Avatar Projecting Actual, Ideal, or Ought Self: Which One Do We Feel Close To?

Psychological connection to an avatar in a video game increases hedonic (e.g., enjoyment, Klimmt, Hefner, & Vorderer, 2009) and utilitarian values of the video game (e.g., behavior change, Fox, Bailenson, & Binney, 2009). Previous studies showed that when customizing an avatar, rather than using a ready-made one, people feel psychologically connected to their avatar (Bailey, Wise, & Bolls, 2009; Lim & Reeves, 2009). While we know the superiority of a customized avatar over a generic one in making a video game enjoyable, there has been little research regarding how to guide players in customizing their avatar. That is, in what ways should we guide people to model their avatar? Should we, for example, advise them to customize the avatar to be as similar to their actual appearance as possible, or should we suggest that they should create an avatar as an idealized version of self, projecting wishful, even unreal qualities?

The question of how to customize an avatar is important because it influences the level of avatar-player connection and immersion in the video game. Jin (2010) found that people were likely to develop a psychological attachment to an avatar when an avatar reflected an ideal self, rather than when the avatar mirrored an actual self. Further, another study showed that an idealized avatar made people feel more immersed in the video game than did a generic one (Jin, 2009). Following this line of research, the current study examined the effect of different self-images—reflected in an avatar—on players' game experience. Specifically, we investigated how an avatar reflecting three self domains—i.e., actual, ideal, and ought self (suggested by Higgins, 1987)—influence players’ perceptions of the avatar (i.e., avatar identification, similarity,
attractiveness, and unnaturalness) and subjective experience of being in the game environment (i.e., sense of presence, Lombard & Ditton, 1997).

Given that ideal self reportedly yields a stronger avatar-player connection and deeper in-game immersion than does actual self (Jin, 2009, 2010), it is also likely that ideal self generates positive effects on game experience in this study. Yet, it is also significant to have ought self as an experimental group and compare its effect to others, as it bears potential implications for certain types of video game. For example, serious games may utilize ought self as a model for customization because the games often aim to help players obtain qualities they do not have but hope to possess (e.g., healthy eating behavior). These qualities can be readily implemented in an avatar reflecting the ought self. Identification with an avatar that embodies the ought self can further promote psychological and behavioral changes such as conforming to desired attitudes and behavior (i.e., the Proteus Effect, Peña, Hancock, & Merola, 2009; Yee, Bailenson, & Ducheneaut, 2009; Yee & Bailenson, 2007).

We conducted a lab experiment to investigate the effects of avatar customization on the psychological connection and avatar perception. To control the effect of gender, we only recruited female college students ($N = 133$). Participants were asked to play a web-based video game (http://www.yoobot.co.uk/) for about 10 min. At the beginning of the game, participants were asked to customize their avatars. Participants were randomly assigned to one of three groups (i.e., actual-avatar, ideal-avatar, ought-avatar groups) and customized their avatars to reflect the different self images. The actual-avatar group created their avatar similar to actual appearance (i.e., actual self), the ideal-avatar group generated their avatar possessing qualities that they hope to have (i.e., ideal self), and the ought-avatar group customized their avatar with qualities that close others think they ought to have (i.e., ought-self). The game allowed the
Participants were asked to select the avatars’ hairstyle, eye type, skin color, and body shape from dozens of options. After customizing their avatars, they completed a series of activities in the game (i.e., making gestures, jumping cones, dancing, and selecting foods). Following the end of the experiment, participants completed a questionnaire, in which they reported the extent to which they identified with their avatar (i.e., avatar identification measured by five items, e.g., “I see my character as part of myself”), how they perceive their avatar (i.e., similarity, measured by single item, “How similar was the avatar's face and body to yours?”); attractiveness, measured by three items, e.g., “My character in the game was physically attractive”; unnaturalness, measured by four items, e.g., “How unnatural was your avatar in the game?”), and the extent to which they experience the game environment as real (i.e., sense of presence, measured by 11 items adopted from the Temple Presence Inventory, Lombard & Ditton, 2000). The items for sense of presence were measured on a 5-point Likert scale and all other items on a 7-point Likert scale.

Results showed that avatar customization type had effects on the level of avatar identification, $F(2, 128) = 4.10, p = 0.019, \eta_p^2 = 0.06$. Pairwise comparison revealed that the actual-avatar group ($M = 3.87, SE = 0.20$) reported lower identification with the avatar than the ideal-avatar ($M = 4.64, SE = 0.20$) and ought-avatar group ($M = 4.43, SE = 0.20$), with $p = .006$ and $p = .045$, respectively. The difference between the ideal-avatar and ought-avatar group was not statistically significant, $p = .451$.

Similarly, avatar customization type influenced perceptions. It had a marginal effect on perceived similarity, $F(2, 128) = 2.73, p = 0.069, \eta_p^2 = 0.04$. The actual-avatar group ($M = 3.49, SE = 0.26$) perceived the avatar less similar than the ideal-avatar ($M = 4.30, SE = 0.25, p = .027$) and the ought-avatar group ($M = 4.11, SE = 0.25, p = 0.086$). The difference between the ideal-avatar and ought-avatar group was not statistically significant, $p = .607$. Further, the effect on
attractiveness was statistically significant, \( F(2, 128) = 6.42, p = 0.002, \eta_p^2 = 0.09 \), such that the actual-avatar group \((M = 3.56, SE = 0.22)\) reported lower attractiveness than the ideal-avatar \((M = 4.55, SE = 0.22, p = .002)\) and ought-avatar group \((M = 4.48, SE = 0.22, p = .003)\). The difference between the ideal-avatar and ought-avatar group was not statistically significant, \( p = .805 \). The effect on unnaturalness was also significant, \( F(2, 128) = 13.13, p < 0.001, \eta_p^2 = 0.17, \) such that the actual-avatar group \((M = 4.72, SE = 0.29)\) perceived the avatar more unnatural than the ideal-avatar \((M = 2.68, SE = 0.28, p < .001)\) and ought-avatar group \((M = 3.44, SE = 0.28, p = .002)\). The difference between the ideal-avatar and ought-avatar group was marginally significant, \( p = .06 \).

The avatar also had an effect on the sense of presence, \( F(2, 128) = 5.43, p = .001, \eta_p^2 = 0.08 \). The actual avatar group \((M = 2.46, SE = 0.11)\) reported lower sense of presence than the ideal \((M = 2.98, SE = 0.11, p = .002)\) and the ought-avatar group \((M = 2.83, SE = 0.11, p = .022)\). The difference between the ideal- and ought-avatar group was not significant, \( p = .38 \).

In sum, the results suggest that video game experience can be altered by the way people customize their avatar. Specifically, the results indicate advantages of ideal and ought self over actual self in customizing an avatar. Ideal or ought self, when embodied in an avatar, are more likely than actual self to engross players in playing the video game, as players may feel greater similarity and closer connection with their avatar. Also, people may perceive the avatar as more attractive and natural when the avatar reflects ideal and ought self than when the avatar mirrors actual self. Even further, embodiment of ideal and ought self, compared to actual self, will make people experience the game environment as real.

The current study has important implications from a theoretical perspective regarding how people feel attached to their avatar. Note that actual self includes qualities people actually
have, whereas ideal and ought self contain qualities people do not have but hope or eels pressured to have. Thus, what triggers players to be integrated to their avatar and immersed in the video game is not attributes shared by players and their avatar, but qualities that they are eager to have or think they should have. This point is in line with the fact that one of main motivations in playing video game is to escape from reality and indulge in fantasies (Sherry, Lucas, Greenberg, & Lachlan, 2006; Yee, 2006). When motivated to avoid real-life problems and explore a fictitious world, people might want to forget actual self and pretend to be another being they have wanted to be.

Practically, the current study suggests a couple of guidelines in designing a video game. First, it should be emphasized that an unexpected negative effect might occur when a video game guides players to customize their avatar similar to the actual self. For example, using a photo of a player would not be an appropriate strategy for avatar-player connection and in-game immersion because of this potential adverse effect. Rather, a video game can attempt to provide an immersive game experience by advising players to create their avatar to reflect their hopes and aspirations. Another notable point of the study is that the ought self can also induce as an immersive experience as does the ideal self. Thus, video games aiming to influence players’ attitudes and behaviors in a certain direction can exploit ought self customization, by guiding players to customize their avatar to possess expected attributes and designing in-game activities to help players to obtain their desired practice. Future research should examine potential differences between avatars customized to be the ideal and ought self.
References


