Engaging the Disengaged via Performance in Online Virtual Worlds

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Abstract

In 2010 an estimated 3 billion hours were spent weekly playing online games. Only recently, however, have these environments been considered more than entertainment. After an initial failed approach following media exuberance of these environments as a panacea for marketing and alternative meeting and work space, companies, governments, universities, non-profit organizations, and marketers are beginning to re-explore the use of these games for social engagement as well as opportunities to engage workers, volunteers and consumers. As more is known about performance in these virtual spaces as experienced through immersion, interactivity and the sense of presence, these environments may indeed offer creative solutions to the challenges of shrinking budgets, displaced workers and socio-economic or cultural alienation. Using digital ethnography to understand the nature of 3-D 'game' culture, this 2-year study explored the development of relationships and the strength of trust and reciprocity in *Second Life*, a 3-D online immersive social environment. This study supported previous findings of online trust as participants reported a willingness to trust their virtual counterparts equally (40%) or greater (32%) in the virtual world as they did in their real lives. This trust was often attributed to a sense of "safety" as a function of role play and anonymity in these environments. Implications of this research add to growing evidence of using virtual environments for business, education, and as viable cultures unique to the virtual world; where individuals 'from the edges' who may feel marginalized and disengaged as a result of physical world barriers such as age, gender, race, or even extreme shyness may feel empowered to participate and collaborate in planning and problem resolution.

Keywords

virtual worlds; engagement; digital ethnography; social capital

Social systems of every nature including those within corporate, non-profit, educational, community and political organizations are all facing unprecedented challenges in ways to strategically engage both internal and external audiences in a global landscape. Ironically, as challenges of distance, unemployment, underemployment, apathy, alienation, disenchantment and disengagement are placing greater pressure on these systems, the number of people connecting, engaging and making profound changes as a result of their online activity in both the private and public sectors continues to increase exponentially. The blogosphere, *Twitter* activity as evidenced throughout numerous political uprisings, and the global tremors incited recently by *Wikileaks* are perhaps the most obvious Internet media to generate international awareness and action.

Although these are very recent examples, since the advent of the internet in 1970s and the subsequent launch of the World Wide Web in 1991, online media have spread across the world in ways that few visionaries could have predicted. As Negroponte wrote in 1995 – before blogs, *Twitter*, *Facebook, YouTube*, or *Wikipedia* -- "Computing is not about computers any more. It is about living" (p. 6). Computers today have created a new media landscape that gives nearly every person the opportunity to be media producer, writer, artist, performer, communicator, observer, or active participant in their local or global community.

As the goliaths of these new media currently include blogs, microblogs, social networking giant *Facebook*, and online video sharing on *YouTube*, one social medium that has often been overlooked in the quest to engage individuals in meaningful ways is online gaming. Yet, analysts estimate that in 2010 an estimated 183 million gamers in the U.S. reported spending, on average, thirteen hours a week playing computer or video games (McGonigal, 2011). Statistics gathered globally between 2008 and 2010 reflected

> more than 4 million gamers in the Middle East, 10 million in Russia, 105 million in India, 10 million in Vietnam, 10 million in Mexico, 13 million in Central and South America, 15 million in Australia, 17 million in South Korea, 100 million in Europe, and 200 million in China (McGonigal, 2011, p. 3).

Are online games nothing more than entertainment and social spaces? Although 3-D online immersive social environments such as *Second Life* were originally met with unrealistic expectations among marketers and suffered a lingering trough of disillusionment on the Gartner hype cycle (2010), the

slow adoption of these as social environments continues to build. This growth has occurred simultaneous to a relatively new interest in 'gamification' as a result of the explosive growth of entertainment gaming culture (Reeves & Reed, 2009; Blascovich & Bailenson, 2011; McGonigal, 2010). Corporations, universities, healthcare organizations, and non-profits are among the many institutions that are finding these spaces can engage individuals in unexpected ways including harnessing untapped perspectives in an environment that steps beyond traditional boundaries. Online virtual worlds that allow users to generate content provide opportunities for artistic, altruistic, and intellectual collaboration as well as development of community, enhanced by the power of telepresence. Additionally and perhaps astonishingly, research continues to show like other online interactivity, individuals report a sense of trust that is often stronger than what is experienced in real world interaction.

To that point, Walther's *Hyperpersonal Model of Computer Mediated Communication* (CMC) (1996) reflects a paradigm shift in how individuals seek information and who they turn to as their most trusted sources. Most recently, peer influence has been identified as the most trusted source of information with 9 out of 10 people globally reporting they trust the recommendations of the people they know more than traditional sources such as media, clergy, parents, and political leaders (Smith, 2011).

This form of trust was also reflected in Yee's (2006) work which found that of almost 3,500 adults who participated in Massively Multi-user Online Role-Playing Games (MMORPGs), more than 20% of males and more than 30% of female players "had told personal issues or secrets to their… [online] friends which they had never told their real-life friends" (p. 320). Nearly 40% of men and more than 50% of women studied also said that "their… [virtual] friends were comparable or better than their real-life friends" (p. 321). This trust is shared between two humans who are performing as their virtual selves, or avatars, in the 3-D online immersive environment. Is there a distinction between human and avatar?

As people seek to connect in new computer mediated ways, there has been great speculation as to the positive and negative societal impacts of this mechanism. This study explored the development of both real and virtual social capital as enhanced by the effects of presence, interactivity, and engagement experienced in the 3-D online immersive environment *Second Life* as a social space rather than a gaming environment. The focus of the study was to examine the uses and gratifications of *Second Life* users; the presentation of self in the virtual world and how it influenced trust in virtual interaction; how trust differed in the virtual environment and if that difference also influenced the strength of ties created there;

and the definition of virtual romantic relationships and their influence on the way individuals approach their real-life relationships and marriages.

Who are the disengaged?

For the purposes of this study, the theoretical framework of social capital was used to explore engagement and disengagement. For example, Coleman (1988), identified social capital as a "resource embodied in the relations among persons and positions that facilitates action" including obligations, expectations and trustworthiness of structures; information channels; and social norms.

Social capital, and its decline, was further defined in Putnam's seminal work, *Bowling Alone* (2000) when Putnam identified the erosion of social capital in U.S. culture as a threat to both civic and personal health. Putnam identified voting rates, participation in bowling leagues and neighborhood associations, and volunteering in nonprofit organizations or schools as some of the behaviors that formed social capital and his research pointed to the decline in each of these areas of participation. Helliwell and Putnam (2004) later confirmed "that social capital is linked to subjective well-being through many independent channels and in several forms" (p. 1435). They identified marriage and family, friends and neighbors, workplace ties, individual and collective civic engagement, as well as trust and trustworthiness independently related to the overall vitality of social capital.

The breakdown of social capital can be seen as a real threat to a functional society in our communities, our workplaces and in our relationships. Likewise, if following trends in behaviors in each of these sectors, disengagement is evident in each. For example, the U.S. Census Bureau (2010) has shown a consistent stagnation in volunteerism, hovering consistently at around 26 percent since from 2006 to 2010. Likewise, an unprecedented economy has generated some of the worst employment numbers in the U.S. since the Great Depression with unemployment hovering at 9 percent from mid-2009 to mid-2011 (U.S. Bureau of Labor Statistic, 2011). And among those who are employed, underemployment (which is typically accompanied by worker dissatisfaction) in the U.S. has jumped to more than 20 percent (Gallop, 2011). Additionally, although the divorce rates have fallen slightly over the past ten years (CDC, 2009), the percentage of marriages that end in divorce remains at just under 50 percent. As communities, workplaces and families struggle, media has often been named the culprit in these declines (Putnam, (2000); Nie & Erbring (2002); Kraut, et al. (1998)).

In times of challenge, individuals often seek escapism as a coping strategy, and media has often been seen as a great form of escape. The opportunities to 'escape' have become even greater as media has become more engaging and participatory. Yet, in their escape, individuals are also forming new relationships, communities, and a potential to create change that translates in real world terms.

In the 3-D online immersive environment, individuals create avatars and have the ability to walk, dance, fly, or animate their virtual 'self' in a dynamic, vivid and realistic 3-D space. In this space they experience a well documented sense of presence and immersion that appears to accelerate emotions in virtual environments (Banos, Botella, Liano, Buerrer, Rey, & Alcaniz, 2004; Tang, Biocca & Lim, 2005; Eber, Betz & Little, 2007). If exploring virtual worlds as a medium, one must also consider media effects as originally theorized my McLuhan in 1964. McLuhan wrote, "Any understanding of social and cultural change is impossible without a knowledge of the way media work as environments. All media are extensions of some human faculty – psychic or physical (p.26)." With the evolution of media from written, to audio, to video (i.e. television), researchers have long documented the powerful influence these media had on creating social and cultural change. But what happens when the individual functions *within* the medium and through interactivity is actively engaged in the development and outcome of the 'story'? And how much of this story is fantasy or becomes a part of an individual's reality?

The online interactive 3-D immersive experiential medium provides a rich environment to explore online relationships that often are shared virtually, or as what many consider role play, while keeping physical world identity anonymous. These relationships include social and professional relationships as well as romantic and love relationships as they form online and as enhanced by the effects of interactivity and visual/social presence.

In this study, more than half of the study participants (60 percent) reported having been involved romantically with another virtual resident, four of whom (16 percent) reported their relationships were extramarital. These romantic and sexual motivations of virtual residents in *Second Life*, as well as the reported desire for social interaction, were primary motivations for participating in the online environment. For centuries, people have turned to media for escape and romance, whether in a book, at a play, on the big screen, on television or in music where the common themes of love, heartbreak and 'living happily ever after' are often dominant. That is further enhanced via the phenomenon of parasocial interaction, as defined by Horton and Wohl (1956) which identifies the bond that is formed between a real person and a fictional or celebrity character such as those individuals who 'fall in love' with a character in

5

a film or television program. Horton and Wohl also referred to this phenomenon as "intimacy at a distance". In the 3-D online social world, individuals expressed that they often take on the role of the actor in the story, creating a powerful bond and what they often cited as "very real" relationship with their virtual counterpart.

Methodology

The mixed method ethnography incorporated participant observation over a two-year period, group discussion content analysis, and 25 semi-structured interviews.

In the groundbreaking anthropological review of *Second Life*, Boellstorff (2008) explained, "That virtual worlds are places means they can be fieldsites; it makes an ethnographic approach conceivable – and what makes virtual worlds so revolutionary is that they are new kinds of places" (p. 91). "Studying a virtual world in its own terms does not mean ignoring the myriad ways that ideas from the actual world impinge upon it; it means examining those interchanges as they manifest in the virtual world, for that is how residents experience them when they are in-world" (p. 64).

Additionally, as research emerges on behaviors in virtual environments, there is evidence that many of the same social cues that apply in real life may apply in the virtual world. For example, in an experimental study of avatars and body language, Yee, Bailenson, Urbanke, Change and Merget (2007) found that when functioning in the virtual realm, individuals applied the same social norms they were accustomed to in real life including eye gaze and personal distance. However, in a world where people can fly, teleport or 'shape shift', clearly not all the usual social norms apply.

However, interpersonal communication in the virtual world is still challenged, especially if only communicating in text-based chat, when there are no facial expressions, body language or changes in voice tone to help interpret the nature of a conversation. For example, it is impossible to detect sarcasm in text (if taken out of context). Understanding the nuanced behaviors as well as the nature of interaction taking place in a virtual setting is possible, however it requires in-depth qualitative exploration.

Qualitative research assumes "reality is subjective and multiple" (Creswell, 2007). Reality in the virtual world is completely subjective to the extent that in *Second Life*, not only do the inhabitants of the culture have an opportunity to create their 'selves' in the image they choose, but also the environment is designed and built by its residents who can create any environment they choose with none of the physical

limitations of the physical world. Qualitative research also provides an epistemological assumption that the researcher becomes part of the culture being observed and the axiological assumption that the researcher is cognizant of values and biases and shares an interpretation of the culture that is blended with the interpretation of those being observed. Qualitative inquiry solicits detailed narratives from the respondents without which it would be impossible to understand the values, beliefs, feelings, and their own interpretation and personal understanding of the culture in which they reside.

Participant observation

In this study, participant observation included weekly discussions about evolutionary psychology and 'the cyborg as self' at 'Thothica' at Clemson University's island, bi-weekly discussions at the SL/RL Relationships group, and occasional attendance at the discussions of personality exploration at the *Delphi Project*, a sim that offers "a place and a process that encourages objective self-examination" (*Delphi Landmark* in *Second Life*). The researcher also joined and participated in multiple groups including music, academic, fantasy and residential communities to better understand the broad nature of the online community.

Recognizing the researchers' role in *Second Life* as one of observation and data collection, friendships were developed with the members of the virtual environment who were very willing to openly share about their real lives and Second Lives and thus create an initial understanding of the culture and its functions. One case was a couple from who is married in RL but whose avatars are single in *Second Life*. This married couple willingly explores their sexuality through relationships with others, even 'partnering' with others (the *Second Life* equivalent of marriage) but with 'the rule' that neither of them will ever meet their virtual partners in the physical world. They are very comfortable with this arrangement. The researcher had also met other individuals who have virtual partners while being married in the physical world, where their physical world mates are completely unaware of their online activities. In one case the researcher received an email from one single friend whose partner (or virtual wife) was married in real life and whose husband had not been aware of her online relationship. When the relationship was discovered, the virtual partner emailed the following:

> Good morning… about 6:00 am, on Saturday, I got a phone call… from x's husband,,, threatening to kill me… thought i should share, if I turn up missing… his name is, XX, and you are the only person to know this.

Many of the people encountered in *Second Life* consider their experience a blend of a dramatic story that might be read in a novel or watched on film, with a touch of reality as the player becomes immersed in the media environment and becomes the 'author' and 'actor' within their own virtual story. In a sense, it becomes an augmented reality or an extension of their real lives or as one study participant frequently referred to it as 'life in the mind'.

Semi-structured in-depth interviews

In addition to participant observation, to get the in-depth and rich context of life in the virtual culture, semi-structured interviews were conducted entirely in-world and in text chat with avatars recruited from a number of sources. The researcher established an identity and built trust with numerous individuals and groups that represent international virtual 'communities' from which participants were recruited for this research. These recruitment sources included discussion groups in *Second Life*, from professional psychologists currently doing research in *Second Life* and from word of mouth. As previously noted, the researcher attended weekly discussion groups regarding *Second Life* relationships. This group had been meeting in *Second Life* for more than a year and developed a loyal group of regular participants who have created a sense of 'community' in this virtual environment. Some members of those communities who did not have an interest in participating told friends who they thought would be willing to be interviewed, creating somewhat of a 'snowball sample'. As Boellstorff (2008) explained about a snowball sample, "it is a desirable approach for ethnographers, who typically acknowledge their partiality and seek to trace social networks rather than artificially isolate members of a culture through randomization" (p. 76).

Participants

Participants in weekly discussion groups were informed that their chat would be logged for public archive and these chat logs were used for content analysis purposes. Review of these chat logs enabled the researcher to identify themes that emerged in the 'local' chat dialogs exchanged in an 'instant message' format. Analyses included several months of discussion logs from several of the relationship group meetings previously discussed. Content analysis of these discussions revealed a number of themes about trust and reciprocity especially due to the nature of Internet communication. These themes guided the focus of the final component of the ethnography, semi-structured personal interviews. These interviews

were conducted in private settings within the virtual world with the 25 individuals who volunteered in response to the notices sent to the discussion group members.

Because this study proposed to evaluate the experience of residents in the virtual world, all communication (including the semi-structured interviews) was digitally exchanged. Most communication in *Second Life* is done using a text-based chat, and *Second Life* offers a feature to log all chats with other avatars either as private or local chats.

The researcher made the conscious decision to accept the validity of the information provided based on the experience as self-reported by the avatars just as one must presuppose that in any research, the participant (real or virtual) is telling the truth. While the virtual representation of self provides the opportunity to veil or deceive with the mask of an avatar, the enhanced anonymity of computer mediated communication also creates a sense of comfort in speaking without fear of judgment or negative real world implications.

To recruit participants for interviews, notices in the form of 'note cards' can be created and sent en masse in *Second Life* as event or activity announcements to avatars who join groups, such as the *SL & RL Relationships* group or retail groups. They are in essence the equivalent of advertisements or press releases in the virtual world. Note cards had been previously used as invitations to participate in studies conducted by researchers at the Virtual Studies Research Institute at Minnesota State University Moorehead when it offered anyone in the group $300 Linden (the *Second Life* currency which is the equivalent of just over one U.S. dollar) to participate. However, this research offered no financial incentive.

Note cards were sent from group owners to members of two *Second Life* membership groups inviting them to participate in this study by agreeing to a private and confidential interview. Interviews were scheduled over a five-week time period to accommodate the 25 people who agreed to participate. A constant comparative approach was utilized to identify saturation of categories or "looking for instances that represent the category and to continue looking (and interviewing) until the new information obtained does not further provide insight into the category" (Creswell, 2007, p. 160). By the 25th interview, it was clear saturation had been achieved.

Participants represented six countries including the U.S., Canada, Switzerland, England, Sweden, and the Netherlands so interviews had to be scheduled from early morning to late evening Eastern

Standard Time (EST) to accommodate European times as well as those on the east and west coasts of the U.S and Canada. Upon agreement of an interview time, an IRB-approved informed consent was sent to the participant again, as a note card with instruction to return it to the researcher to confirm their agreement to the protocol.

Interviews

The interviews covered a series of questions that incorporated both an understanding of level of presence experienced by the individual as well as further explored the themes that emerged from the participant observation and the discussion analysis. For example, in addition to statistical data such as how many and what type of relationships a person has experienced in the virtual world, the researcher investigated the strength of the ties created in the virtual world and how those relationships impacted the subject's real lives.

With the study of new technology and new environments come new challenges. In the digital or virtual realm, for example, the researcher is dealing with 'virtual' people. Fundamentally one must ask, "Is this person real?" and "How does the information collected relate to physical reality?" Perhaps most important is the question of why that differentiation is important. Distinction between virtual and real is critical in collecting data, just as it is important to determine how they intersect.

The separation between person and persona raises a common dilemma reported by digital ethnographers with a wide array of thoughts and processes adopted. For example, Taylor (1999) explained, "issues of plural existence, anonymity/disclosure, and reliability" challenge validity and reliability. He posits, "At what level is it necessary or desirable to actually prove in some fashion the offline identity/body of a given participant?" (p. 443). Likewise, questions are raised regarding the authenticity of responses from virtual beings when they are not only anonymous, but often in an altered state of 'self'. On the other hand, this raises the issue of truth in any form of personal data gathering whether it is online or offline. For example, in a study of young adults attending clubs, even when knowing they were going to be tested for drugs, 41 percent of the participants lied about their drug consumption to the researchers, claiming they had not used any drugs (Johnson, Voas, Miller and Holder, 2009). This raises important questions about truth in data collection via interviews and questionnaires in general, not specific to online but to all data collection.

Likewise, in Carter's (2005) ethnography of the virtual world *Cybercity*, she found "verifying the authenticity or truthfulness of the data I have collected is no more problematic in this particular environment than any other" (p. 151). As she explained, it is through ethnographic research that we are required to continue to collect data, reflect on it, and understand that it is "situationally negotiated, rather than an objectifying process to be undertaken only when analyzing the data themselves" (p. 151). In fact, it could also be proposed that because sociological research very typically requires assurances of anonymity, participants may feel even more secure in revealing their most authentic selves when they are responding as their virtual selves.

At this time, establishing formal consent in the virtual world is also complicated from an IRB perspective as there is little agreement on whether 'virtual people' can be studied as 'real people'. However, as more research is being conducted in the virtual realm, especially with online surveys, the line between virtual and real is becoming less distinct. IRB protocols require assurance of anonymity for both the avatar name (or virtual persona) and the real person behind the avatar. Likewise, the *Ethical Decision-Making and Internet Research Recommendations* from the Association of Internet Researchers ethics working committee (Simteach, 2008) provide an excellent guide for on-line data collection (http://aoir.org/reports/ethics.pdf).

As previously mentioned, another obvious challenge to online interviews is the lack of facial expression, body language or other nonverbal communication that may reveal important information including the use of sarcasm or an interviewee's discomfort in responding to sensitive questions. On the other hand, it can be argued, that this lack of eye-to-eye contact can put the interviewee more at ease, for example individuals who have a difficult time looking at people when they speak due to extreme shyness and lack of self-confidence. In the virtual setting, individuals report they can express themselves freely and in what they perceive to be a 'safe' environment. For example, there is no fear that they may encounter the interviewer in a public setting in their real life where they may feel judged. For example, one study respondent explained:

> [15:07] INTERVIEWEE: But on SL, after spending so much time using text, I guess you can open up in different ways because you don't have to worry about blushing or your voice cracking when you say something that might be potentially embarrassing.
>
> [15:07] INTERVIEWEE: Or ...looking people in the eyes.
>
> [15:08] INTERVIEWEE: Something that I apparently have a problem with.

11

[15:08] Researcher: has that changed the way you interact in RL now?

[15:08 INTERVIEWEE: Yes, definitely.

[15:08] INTERVIEWEE: I think that I recognize to some degree that people expect you to...

[15:09] INTERVIEWEE: Act a certain way, put a certain inflection on your voice and wear your face in a way that 'conveys' the meaning of what you're telling them.

[15:09] INTERVIEWEE: For instance, I could tell you something totally serious in text. And if it's in a serious context, you might take me seriously.

[15:09] INTERVIEWEE: In RL, if I were looking at the ground and I said something that I wanted to be serious they might think I'm being facetious.

[15:10] Researcher: so true

[15:10] INTERVIEWEE: Or if I'm not loud enough. Or mumbling.

[15:11] Researcher: So you are changing the way you communicate to reflect that?

[15:11] INTERVIEWEE: Yeah. I don't like looking people in the eyes for some reason when I talk to them? I just let my eyes wander and look at objects irrelevant to the conversation.

[15:11] INTERVIEWEE: I don't even realize it.

[15:11] INTERVIEWEE: But, uh.

[15:12] INTERVIEWEE: I make the conscious decision to do it if I have to put on my 'GET SERIOUS' face.

[15:12] INTERVIEWEE: "Time to be serious. Look them in the eye. THIS IS SERIOUS BUSINESS BECAUSE WE MAKE EYE CONTACT!"

[15:12] INTERVIEWEE shrugs.

[15:12] INTERVIEWEE: <_<

At the conclusion of each interview, each participant was asked how they felt during the interview as they might have compared it to meeting in the physical world. Specifically, they were asked if they were more, less or equally comfortable sharing their stories both as their avatar and in text chat. All but one study participant indicated that they much preferred meeting virtually as they felt more comfortable to share what they truly felt than they would if they'd been face-to-face in person. The one who indicated otherwise indicated that because he wasn't a good typist he would have preferred to do the interview using the voice feature.

Results

12

Of the 25 interviewees, 36 percent (n=9) were married, 32 percent (n=8) were single, .4 percent were separated (n=1), 24 percent (n=6) were divorced, and .4 percent (n=1) were in a cohabiting relationship. Fifteen (60 percent) were either in or had previously been in a *Second Life* relationship, only one of which was with their real life spouse and four of which were extramarital. The average age of study participants was almost 49 and 80 percent had either undergraduate or advanced degrees and sought interaction in *Second Life* for the intellectual stimulation. These demographics do not fit the stereotype 'gamer' that is often represented in popular press dominated by youth, young male adults, or a social outcast. Rather, these demographics are more consistent with Reeves & Reed (2009) whose research revealed the average age of a gamer is 35-years-old with 26 percent of players older than 50. They likewise earn a mean household income of approximately $85,000 with almost two-thirds having at least some college education (p.21).

Although there were dramatic stories of deception in the virtual world, perhaps one of the most surprising results of the interviews was a willingness to trust a virtual person. In an era of decline in social capital resulting from the deterioration of trust in our neighbors, co-workers, religious, civic and political leaders (Putnam, 2000), the participants in this study reported a willingness to trust their virtual counterparts equally (40 percent) or greater (32 percent) in this environment as they do in their real-life environment. As one interviewee explained, "Due to the security and anonymity here, [trust] is easier I guess. Well, people online are simply more open with their feelings, and what is the risk?"

The results of this study reveal social, entertainment and escape motivations as well as gratification factors of information seeking, intellectual stimulation, communication and employment. The key themes aligned with social gratifications included social interaction in addition to the development of sexual and romantic relationships. More than half of the study participants (60 percent) reported having been involved romantically with another virtual resident, four of whom (16 percent) reported their relationships were extramarital. The study participants consistently cited anonymity via a virtual persona and the sense that virtual actions did not share the same depth of potential consequence as they would in real life, as a source of confidence to explore their sense of self and others in a perceived "safe" environment. This finding is consistent with Bargh and McKenna (2004) who found that the "relative anonymity aspect encourages self-expression, and the relative absence of physical and nonverbal interaction cues (e.g. attractiveness) facilitates the formation of relationships on other, deeper bases such as shared values and beliefs" (p. 586). Their extensive literature review also revealed evidence that communicating via the

Internet was instrumental not only in maintaining close ties with friends and families, but in forming new close and meaningful relationships in a relatively safe environment (p. 582).

One of the common themes revealed in the interviews was that these individuals were, as one participant explained, "seeking romance that seems to be missing in RL [real life]." For example, when talking about her relationships in *Second Life*, one participant lamented "I do wish my husband would come in here and type to me. I miss having love letters." This response was reflected in others' interviews who reported being married in their real lives but seeking sexual or romantic bonds in *Second Life*, considering it a 'safe' place to explore their fantasy through virtual performance and in several cases without feeling they were being unfaithful to their spouse. Although most of the participants who were in virtual relationships were single in their real lives, those who were married often reported that their spouses were unaware of their *Second Life* relationships although others in the discussion group and one interviewee had come into *Second Life* because their spouses had encouraged it. One study participant indicated he had an 'open' marriage in *Second Life* while he and his spouse vowed monogamy in real life.

Another important distinction the study participants frequently made was their ability to reflect their idealized selves in their online social and professional interactions with personal recognition and reward they previously had not found in the physical world. For instance, another 60-year-old male interviewee who had not completed college expressed his gratification for the ability to "interact with people who are intellectuals, and often they are professors, and they seem to like what I have to say – so it's pretty rewarding." In this environment, those who may feel they were marginalized in their culture for a lack of education have the ability to interact and achieve status based on what they bring to the community intellectually. As one European male interviewee who had left school at 16 due to life circumstances described, "external confirmation from others is wonderful… healthier than broadsheet, magazine, good-looking stereotypical 'better' people."

Finally, as a result of the ability to role play or perform via the virtual representation of self, others spoke to the way they experienced personal growth and changed the way they communicated with individuals in the physical world. Such was the case with the college professor who explained that when she Googled some of the speakers she'd heard at events in *Second Life*, she discovered their avatars had been modeled after older and 'more distinguished' men yet their appearance in reality was young and handsome. This is not typical in the virtual world, however, it points to the image the professionals wanted to convey and the desire to be taken more seriously or to be more respected. In this case, the

14

speaker felt marginalized in his field by his boyish looks. The study participant reported being much more open to listening to what a person has to say, rather than making visual judgments she didn't even realize she had been making. She also admitted that in this process she had discovered how bitter a human she had become and assumed that others judged her in her university work due to her age and weight and as such typically dealt with people defensively. She explained, "being in here has made me really more sensitive and accepting, I think."

Conclusions and Implications

Although *Second Life*, the dominant 3-D online social virtual world doesn't command the staggering numbers of participants that entertainment games such as *World of Warcraft* has -- in what has become a $10 billion dollar industry of online multiplayer games (Reeves and Reed, 2009) – it has built and maintained a vibrant following and now boasts an economy of more than 30 million in U.S. dollars transacted quarterly in the virtual exchange (Linden Lab, 2011). Likewise, it is anticipated that the emerging tracking and rendering technologies offered by Nintendo's *Wii*, Microsoft's *Kinect*, and PlayStation's *Move* will combine with 3D monitors and inexpensive head mounted displays to increase consumer demand in the next few years as immersive worlds continue to gain popularity (Blascovich & Bailenson, 2011).

At the same time that these technologies are commanding stronger audiences, organizations are facing unprecedented challenges in building relationships or motivating apathetic or disengaged workforces and volunteers. The question is whether the technology that is often seen as a distraction and a cause of public malaise can actually become part of the solution. Can communities, companies, organizations and even families use these technologies to engage each other in meaningful ways and rebuild the functions of social capital that have been lost or diminished as online media have become more dominant in our culture? Can role play or virtual performance invite individuals to creatively engage in their work and in their relationships using the same motivations that captivate gamers when they are in a state of 'flow?'

As the moderator of the 'Thothica' discussions Reflection Freenote stated:

> Do we tend to approach novel situations and creative challenges with greater enthusiasm in SL, than in RL? Is this because we are better aware that they are not 'life and death' encounters for our avatars? If so, our perception of reality is more accurate in SL than in RL.

15

Individuals performing as avatars participating in this study revealed that although they may feel 'marginalized' in their real lives as a result of isolation, age, gender, race, or even extreme shyness, they were able to create an online persona and essentially role play their 'idealized self' and build meaningful connections. These bonds were reportedly equal to or greater than the bonds they had been able to create in their physical worlds. This is important, for example, if companies or organizations want to invite those individuals 'from the edges' to participate and collaborate in planning and problem resolution. Based on the results of this research, for example, allowing employees to participate in this environment in a corporate dialog anonymously could break the "Spiral of Silence" (Noelle-Neumann, as cited in Shoemaker, Tankard, & Lasorsa, 2004) and potentially increase collaborative and creative thought.

Perhaps one of the most startling discoveries of this research was the power of the mediated effects on the way individuals approached 'visual identity' in real life. In the virtual environment, most participants were performing as an idealized version of themselves in order to experience interaction as the 'person' they would like to be seen as. Or, contrarily, they create sometimes whimsical and sometimes grotesque fantasy creatures as a way to become fully immersed in role play or to solicit attention. As a result many individuals explained they have to learn how to look past virtual appearances to discover the personalities of their virtual peers. As revealed in the findings about representation of virtual self, several of the study participants indicated that they now see people differently in real life based on their experiences with virtual beings in *Second Life* (such as the woman who sees her sister as both human and 'nekko' and the professor who now listens to the student with dreadlocks rather than passing judgment based on his appearance). This is a truly extraordinary shift in values systems that could be applied to the understanding of visual discrimination and to such problems facing our cultures as negative self body image. These results speak to the potential to development of image based on action and thought more powerfully that looks.

On the other hand, true anonymity would also invite the potential of disruptive and potentially destructive behavior, given the perception that there would be little to no possibility of consequence in their real lives. Further research is needed to better understand how the strength of trust and reciprocity as well as the potential to deceive in a 3-D online immersive environment will translate in the real world as individuals, institutions, and industry turn to these environments for work, education, entertainment, news, and social connection.

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