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Choosing My Avatar & the Psychology of Virtual Worlds: What Matters?

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Background

Virtual worlds began as online environments that provide shared space for a society of users who are primarily engaged in entertainment or social purposes. As these worlds become more pervasive and popular, applications of these worlds and their technologies already show increasing potential for use by educators and researchers. There are currently several different types of virtual worlds growing in popularity that target different demographics: games for real life simulation, education, and user creation.

Second Life (SL) is a particular virtual world, created by Linden Labs and available free for download at their website (www.secondlife.com). SL users log in from over a hundred countries and approximately two hundred universities have a presence in SL for education and research purposes. SL is used as a meeting place for geographically separated collaborators, a virtual classroom by universities, conference space by businesses, and more (Jarmon, 2009). Organizations use the space and tools available in Second Life for interactive online exhibits, an environment for fieldwork and observation, and simulation-based training (Jarmon, Lim, &Carpenter, 2009).

Users connect with the world in SL by creating an identity through an avatar. Avatars can be considered pictures or icons created for various purposes; e.g., profiles on websites, display in communication technologies, as a player in video games, and increasingly for users entering virtual worlds like SL over the Internet. Avatars allow for anonymity between any two people meeting in a virtual world. An avatar's behavior and appearance encapsulates only consciously selected actions from the individual it represents. The technology of virtual reality allows an individual to completely step away from their physical selves (in "real life"). An avatar can be a representation of a person made as realistically as the technology allows, or it can be a carefully crafted creation of a personality or character made for a specific intention or expression (Bailenson, & Blascovich, 2009).

Studies conducted within SL support the idea that avatar appearances can cause the occurrence of behavioral confirmation, where the individual reacts to unconscious social cues that indicate how they should act in accordance with their appearance, and the Proteus Effect, where the individual acts based on how they themselves believe their appearance indicates they should be expected to behave. On one side of the interaction, the appearance of an avatar affects the perception other avatars have of the individual controlling it. The expectations and social constructs of the SL community cause users to subtly change their behaviors when they encounter an avatar based on its appearance. In response, the individual behind that particular avatar becomes influenced by the behavioral expectations inferred from the reactions of other avatars with whom they interact.

If, for instance, an avatar is perceived by others to be particularly attractive, group members may approach it in a way that would induce more amiable conversation (Yee, Bailenson, & Ducheneaut, 2009).

In a similar manner, an individual can also experience the Proteus Effect in regards to their own avatar from self-perception of their online identity. Users have been found to interact with others in a manner corresponding to how they view their own avatar. Experiments by Yee et al. (2009) show that participants given attractive avatars were more prone to lessen interpersonal distance and indulge in greater self-disclosure in interactions with a strange avatar, and participants with taller avatars exhibited greater confidence in a negotiation task by having a greater tendency to suggest divides in their favor. In face-to-face trials of the negotiation task conducted after the experiment was done in a virtual world, there were also observed behavioral changes of the participants who had the taller avatars.

An avatar's appearance creates a perception in both the mind of its user and the users of other avatars that interact with it. Bailenson, Yee, Merget, & Schroeder (2006) found that co-presence within virtual worlds, the sense of social pressure exerted by surrounding avatars, is affected by both form and behavior realism of an avatar. Thus, an avatar's appearance can influence how comfortable a user feels in the virtual world, and it can have a complex effect on social interactions within SL. When a user becomes comfortable within SL and feels that their avatar is an extension of themselves, their sense of real world identity comes to include their identity within SL.

Jarmon et al (2009) refer to this phenomenon as embodiment. When the user feels virtually present in their virtual world, they attach their avatar to themselves. The user comes to "exist in SL" and thus more likely to feel that other users are co-present with them through their corresponding avatars as well. The experience of SL adds another dimension. The SL world includes not only the avatars, the environment, and computers connected through the Internet, but also the society of the world, the community of users, and the physical human beings sitting behind those computers.

Neustaedter, & Fedorovskaya (2009) emphasize this point and consider every person who creates an avatar, for serious intentions or recreation, to do so with the influence of an identity need. Therefore, the creation process will either extend their personal identity or construct a separate, virtual identity apart from their real life self. These needs divide users creating avatars into one of four groups: Realistics, Ideals, Fantasies, and Roleplayers.

Realistics try to create an avatar that they feel most closely matches their physical appearance, choosing human avatars with their own gender. Ideals aim to introduce themselves virtually through an avatar that is the most attractive self-representation, differing from Realistics by intentionally changing attributes like height or weight. Both Realistics and Ideals will enter the virtual world intending to stay true to their physical selves and do not create a separation between themselves and who they are behind their avatar.

Other users strive to step away from their real world selves across the Internet. The category of Role-players includes users who control avatars to step

into another persona, either another real world person or a fictional character. Roleplayers will often create multiple avatars at one time and not stay particularly attached to one “character” or avatar for the duration of their existence in a virtual world. Fantasies are users who create a completely original character with their avatar. They enter virtual worlds intending to step away from their real-life self, but do not try to match a specific concept of someone or something else.

As the presence of avatars and their applications become more widespread and pervasive in online technology, it becomes increasingly imperative to understand how our avatars affect us. As research progresses, it becomes obvious that the avatar one uses in a virtual world colors their experience in that world. Avatars affect our virtual self-image, our level of immersion in the virtual world, and also our interaction with other users. Despite the control we exert over avatars, there are a myriad of ways in which they influence the societies that emerge in virtual worlds. To address the ways avatars affect our self-perception and behavior, we investigated the ways users approach initial avatar creation.

Method

As previous research establishes that avatars reflect the representational needs of the user, we chose to design a study to relate data on personality, social presence, and gaming background in order to determine whether we could identify any factors that would be connected to preferences for particular categories of avatars.

Materials

This study tested participants through surveys. The preliminary surveys included a few demographic questions such as age and gender, and then six pages of questions on their experience with video games on different platforms, their online presence and use of technology for daily communication, as well as personality.

The experimental survey showed participants an array of eight avatars (see Figure 1). These avatars were presented as choices for four different social scenarios. Participants chose appropriate avatars that they felt would best represent themselves in these scenarios as well as an avatar they would be least likely to use.

These avatars were all created within the SL virtual world and the images were captured from snapshots obtained through the SL technology. The majority of the avatars shown were pre-made starter avatar appearances designed to be attractive and convenient for beginning users to wear or use as a foundation to customize towards their own preferences. The avatar array was composed of four human avatars and four non-human avatars. All of the non-human avatars in the array were pre-made avatars available for new users in SL. The two animal avatars, Tiger and Dog (Figure 1), represented the fantasy avatars. The Robot

and Kool-Aid Man were selected as Roleplayer avatars generic enough to be easily recognizable to the participants.

One male and one female avatar were photographed exactly as the pre-made starter, like the four non-human avatars, to represent ideal avatar options. The other two human avatars were created by further customization using the ideal avatars as templates to be representations of the realistic avatar category for this study. We used the SL avatar appearance editing tools to modify the starter avatars to create differences in the realistic avatars to make them separate choices from the ideal avatars that can particularly be noted in the upper body build, facial features, and skin tone. As illustrated in the array in Figure 1, the ideal and realistic human avatars are still recognizable as versions of the same "person."

Participants

This experiment was completed online, with no face-to-face contact between the experimenter and the participants. Participants were undergraduate students at the University of Kentucky who were recruited from an online subject pool and received credit for participation. At this time, a total of 46 students have been tested.

Procedure

All research protocols were approved by the University of Kentucky IRB review committee. Participants self-selected for the study from a list of experiments they could complete. After enrolling in the online study, participants were directed via a web link to the surveys. The surveys were successive and designed so that a participant had to complete all sections in one sitting.

Participants completed the three aforementioned surveys on basic demographics, regular video game playing and social media habits, and personality. Participants were then shown the pre-made avatar array and given four scenarios for which they were asked to choose an avatar they would feel most comfortable and least comfortable representing themselves. The scenarios were: the first day of a class in a virtual world, an important job interview, entering an alternate universe, and living a day in their lives twenty years in the future. The scenarios were selected to create social contexts where participants would feel different kinds of representation would be appropriate or expected and thus have different purposes in mind when selecting their avatar from the array.

Results

Up to this point, we are engaged in continuing data collection and analysis. We currently present preliminary findings and data gathered from 39 female participants to demonstrate initial trends in the results; findings that we plan to investigate further.

We discovered a trend in the frequencies of avatar choices across scenarios. Participants did show sensitivity to social contexts. As shown in graphs 1 and 2, preferences were for the realistic female avatar in a job interview scenario, while the dog was a more popular choice in a scenario for entering an alternate universe. These choices indicate that even on virtual mediums, participants felt different social situations carried an expectation that they felt compelled to abide by in avatar appearances.

Also, we noted that the participants chose the realistic female avatar more frequently over the ideal female avatar, showing that the realistic avatar was perceived with some consistency as preferable over the ideal. Though they were created with the same template and had comparable appearances (see Figure 1), the editing in appearance was enough to create a trend in the resulting choices across multiple scenarios. Further analyses will explore the possibility that certain background attributes of users, such as experience in playing video games or using social technology, might influence how they choose human avatars.

Discussion

Our study shows that users of online virtual worlds are influenced by the social context of the virtual world when they create and design their avatars. In addition, their intention for entering that virtual world combined with their individual identity needs prompts them to create an avatar that either resembles them or completely deviates from their personal identity. If there are virtual worlds structured or social contexts where an individual feels their personal identity is inconvenient or inadequate, there is less chance for a virtual world experience that is engaging and rewarding. Not everyone online will experience the same environment at the same time in the same way. Further research can explore what the experience would be for an individual who, for example, may have identity needs that drive preferences for Fantasy or Roleplayer avatars in virtual worlds who feels pressure from a job interview scenario to be realistic and professional in appearance over an individual who prefers to be realistic or ideal and feels most comfortable that way already.

These types of discoveries about avatars and social interaction in virtual worlds reinforce the importance of the social concept of the virtual world on the process by which participants create their avatars, which could potentially determine how an individual engages in the online activity. Not only is the technology on editing and controlling avatar appearance important in allowing the user to be expressive and creative in their online representation, so is the ability to feel uninhibited when utilizing the tools offered by virtual worlds. As our study had participants choose from pre-made avatars, we could not observe them in the process of actually making specific choices to modify particular features of avatars. This limitation does not allow us to investigate the degree to which our participants felt pressure from the scenarios to select socially appropriate avatars rather than ones they felt personally appealing and therefore we cannot at this

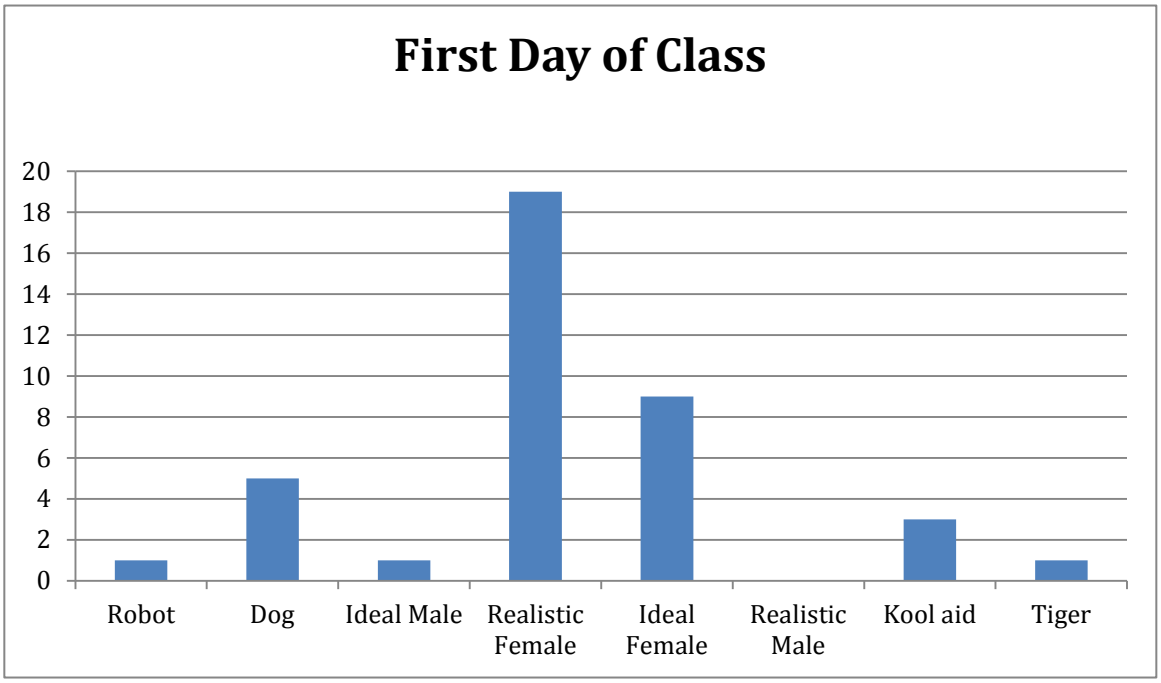
point draw strong conclusions about the magnitude of the influence of social context or personal identity preference on choice of avatar appearance.

This research has relevance to the choices organizations and users make when entering virtual worlds for particular goals. For the recreational user, one virtual world might be much the same as the other. With all the applications for virtual worlds, it is imperative to keep in mind that your avatar and everyone else in that virtual world comes with different identity needs and experiences situations differently. Every virtual world is not necessarily a good fit for every online user, or ideal for every purpose. With further research, environments can be made to be as accommodating as possible. In the mean time, it is best to keep in mind both the users' attributes and needs and the different social contexts encountered in particular virtual worlds as they make informed decisions about selecting an avatar for a particular application.

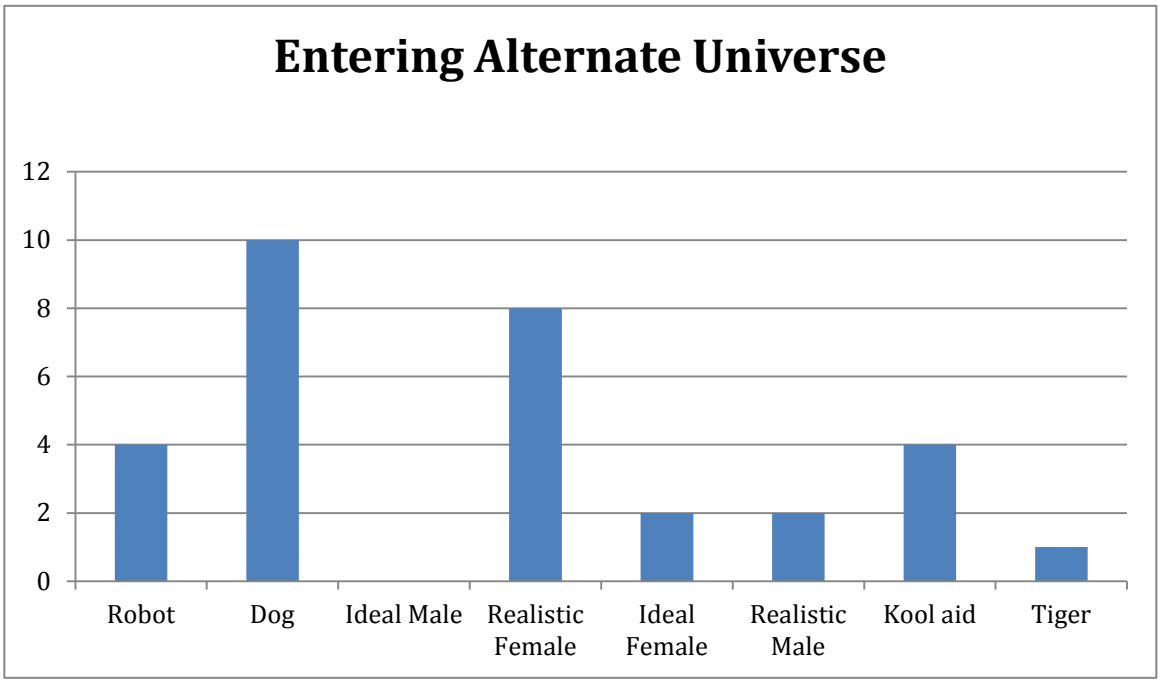
Images

Figure 1.

Graph 1.



Graph 2.



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