offline self. Bessière, Seay, and Kiesler (2007) shows that people realize some aspects of their "ideal selves" through their avatar, which may have some benefits for those with low self-esteem. Hussain and Griffiths (2008) examined gender swapping in avatar presentation. Ducheneaut, Wen, Yee, and Wadley (2009) asked players to reveal their reasons to customizing their virtual selves in online games and found that play presented their avatars based on the following three kinds of reasons: idealized self, standing out, and following a trend.

2.2 Self-presence and virtual self-discrepancy

Self-presence is commonly connected with the virtual world. McCreery, Schrader, Krach, and Boone (2013) employed a combination of survey instruments and direct observe action to explore the relationships among personality of self and avatar, presence, and behaviours within a virtual environment. Jin and Park (2009) also added empirical evidence about the mediating role played by self-presence in avatar-based video games. Given that all reference discussed above, we consider that

the self-presence plays an important role in MMORPGs. Given the popularity of MMORPG, it is important to understand players' self-presence in cyber world created by online games. In this study, self-presence refers to the degree to which MMORPG players feel as if their avatars in MMORPG are their real selves.

Academics and industry practitioners are interesting in why some players prefer to have their avatars different from their selves in the physical world. Previous studies have discussed virtual self-discrepancy in the online world. Dunn and Guadagno (2012) examined the influence of gender, personality, and self-esteem on virtual self-representation in the form of virtual self-discrepancy. Suh (2013) considered that self-esteem influence people's contribution in the virtual community.

Fig. 1 illustrates the concepts of self-presence and virtual self-discrepancy used in the current study. In the current study, physical self is the self in the physical world. Virtual self is the virtual identity in the virtual world created by MMORPGs. The idea self is the self that an individual hope himself or herself to be. Self-presence refers that virtual self is experienced as the real self (idea self) of the player. Virtual self-discrepancy refers to the difference between individuals' self in the physical world and the avatars they created to identify themselves in the virtual world.

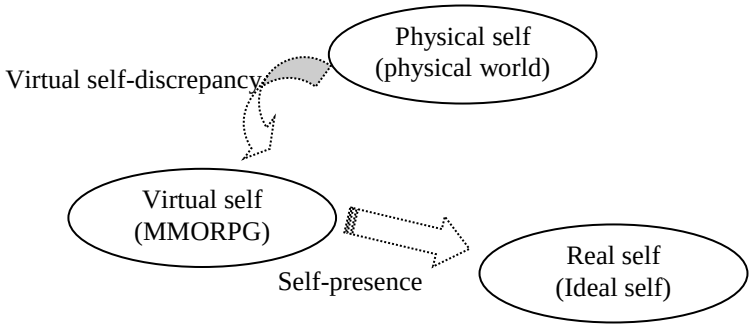

Figure 1. Physical self, virtual self, and real self

2.3 Self-esteem

Self-esteem is frequently mentioned when investigating internet behaviour, especially pathological Internet use and Internet addiction. Niemz, Griffiths, and Banyard (2005) suggested that pathological Internet users had lower self-esteem and were more socially disinhibited. Players with low self-esteem tend to act or speak more openly on the Internet than ones with high self-esteem. Ng and Wiemer-Hastings (2005) argued that anonymity characteristic of Internet gives low self-esteem individuals the desire to create a virtual life for themselves on the Internet, and increase the probability of being Internet addicted.

Low self-esteem individuals may be unsatisfied to the physical looking of themselves in the physical world. Yee (2002) argued that, in the virtual world, individuals may temporarily overcome the low self-esteem issue. Players may customize the ideal avatar which can make up their weakness up and to build their self-esteem up. Thus, avatar presentation may be relative with individual's self-esteem.

2.4 Online Disinhibition

Online disinhibition effect leads people to loosen up, feel less restrained, and express themselves more openly (Joinson, 1998, 2001; Leung, 2002; Postmes, Spears, Sakhel, & De Groot, 2001). John Suler (2004) advocated that online disinhibition could be divided into two parts: benign disinhibition and toxic disinhibition(John Suler, 2004). When people have the benign disinhibition on the Internet, they share very personal things about themselves like emotion and secret. They trust in the person they convey to and show their kindness that may not be seen in the physical world. When people have toxic disinhibition, they show their anger and/or talk with rude language. People with toxic disinhibition may unfold their dark side in their heart. In another study by Suler (2002), some types of the benign

disinhibition are ways to understand oneself. People may use practice their positive characteristics, or develop new selves in the virtual world.

MMORPGs provide players a virtual world in which they can relax and escape from the physical world (Yee, 2006). In the physical world, people have to follow social norms in their physical looking presentation. Without the limit of the social norm in the virtual world created by MMORPGs, players customize their avatars whatever they want. Online disinhibition effect should be a factor influencing players' avatar presentation behaviour.

3 HYPOTHESES

As mentioned above, self-esteem is an important factor that might influence what we act and how we feel. For example, the benefits of high self-esteem can enhanced initiative and pleasant feelings (Baumeister, Campbell, Krueger, & Vohs, 2003). Low self-esteem individuals tend to have less internal consistency, lower self-rated confidence(Campbell, 1990). the current study proposes that self-esteem is a determinate for virtual self-discrepancy and argues the following hypothesis:

H1: Low self-esteem players will feel higher level perception of self-discrepancy between physical and virtual world than high self-esteem ones.

Individuals' behaviours are usually restricted by social norms. Social norms have been found to influence a variety of behaviors in our living society(Cialdini & Goldstein, 2004), such as saving(Cole, Mailath, & Postlewaite, 1992), and household (Lindbeck, 1997). MMORPGs provide players a virtual environment in which they can escape from the physical life and temporarily ignore the physical-life problems (Yee, 2006). In MMORPGs, without the limit of social norm, people can do whatever they want. The consequences of online disinhibition might make them feel that they are different from themselves in physical world because they can do things that they cannot or do not usually do. Thus, the online disinhibition perception will increase their perception of virtual self-discrepancy between physical and virtual world. Based on the discussion mentioned above, the current study proposes that online disinhibition is a determinate for virtual self-discrepancy and argues the following hypothesis:

H2: Players with higher online disinhibition perception will have higher level of the virtual self-discrepancy between the physical selves and virtual selves when playing MMORPGs than ones with lower online disinhibition perception.

Self-presence refers to the degree to which game players feel as if their avatars on the screen are their idea self (Jin & Park, 2009). Self-presence can be used to reveal how players immerse in the virtual world created by MMORPGs. It is a psychological state in which virtual selves are experienced as the real (ideal) self (Lee, 2004). Therefore, we argue that online disinhibition is link to self-presentation and propose the following hypothesis:

H3: People with higher online disinhibition perception will feel stronger self-presence perception than ones with low online disinhibition perception when playing MMORPGs.

Virtual self-discrepancy means the difference between self in the physical world and the avatars in the virtual world(Suh, 2013). Self-presence refers to the sense of present idea selves by avatars. When players perceived low virtual self-discrepancy between virtual and physical selves, they regard that the avatars should be same as themselves in the physical world. They do not customize their avatars to match their ideal selves. Instead, they choose their avatars based on their selves' image in the physical world. Thus, low virtual self-discrepancy players will not self-present their ideal selves by avatars. In contrast, players with high virtual self-discrepancy feel strong difference between selves in the virtual and physical worlds. When the virtual self-discrepancy perception is high, player may break their existing cognition of who they are and will self-present their ideal selves by avatars. Thus, we propose the following hypothesis:

H4: People with higher virtual self-discrepancy perception will feel stronger self-presence perception than ones with low virtual self-discrepancy perception when playing MMORPGs.

Lastly, we consider that the self-presence is the antecedent of avatar presentation. When people think that they are the avatars in MMORPGs, it is possible for them to create an avatar that fits their expectancy. Owing to the customization function provide by MMORPGs, creating an ideal avatar in MMORPGs becomes easier than before. People who are not satisfied with their appearances can choose their avatars' look, figure, height, and others as they want. Bessière et al. (2007) proved that players would create their main character more similar to their ideal self than the players themselves were. In this study, we consider that their created avatar will follow three factors that they usually do not have in physical world: idealized self, standing out, and following a trend. We propose the following three hypotheses:

H5, 6, 7: Players with high self-presence perception agree much that avatar presentation should be used to present their ideal selves (stand out, follow trend) than ones with low self-presence perception.

4 METHOD

4.1 Sample and Procedure

The study conducted an online questionnaire survey to test the proposed hypotheses. The questionnaire composed of six sections of disinhibition, self-esteem, self-presence, virtual self-discrepancy, MMORPG behavior, and demographics. All measurement items in the survey were close-ended questions. The questionnaire lasted approximately 10 minutes in duration.

The study recruited participants from an online bulletin board PTT (telnet://ptt.cc), which is the biggest bulletin board systems in Taiwan, which contained 1.5 million registered users. The study choose PTT since it is a popular online community and many game players share information of a variety of MMORPGs on it, which increasing the representativeness of the sample.

The study requested permission from moderators of bulletin board of "MMORPG" in PTT prior to posting the call-for-volunteers message. After that, we post the call-for-volunteer message which contained hyperlink to the online survey. To encourage game players to join this survey, the study provided 150 points virtual currency of PTT for each completed response as incentive. Besides, the study provided a lottery of some convenience store gift vouchers of US 7 dollar worth for completed responses.

Data was collected in an eight-day period. In total, the study received 373 responses. After eliminating data with incomplete responses, 337 responses were accepted for data analysis.

4.2 Measurement

The Rosenberg Self-Esteem scales (Rosenberg, 1965) was used to measure self-esteem. Online disinhibition was measured by three items scale developed by J. Suler (2004). Virtual self-discrepancy was measured by adapted procedure developed by Suh (2013), which was based on Tennessee Self-Concept Scale developed by H. W. Marsh, Parker, J., & Barnes, J. (1985) and Self-Description Questionnaire developed by H. W. Marsh, Smith, I. D., & Barnes, J. (1983). In order to get the discrepancy between selves in the physical world and in the virtual world, the participants were tested with the same questionnaire items of self-concept and self-description in both the physical and virtual world. We calculated the difference of scores in the virtual and physical world as virtual self-discrepancy score.

The study adapted the four item self-presence scale developed by Behm-Morawitz (2013), which was originally used for measuring the participants' interaction with their avatars in MMORPGs. The online disinhibition was measured by three items scale developed by J. Suler (2004). The study used the scale developed by Ducheneaut et al. (2009) to measure avatar presentation, which composed of three

factors: idealized self, standing out, and following a trend. The scale contained two questions each for the three factors.

Demographic data of participants were also collected in this study. In addition, to profile the game playing behavior of participants, the study asked participants to reveal how many hours they spent in MMORPGs per day and how much money you spent per month.

The study adopted 7-point Likert type scale, from 1 (strongly disagree) to 7 (strongly agree), for all measurements except demographic data collection.

5 RESULTS

5.1 Descriptive Statistics

The statistical analysis of the current study was based on the remaining 337 usable responses (69.73% male and 30.27% female). Cronbach alpha analysis was used to test the reliability of scales. The results showed 0.908, 0.843, 0.708, 0.768, 0.636, 0.782, and 0.83, respectively for self-esteem, online disinhibition, virtual self-discrepancy, self-presence, idealized self, standing out, and following a trend. All the reliability scores exceeded or closed to 0.70, which is well within the acceptable or marginal acceptable range.

5.2 SEM analysis

Fig. 2 shows the results of the structural equation modeling analysis. According to Hair, Anderson, Tatham, and Black (1995), and Gefen, Straub, and Boudreau (2000), the goodness of fit index (GFI), comparative fit index (CFI), normed fit index (Steinfield, Ellison, & Lampe), and non-normed fit index (NNFI) are the best indices if they are above 0.90 and demonstrates marginally acceptance if above 0.80, adjusted goodness of fit index (AGFI) above 0.80. All indices of the SEM model were within the accepted thresholds. Table 4 provides an overview of testing our hypotheses.

6 DISCUSSION

Based on SEM, self-esteem will negatively influence the virtual self-discrepancy. That means when an individual has low self-esteem, he or she will get higher virtual self-discrepancy and lower self-presence while playing MMORPGs. Low self-esteem is a reflection of central negative beliefs (Fennell, 2005). While individuals have low self-esteem, it is hard for them to believe what they are capable of. They are not satisfied with their physical appearances, personality, social skills, and others. Once they have a chance to play MMORPG, they tend to change all the things they are not satisfied with through their avatar. So they will have higher virtual self-discrepancy between physical world and virtual world created by MMORPGs.

Besides, the results show that online disinhibition has positive effects on both virtual self-discrepancy and self-presence. That means when an individual perceive high online disinhibition, he or she will get higher virtual self-discrepancy and self-presence while playing MMORPGs. How different between physical world and MMORPG world is decided by how individual feel. Today, people live in the world full of social norms and morality. But in MMORPG world, who cares? Social norm and morality restricts are released are nearly nothing. After freeing themselves from social norms, people can exhibit abnormal behaviors in MMORPG world and create higher virtual self-discrepancy. Self-presence is also influenced by online disinhibition. As we discussed previously, due to the online disinhibition, people would like to do something that is immoral in physical world. And the pleasant sensation from breaking social norm makes individuals feel like they are the avatars they create, thus increase their self-presence.

We also found that virtual self-discrepancy has significant influences on self-presence. That means when an individual has high virtual self-discrepancy between physical and MMORPG world, he or she

will get higher self-presence while playing MMORPG. One plausible theory is that when people experience the differences between two worlds, they can use avatar to present their ideal selves. They are not restricted by the image and characteristics of themselves in the physical world since that they recognized that physical and virtual world are totally different. Thus, players with high virtual self-discrepancy will get higher self-presence than ones with low virtual self-discrepancy.

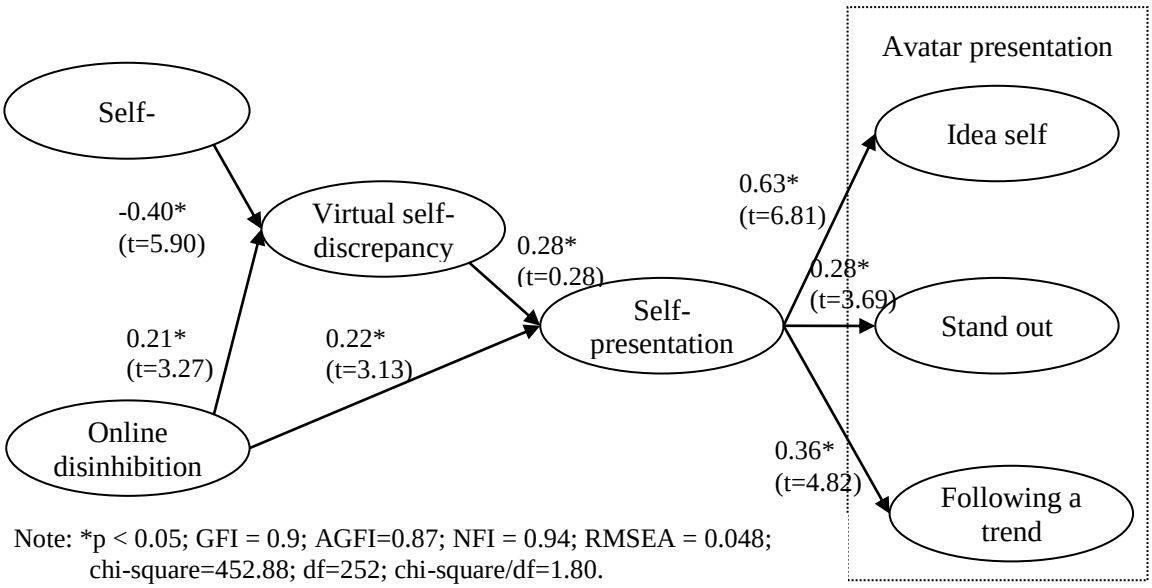

Figure 2. Analysis results (n=337).

Our model shows that self-presence influences avatar presentation (idealized self, standing out, and following a trend) positively. That means when individuals have high self-presence when playing MMORPG, their game avatars will show these three factors to represent themselves. People may have something that they are not satisfied with. Virtual space of MMORPG provides them a chance to change it. No matter how people are not satisfied with their physical appearance or body, it is not a problem at all in MMORPGs. People can choose their favourite look during avatar creating. Thus, if an individual intensely considers that he or she is the avatar in MMORPG, they tend to show their best. They create avatars that represent idealized self. They create avatars standing out from other players. They create avatars following the newest trend. In that way, they present all the desirable appearance conditions they ever want during avatar creating.

7 SUMMARY

This study provides contributions about confirming the antecedents of avatar presentation that may be serve as a suggestion for future research. Besides avatar presentation, other game behaviours such as gender swapping and multiple role playing are also crucial for the extending the understanding of MMORPG psychology. Personality also plays an important role on MMORPGs. In this study, self-esteem is the personality factor we focus on. There are still many other personality dimensions which still waiting for academics to explore their connection to game behaviours. Due to the increasing of MMORPG players, there are increasing amount of interesting research issues which need academics to put their focus on. The current study may contribute to the understandings of avatar presentation and its influential process.

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