

Conjuring the Ideal Self: an Investigation of Self-Presentation in Video Game Avatars

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Abstract

Self-presentation in online spaces has recently attracted a significant amount of attention in psychological literature. Video games allow players to create a detailed, unique character to represent themselves in the online social world. Research has found that there is a relationship between self-esteem and online self-presentation. However, little research has examined gender differences within this topic. The study aimed to address this gap in the literature by specifically examining gender differences in avatar creation and how this extends to gameplay choices, while confirming the previously noted effects of body self-esteem on avatar creation. Forty participants created an avatar in *The Elder Scrolls Online* and completed questionnaires on General Self-Esteem and Body Self-Esteem plus an evaluation of their avatar. Results found that body self-esteem predicted perceived avatar similarity and gender affected class choice. Limitations and directions of future research are discussed.

Keywords

self-presentation; avatars; psychology; social psychology; impression management; online behaviour; self-esteem; MMORPG; The Elder Scrolls Online

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Introduction

Self-presentation

Self-presentation, or impression management, is a regulation of social behaviour with the intention of controlling the perception of one's image. It was first described by Erving Goffman in his 1959 book "The Presentation of Self in Everyday Life", using analogies to theatre to explain how individuals are like actors when they self-present. It was then defined as a social behaviour by Edward Jones in the 1960s, and has been studied extensively in social psychology since.

It is said that the concept of self is important as it can influence, and be influenced by, social interaction (Schlenker, 1980; Leary & Kowalski, 1990). It is argued that a certain degree of self-presentation is essential for successful social interaction, and it is not simply a sign of vanity, shallowness or insecurity (Leary, 1995). It has been consistently found that individuals will try to present the most positive version possible of themselves (Alexander & Knight, 1971; Bromley, 1993). Ultimately, it is thought that it is the desire for social approval that drives self-presentation efforts (Arkin, 2013; Jellison & Gentry, 1978).

Self-presentation in online environments

With the explosion of social media use in recent years, literature has shifted focus towards impression management online. Currently, 83% of internet users use social networking sites, and computer mediated communication (CMC) accounts for a quarter of the time spent online (Brenner, 2013). Impression management is particularly relevant to online environments, as publicness significantly increases motivation to self-present positively (Leary & Kowalski, 1990). Websites and applications such as Facebook, Instagram and Twitter provide a platform for individuals to project themselves, and it can be their real self or an idealised self they choose to project.

As early as 1996, Walther's Hyperpersonal model of communication predicted that the reason individuals positively self-present online is because the technology allows unlimited time and editing, meaning that they can be highly strategic about self-presentation. Online communication allows the individual to consider their response more carefully, as they do not need to respond instantaneously as they would in a spoken conversation. Editability means they can revise their message, or delete it (Walther, 2007). This means negative aspects can be downplayed, and information presented selectively to portray a positive image (Ellison *et al.*, 2006; Bibby, 2008). It is for these reasons that it is significantly easier to present the best possible self online than it is in real life.

Early research on impression management online examined the use of personal websites as a form of self-presentation (Schau & Gilly, 2003). Chat rooms and bulletin boards were also examined and it was found that users often pretend to be someone else or act out negative impulses in the online world that they cannot in real life (Rheingold, 1995; Surratt, 1998; Turkle, 1995). Users of chat rooms were found to embellish personal characteristics such as age, intelligence, income and marital status (Caspi & Gorsky, 2006; Cornwell & Lundgren, 2001; Whitty, 2002).

More recently, research attention has shifted to social media sites such as Facebook. It is stated that self-presentation is a major motivation to use social networking sites (Kramer & Winter, 2008, Nadkarni & Hofmann, 2012). It has been found that some users will self-present by only showing the most attractive photos (Ellison *et al.*, 2006; Manago *et al.*, 2008; Strano, 2008). Facebook users rated their profiles as portraying them as better than reality on qualities such as "funny", "outgoing" and "adventurous", and believed that their profiles presented them more positively than reality (Toma & Carlson, 2015).

Self-presentation in video games

Video games are another form of media which can encourage conscious or unconscious impression management. Many current games allow players the freedom to create a very detailed and unique avatar to play through the game as. There are usually many options available for customisation, varying from hair colour to hand size, from forehead slope to eye width, meaning that players can easily create something that resembles themselves. Therefore, it would be reasonable to expect that people will do so.

It has been found that users will spend extra effort creating a unique representation of themselves, despite there being ready-made options available, and even if it requires significantly more time commitment (Cheng *et al.*, 2002; Taylor, 2002). In the social online game *Second Life*, 60% of users were found to create an avatar based on their own characteristics, and it was found that it was often an idealised version of themselves (Ducheneaut *et al.*, 2009). Players of *World of Warcraft* were asked to rate their own attributes, and then rate their character's attributes. It was found that they rated their characters as having more favourable attributes than their own attributes; therefore they had created an idealised character (Bessiere *et al.*, 2007). In a study of undergraduate females, it was found that those who wished to be thinner created avatars with a lower body mass (Thomas & Johansen, 2012).

Creating an idealised self avatar has been found to establish a stronger avatar-self connection than creating a self-reflective avatar (Sa, 2010). Furthermore, users who create an idealised avatar indicate greater personal and emotional investment in their avatar. Introverted players

often create avatars which are idealised versions of themselves, while extroverted players experiment with new identities (Yee, 2006). Evidently, the process of avatar creation in video games can reveal considerable information about self-presentation and social behaviour.

Gender and Gameplay Choices

Games such as *The Elder Scrolls Online* originate massive virtual worlds, complete with their own history, politics and prejudices (or lack thereof). Potentially, one of the reasons why these games are popular with both genders is because in the game, male and female bodies are equally strong. Both genders can be warriors or healers if they choose to be; there are no gender stereotypes. There are many strong female leader characters, the society is truly equal and not dominated by either gender.

While MMORPG environments allow players to escape the gender stereotyping of the real world, video games are still often marketed very obviously to men or to women (Lien, 2013). For example, the *Call of Duty* first person shooter series is usually marketed to men - commercials for it are shown during sports games and action movies. Games marketed to women are less action based and more light-hearted, life simulations or puzzles such as *Candy Crush* and *Farmville*. According to some research, men like action and adventure, or "serious" games, while females prefer games which involve helping and nurturing (Subrahmanyam & Greenfield, 2000; Hartmann & Klimmt, 2006).

However, in a more recent study of South African young adults, it was found that females and males actually liked similar games, and that males identified with female game characters. The paper argued that people performed in accordance with gender stereotypes because of social expectations (Amory & Molomo, 2012). This suggests that there could potentially be many female gamers who do not openly discuss their gaming habits because of the stereotypes associated with gaming. Often, people do not identify as gamers because of the negative connotations associated with gaming (Shaw, 2011). This research adds to the argument that gender stereotyping within gaming is a widespread issue.

Despite this, women now make up almost half (48%) of gamers and contrary to stereotypes, women aged 18 or over make up more of the gaming population (36%) than boys aged 18 or younger (17%). Adult male gamers average 18 years' experience of play while adult females average 13 years (Entertainment Software Association, 2014). This shows that women represent a significant amount of the gaming population, and are almost equally experienced when it comes to years of play. It highlights how false the stereotypes and marketing strategies are.

Rationale of the current study

Research in this area highlights the potential of avatar-based media for exploring fundamental psychological mechanisms underlying perceptions, attitudes and behaviours relating to self-presentation. (Seung-A, 2010). Avatar creation media provides an environment with which to study the more unconscious aspects of self-presentation. In online environments such as these, it becomes easy for people to interact socially in a disembodied manner; they are granted anonymity and can reveal as much or as little as they choose. This combination of anonymity and disembodiment provides a computer mediated environment wherein a new kind of identity production appears. (Bargh *et al.*, 2002; McKenna *et al.*, 2002). The study of avatars and social interaction online are important research areas in the human computer interaction (HCI) and cyberpsychology fields, and the wider field of social psychology.

Online massively multiplayer video games such as *World of Warcraft* (*WoW*) have created idiosyncratic social environments with their own culture, history, group behaviour and real economic markets. It is unsurprising that they have become a focus of study for researchers in psychology. *WoW* has been studied by researchers using methods such as qualitative ethnography and quantitative analysis of census data (Bainbridge, 2015). As we continue to spend more and more time online, the study of social behaviour in online communities becomes increasingly important.

In addition to this, the recent "Gamergate" controversy (see Heron *et al.*, 2014) highlights the need for research in to gamer identity, particularly with respect to gender and gaming. Despite the number of female gamers, the games industry is still seen as a male dominated industry (Stuart, 2011; Jayanth, 2014). Women make up just 12% of the games industry workforce (Wallace & Robbins, 2006; Burgess *et al.*, 2007). Stereotypes prevail, which subsequently affect the design and marketing of games. Research into gameplay choices will help to inform game design, as well as revealing information about social behaviour, individual differences and gender differences.

The main aim of the study is to investigate self-presentation in avatars with relation to self-esteem. The secondary aim is to explore avatar-directed gameplay choices with relation to gender. While a growing body of research has been dedicated to self-presentation in avatars, none has investigated the relationship between self-esteem and self-presentation using Franzoi & Shields's (1984) body self-esteem measure.

There has been some previous research in gender and avatar creation; however, it has been limited. For example, Thomas & Johansen's (2012) study used a female-only sample and thus was not making a gendered comparison. Currently, there is little research on gender in gameplay

choices. It has been found that females did show a slight preference for healing/support based roles (DiGiuseppe & Nardi, 2007). However, this study can be criticised for its methods and non-scientific approach. The study was mostly quantitative and did not use any statistical methods to analyse the strength of the relationship between gender and class choice. Building on this research and using assumptions from gender stereotypes to draw hypotheses, this study looks to investigate gender differences in gameplay with regard to class choice.

The hypotheses of the study are as follows:

H1: self-esteem will predict scores of perceived similarity

H2: gender will affect class choice

Method

Design

The study used a mixed design to investigate two hypotheses. The independent variables were self-esteem scores and gender. The dependent variables were perceived similarity scores and class choice, respectively.

Ethics

Participants were informed before the experiment commenced that all their information would be kept fully confidential. They were reminded that they could withdraw from the study at any time and could omit any questions they did not wish to answer. Consent forms were used to ensure that participants were aware of what they were taking part in.

Participants

There were 40 participants. 23 (57%) were female. 28 (70%) participants were students. The remaining participants were either graduates or non-students. Participants were recruited through advertising on the University of Glasgow's Psychology Facebook groups, email and through word of mouth. Age of participants ranged between 20-35. The average age was 22.6 (SD = 3.05).

Twenty described themselves as regular gamers. The others had little to no gaming experience. Of the regular gamers, the average time spent playing games per sitting was 2.2 hours. The most common system used was PC, followed by PS3. The most popular genres were action/adventure, role playing (RPG) and first person shooter (FPS). The genre of MMORPG games was played by 10% of participants (n = 4).

Materials

The video game used to create avatars was *The Elder Scrolls Online*, a 2014 massively multiplayer online role playing game (MMORPG). Players are able to create a unique avatar upon starting the game, which will represent them in the social online world as they play through the game.

The avatar creation process is very detailed and allows players the choice of nine races. There are three human races, the Redguards, Nords and Bretons, differentiated by hair, eye and skin colouring, culture and combat style. The three elven races are Dunmer, Bosmer and Altmer. Lastly, there are three humanoid creature races, the Orcs, Khajits and Argonians. For this study, race choice was left open to participants. A brief outline of each race is provided in-game to inform users of their traits and combat styles.



Figure 1: Available races in *The Elder Scrolls Online*. Top row L-R: Argonian, Breton, High Elf; Middle row L-R: Khajit, Nord, Dark Elf; Bottom row L-R: Orc, Redguard, Wood Elf

After choosing a race, users then choose a class, which determines their style of combat and skills. The game provides a description of each class, and if clarification was needed extra information was given to participants to inform their decision. Choice of class is important as it determines the player's role in a social group. Dragonknights are damage based warriors using heavy weapons, Nightblades focus on damage using stealth, while Sorcerers use magic and Templars are support based using magic to heal teammates.

Participants were told to choose the class as if they were going to play the game, and reminded of the social and team work aspects involved.



Figure 2: Class choices in *The Elder Scrolls Online*

For the physical dimension of the avatar, the game allowed for the manipulation of 48 attributes, using scale sliders and ternary diagrams. These attributes varied from face structure such as cheekbone height, eye width etc., to body shape such as waist size, hip size and gut size. It was left to participants to manipulate as many or as little attributes as they liked, to ensure that the process represented real life character creation as closely as possible.



Figure 3: Example of avatar creation user interface in *The Elder Scrolls Online*

Measures

The measures used were Rosenberg's Self-Esteem scale, a Body Self-Esteem questionnaire and a specially created avatar evaluation questionnaire.

Self-esteem

Firstly, to measure general self-esteem, the Rosenberg scale (1965) was used. This self-report test measures ten items on a Likert-type scale with responses ranging from 'strongly agree' to 'strongly disagree'. Scores range from 0-30 with scores under 15 signifying low self-esteem.

Secondly, to measure body self-esteem, Franzoi & Shields (1984) Body Self-Esteem scale was used. This self-report questionnaire uses a Likert scale to measure how participants feel about 35 body parts and functions, such as "appearance of stomach", "thighs", "nose", "lips" etc. Participants respond with a number between 1 and 5 in the space provided. The minimum score is 35 and the maximum is 175.

Evaluation

The avatar evaluation asked participants to rate their avatar in terms of facial features and body, and then asked them how similar to themselves they perceived the avatar to be. Lastly, participants were asked to write a short sentence explaining why they chose the race and class they did.

Additional Measures

A questionnaire on gaming experience and habits was given to determine if participants were regular gamers or non-gamers. This asked if they considered themselves regular gamers or not, and if so how many hours they would typically spend playing. It also asked which genres of games they played and on what gaming system. Lastly, it asked if participants played online games and if so, if they played with friends or with strangers.

Procedure

Firstly, participants were given their questionnaire package and informed of what they would be doing. They were asked to read and sign a consent form and read the instructions sheet. Secondly, they completed the gaming habits questionnaire.

After this, they began creating their avatar. They were asked to complete a trial to acclimatise to the user interface of the game, by way of replicating a practice avatar from a printed image. To ensure that this example avatar did not influence participants' own avatar choices, it was given extreme and unusual features that they would be unlikely to choose for their own avatar.

The trial ensured that the user interface was not a confounding variable, as difficulty or confusion using it could affect a participant's avatar design process and lengthen their creation time, which was being measured. If participants were regular gamers or felt confident about using the interface they were allowed to skip this stage.

After the trial, the avatar settings were reset and the participants began creating their own avatar. While doing this, a screen recording was taken in order to measure the time spent on creating.



Figure 4: The practice avatar

Upon finishing the avatar, participants then began completing their questionnaires. Firstly, they completed the Rosenberg Self-Esteem scale, followed by the Body Self-Esteem scale, and lastly the avatar evaluation questionnaire.

Participants were then debriefed on the study. They were told what the questionnaires had measured, how the data was going to be used and what the study was investigating. They were reminded that their data would be anonymised, and that they could email to ask any questions or enquire about the results of the study. The duration of the experiment was on average 30 minutes for each participant.

Results

Self-esteem and similarity

H1: self-esteem will predict scores of perceived similarity

A multiple regression was run to test if self-esteem would predict perceived similarity ratings. Self-esteem was a composite of two

independent variables: the Rosenberg general self-esteem measure and the body-self-esteem measure. A multiple regression was used as it allows analysis of the effects of multiple independent variables on a dependent variable; in this case if one or both self-esteem measures predicted similarity.

The results were found to be highly significant: $F(2, 37) = 5.73$, $p = 0.007$. This supports the hypothesis that self-esteem will predict scores of perceived similarity. However, analysis of coefficients revealed that only one of the variables added statistically significantly to the prediction, the body self-esteem measure ($p = 0.002$). This signifies that while body self-esteem was a highly significant predictor of perceived similarity, there was no relationship found between general self-esteem and perceived similarity rating.

	All	Males	Females
Age	22.6	22.9	22.4
General Self-Esteem	19.3	19.6	18.9
Body Self-Esteem	112.2	114.6	110.6
Perceived Similarity	4.8	4.3	5

Table 1: Descriptive Means

The unstandardised coefficient value for body-self-esteem was 0.081. This means that as body self-esteem rating increased, perceived similarity rating increased by 0.081. This supports the hypothesis that self-esteem will predict scores of perceived similarity.

Gender and class choice

H2: gender will affect class choice

For this hypothesis a Chi-Square goodness-of-fit test was used. The results were moderately significant: $\chi(3) = 9.264$, $p < 0.026$. Thus the hypothesis that gender would affect class choice was supported.

It was found that the most popular class choice for women was the healing role (Templar) as 34.8% ($n = 8$) of female participants chose this, while only 1 male participant chose it. For males the most popular choice was the damage focused role (Dragonknight) with 47.7% ($n = 8$) making this choice. The Sorcerer class was more popular with females (30.4%, $n = 7$) than males (11.8%, $n = 2$) while the Nightblade class was more popular with males (65.3%, $n = 6$) than females (17.4%, $n = 4$). Examination of Cramer's V reveals that the strength of the relationship between gender and class choice is very high, as the Gamma value is high (0.481) while the significance is low (0.026). This supports the hypothesis that gender affects class choice.

The bar chart below illustrates the differences in class choice between genders. It is clear that Templar was a significantly more popular choice for females than males, while Dragonknight was more popular with males.

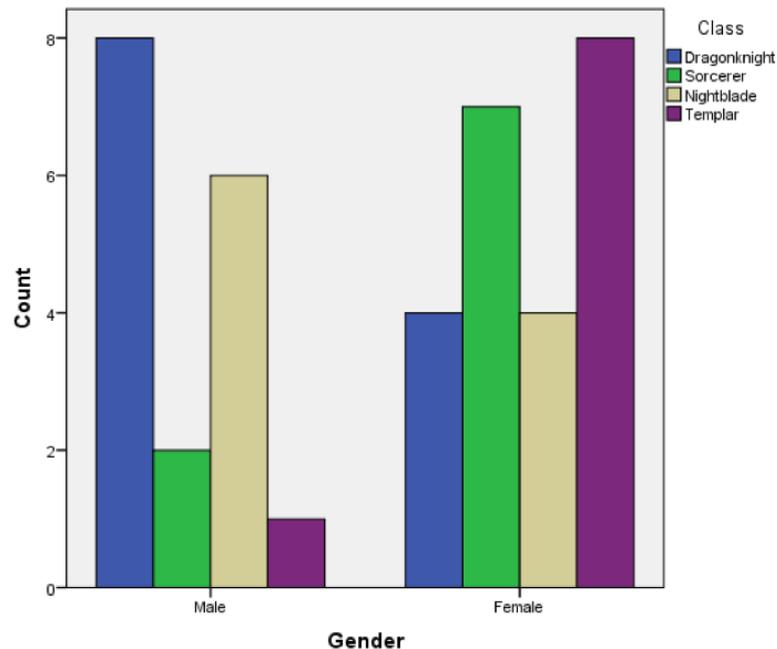


Figure 5: Class choice for males and females

However, a second cross-tabulation revealed that within gamers of both genders, Dragonknight was most popular (22.5%, $n = 9$) and Templar least popular (5%, $n = 2$). Being a gamer did not significantly predict class choice ($p = 0.066$) as class was varied within the regular gamer group.

Discussion

Summary

Primarily, the study sought to investigate self-presentation in video games. Previous research found that self-presentation is a key feature of online social interaction, and that self-esteem can predict the nature of the self portrayed. This study proposed that self-esteem would predict the perceived similarity rating of participants' avatars. Gender and class choice was examined to determine if gender plays a role in gameplay decisions, to build on previous but limited research in this area.

Interpretation of the results

Self-Esteem & Similarity

While there were no significant results found for general self-esteem, there were highly significant results found for the relationship between body self-esteem and similarity rating. The strength of the relationship was examined and found to be very strong. As body self-esteem score increased, perceived similarity rating increased. This supported the hypothesis that self-esteem would predict avatar similarity.

As expected, those with a high body self-esteem score created an avatar similar to themselves, potentially because they were happy with themselves and did not feel the need to change things dramatically. Conversely, those with low body self-esteem score created something they perceived to be slightly similar, but downplayed or exaggerated the features they didn't like in themselves - these features were determined through the results of the body self-esteem questionnaire. This supports Jensen *et al.*'s (2003) statement "Whether this takes the form of a kind of literal 'mapping' of the self onto one's avatar, or a concealment of one's "real self" within it, avatars are viewed as a form of self-representation."

These results are consistent with findings from previous research (e.g. Axelsson, 2002; Ducheneaut *et al.*, 2009; Bessiere *et al.*, 2007; Thomas & Johansen, 2012; Companion & Sambook, 2008; Trepte & Reinecke, 2010) and suggest that body self-esteem plays a fundamental role in online self-presentation. Despite the study using a small sample, the effects of body self-esteem on online self-presentation were pronounced.

However, an alternative interpretation of the results could be that those who have high body self-esteem are more likely to describe the avatars as similar to themselves, because they believe themselves to be closer to the idealised version they have created, even if this is not the case. Similarly, those with low body self-esteem may state that their idealised avatar does not look like them, but an objective observer may think it does, when the person cannot see it for themselves because their judgment is clouded by low self-esteem. Therefore, to fully investigate the relationship between body self-esteem and avatar similarity, a future replication could use an additional measure of similarity, such as the judgment of a neutral party or even a comparison of actual body measurements and facial structure vs. the avatar's features.

Gender

It was hypothesised that gender would affect class choice. This hypothesis was supported by the results of a Chi-Square test. Males were more likely to choose the Dragonknight class, while females were more likely to choose the Templar class. This suggests that there are gameplay differences between males and females with regard to the role they play in a social online game. These results posit that women prefer healing, supportive roles while men prefer damage-based, more

aggressive roles. This is consistent with typical gender stereotypes and marketing in video games. However, it is possible that females are simply acting in accordance with the stereotypes expected of them, as argued by Amory & Molomo (2012). It was found that female gamers showed more variation in class choice, suggesting that class choice could potentially be more to do with gaming experience. This supports DiGiuseppe & Nardi's (2006) findings that as gaming experience increased, females showed more variation in class choice. If females do not have gaming experience, perhaps they are more likely to fall into stereotypical behaviour. Of course the same could apply to males too, as they may choose the more aggressive role to fulfil the stereotype of being physically strong. However, as aforementioned the sample was small, thus a larger study could determine if these effects are widespread.

Limitations

The study was not without its limitations. Predominantly, the sample size was very small, meaning it is difficult to generalise the results to the population. This was due to time constraints; in future the study could be replicated with a larger sample to increase statistical power. Secondly, age in the sample only varied between 20 and 35. This was because it was mainly undergraduates used, and it was difficult to gain access to individuals spanning each age group. It was decided that the sample would be limited to this age range as it would have been difficult to counterbalance across all age groups. Future research could improve on this by testing individuals in all age groups to determine if age produces any effect. In terms of gender, there was a disproportionate amount of females in the sample. Ideally there would be an equal amount of both genders to ensure the results are generalisable to the population.

Another issue with the study was software problems. *The Elder Scrolls* was chosen as it had a very detailed character creation interface; however some participants still commented that the attributes changed very subtly and because of this they could not make extreme "cartoony" looking characters. An additional problem of using this software was the user interface, as it is perhaps not the most intuitive to use. There are sliders for each attribute which works well when the attribute is on a scale (e.g. height); however for attributes like hair style, the user is required to click through each option as there is no thumbnail to display each style. This frustrated some participants and could have lessened the effort they expended in creating their avatar.

Implications

The study presents some interesting implications with regard to self-presentation in video games. It has been found that participants who played a game with their own personalised avatar displayed higher levels of aggressive behaviour than those who played with a non-

personalised avatar. In violent video games, participants were found to experience more arousal and self-activation if they played with a personalised character, which subsequently increased aggressive responses (Fischer *et al.*, 2010). It would be interesting to investigate the effect of personalised avatars on behaviour in other types of games such as prosocial games, to determine if this is a widespread effect.

Additionally, avatars in video games could allow for an increase in self-esteem. These environments also allow people to express themselves fully, in ways that they may not feel able to in real life - they are able to reveal their "hidden selves" (Sular, 2002). It is for these reasons that online environments play a key role in identity empowerment. (Zhao *et al.*, 2008).

Future research

A fundamental direction for future research would be to isolate the specific features of the body self-esteem questionnaire, and examine each one in relation to the corresponding feature on the avatar. For example, comparing ratings of own biceps in males to size of biceps they choose for their avatar. This would serve to explore in more depth the relationship between self-esteem and avatar creation.

Secondly, the difference between the effects of general self-esteem and body self-esteem should be investigated further. The study found that there was no effect of general self-esteem on the avatar's perceived similarity. This suggests that either avatar presentation solely reflects physical attributes, or that the sample size was simply not large enough to find any effects. Perhaps general self-esteem could be reflected in other non-physical attributes commonly found in avatars such as intelligence, honesty, wisdom, etc. It could be possible that people separate their physical and mental qualities when creating an avatar, and as there were only physical qualities to customise, general self-esteem was not a significant factor in influencing this.

As previously mentioned, a limitation of this study was the age range in the sample. Future research in the area could aim to test participants from every age group to determine if the effects are age-specific. Would older adults display the same amount of self-presentation efforts as younger adults? Does exposure to video games and social media affect this, or is self-presentation a timeless concept found across many mediums? A future study could compare self-presentation in video game avatars, social media websites and traditional mediums to determine if self-presentation efforts have increased with the use of these technologies.

Lastly, future research could comprise cross cultural study. Research has found that there are differences in the way Western and Asian users self-present in games. Western games more commonly have customisation options while Asian games will typically only have pre-

defined characters to play as. It was found that Asian gamers disliked detailed character creation because they did not like that other, more skilled players could create avatars more attractive than theirs (Yee, 2006). This could possibly represent a difference in cultures, as Western cultures focus on individualism and Eastern on collectivism. Future research could investigate how self-presentation differs across cultures, to establish if the research by Yee is generalisable to the population.

Conclusion

This study contributed to the literature by expanding on current research while investigating new hypotheses. The effect of self-esteem on avatar self-presentation found in previous research was confirmed and found to have a strong relationship. The study built on previous research by using quantitative rather than qualitative methods to find that gender affected gameplay decisions.

The results of this study could be applied to many areas, such as games design and marketing, cyberpsychology and the study of online social behaviour. It is important to determine if real life social behaviours translate to online environments, or if different rules apply in these environments.

As previously discussed, there is an argument that the games industry seems to be discordant with the reality of their audience: marketing for mainstream titles is often clearly directed at men or women. As such, gender is a contentious topic within the industry, and therefore something that needs to be explored. Research in this area could lead to better game design and marketing as designers will learn more in depth information about their audience, while informing the field of social and cyber psychology on trends in online behaviour.

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