

A Presumption of Reality: Exploring Virtual Behaviour as a Predictive Mechanism for Real-Life Outcomes

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Abstract

With the advent of open-ended, participant-driven metaverses, the ability to explore virtual behaviour that might be predictive of real-world outcomes becomes feasible. One of the core concepts of virtual worlds such as Second Life, for example, is that the digital canvasses are open-ended and emergent. With the participant in charge, this allows for individual and group manifestations that are not necessarily driven by a designer, artist or game master controlling or encouraging behaviour, but rather by mechanisms designed by the players themselves. This paper defines virtual DNA, or data and patterns left behind by digital behaviour, and explores the possibility of predicting real-life outcomes based on analysis of virtual-world interactions. In particular, the paper explores virtual art created for and about the Virtual World, Second Life as one link to the connection between virtual and real-life outcomes. Further, the 3D web is forecast to be a substantial part of the internet environment within the next five years. Should virtual behaviour prove to significantly parallel real-world outcomes, implications for disciplines such as social behaviour prediction and marketing research would be significant.

Keywords

Virtual worlds, metaverses, virtual behaviour, marketing research, e-marketing, digital ethnography

1 Introduction

The Institute for Interactive Arts and Engineering (IIAE) is a joint creation of The School of Engineering and Computer Science and the School of Arts and Humanities at the University of Texas at Dallas (UTD). The IIAE promotes multi-disciplinary technology development within a cultural context and supports a variety of specialized technology labs. One such initiative, the Virtual Worlds Lab, owns an island on the metaverse, Second Life, where a variety of 3D web research initiatives are housed. A key project of the Virtual Worlds lab is the Metaverse Gallery, which primarily features art that is made exclusively for the virtual world space, not merely uploaded into the environment. This paper suggests that an exploration of this art, and its relationship to its real-life creators, can be an insightful digital ethnographic study into the relationship between virtual and real-life behaviour.



Figure 1: The Research Offices and Metaverse Gallery on the UTD Second Life Island

1.1 The Avatar as InkBlot

Using digital ethnographic methods, we can explore the rich world of the emergent space created by Second Life residents to begin to construct the relationship between real world and digital behaviour. Suler likens the avatar to a “Rorschach inkblot, the draw-a-house/person/tree test or any work of art.” [Suler 1996] According to Suler, the avatar is selected from personal imagination. [Suler 1996] “Consciously or unconsciously, people condense a multitude of meaning into it. They project their personality into it – who they are, who they wish to be, what they fear, what moves them.” [Suler 1996] The current work on metaverses or virtual worlds, while encompassing selection and evolution of an avatar, goes well beyond this singular form of representation. By studying a variety of art that has been featured in the Metaverse gallery and selected specifically because it was designed for or specifically represents a virtual world, we can begin to get rich insight into the developing nature between the physical and virtual psyche.

2 The Importance of the Upcoming 3D Environment to Business Strategy

2.1 Real-World Artifacts: Economies of Virtual Worlds

As of midnight, August 14, 2007 approximately 8.8 million residents exist on Second-life, one of the most publicized metaverses of the last year. Further, approximately 500,000 residents entered Second Life in the last seven days. [Second Life 2007] Over 30,000 virtual residents have logged on in the last day. [Second Life 2007] Within the last 24 hours, approximately \$1.1 million U.S. Dollars have been spent within this one virtual world. [Second Life 2007] In a digital space where unique creative enterprise and design are largely geared around “islands,” or virtual real estate ownership, 9541 islands were purchased and owned on Second Life month-to-date (MTD) August 2007, with approximately 859 or nine percent added within the last 30 days. [Second Life 2007]

Further, The Gartner group forecasts that by the end of 2011 that 80 percent of internet users and Fortune 500 companies will utilize 3D aspects of the web. [Gartner 2007]

2.2 The Study of Virtual Consumer Behaviour

A tradition of data mining and metrics in e-marketing analysis clearly drive dynamic and recursive decision making. However, in an emergent, 3D environment, a much more complete picture of digital virtual behaviour is on display. Page views, unique visitors and various types of browsing behaviour and cross website tracking has long been possible in internet analysis. Some firms even combine these internet artifacts with “real world” behaviour gathered through customer relationship management (CRM). However, now a much more complete picture of the wants and desires of consumers can be observed from the open canvass of a virtual world. The old-school internet tracked “eyeballs” as indications of consumer preference, which of course only gave an indication of what a person was looking at, “clicking” on and ultimately buying. Even Web 2.0 technologies, which offer more open availability to upload, tag and create channels, still rely on somewhat limited pre-established technology utilization. With the 3-D Web, immersive behaviour unfolds, increasingly free from predetermined functionality. Opportunities for virtual marketing research and digital consumer behaviour analysis increase manifold in an environment where we are free to observe full cognitive display. This digital manifestation of the senses leads to the emergence of virtual humans and behaviour --not those we design, but those we observe.

2.3 Virtual DNA -- Manifestations of Digital Behaviour

Increasingly, the digital canvass available to end-users of all sorts, from political activists to consumers, is open-ended and user driven. Unlike html-driven user interfaces, which somewhat limit usage innovation and certainly deter functionality derivation, virtual worlds, by definition, allow for users to manifest themselves and their technology innovations -- reminiscent of creativity in our physical presence. Increasingly, avatars can take their virtual life where they will, modifying, enhancing, adopting, reacting, arguing, loving, creating, and indeed, destroying. With this increased ability of virtual world participants to take their digital lives where they will, an important research question emerges – what is the relationship between real world and digital behaviour? What does this virtual DNA, or data and patterns left behind by digital behaviour, tell us about the relationship between the physical and the virtual persona? Studying art produced for the virtual world itself, or about the virtual world, is a broad, observational first-step at gaining insight into this quickly emerging immersive environment.

3 The Digital Persona

3.1 Methodologies for Linking Virtual and Real-Life Behaviour

A variety of researchers are beginning to explore the relationship between social behaviour and norms in virtual and real-life environments. [Yee et al. 2007] For example, Yee and colleagues suggest that there is potential to use online environments to explore economic and legal issues and that this approach might serve as a “much more generalizable simulation than a mathematical model.” [Yee et al. 2007] However, the authors posit that first the relationship between social behaviour and norms in the virtual versus the real-world environment needs to be established. [Yee et al. 2007] To this end, the authors compare male-male, female-female, and male-female eye-contact and other similar behaviour in real-life versus Second Life. [Yee et al. 2007]

The authors conclude “overall, our findings support our hypothesis that our social interactions in online virtual environments, such as Second Life, are governed by the same social norms as social interactions in the physical world. If people behave according to the same social rules in both physical and virtual worlds even if the mode of movement and navigation is entirely different (i.e. using keyboard and mouse as opposed to bodies and legs), then this means it is possible to study social interaction in virtual environments and generalize them to social interaction in the real world. “ [Yee et al. 2007]

3.2 The Online Disinhibition Effect and the 3D Environment

John Suler, in the Online Disinhibition Effect takes a much more complex view of the online persona versus that exhibited in the “real world.” [Suler 2004] Writing in 2004, and focusing on a traditional html-based internet environment, Suler describes several characteristics of online users which in fact may cause their online personalities to substantially differ from their “in person” selves. [Suler 2004] To this end, Suler argues for “constellations” of behaviour which may overlap, but are substantially different aspects of the same person in different environments. [Suler 2004] As Suler explains, “Everyday users on the Internet – as well as clinicians and researchers – note how people say and do things in cyberspace that they wouldn’t ordinarily say and do in the face-to-face world.” [Suler 2004] Among Suler’s reasons for this include:

- Dissociative Anonymity: As people move around the internet, others they encounter can’t easily determine who they are. [Suler 2004]
- Invisibility: In many online environments, especially those that are text-driven, people cannot see each other. [Suler 2004]

- Asynchronicity: In e-mail and message boards, communication is asynchronous. People don't interact with each other in real-time. [Suler 2004]
- Solipsistic Introjection: Absent face-to-face cues combined with text communication can alter self-boundaries. People may feel that their mind has merged with the mind of the online companion. [Suler 2004]
- Dissociative Imagination: People relinquish their responsibility for what happens in a make-believe play world that has nothing to do with reality. [Suler 2004]
- Minimization of Status and Authority: Online, the absence of cues in dress, body language, and environmental settings reduce the impact of authority. [Suler 2004]

Of interest is how much of Suler's construct changes with a 3D, avatar-based web environment. Certainly the asynchronicity element is eliminated in 3D world interaction. Further, visual online worlds actually seem to aggrandize status and authority and relish in dress, body language and environmental settings. Can we argue, then, that this fuller ability to express a complete self therefore brings more closely together the physical and virtual persona? Is it now true that the behavioural constellations described by Suler in 2004 demarcating the virtual and "real" person, are indeed moving closer together? To this end, we study three case studies of artistic representation within Second Life and explore the traces of virtual DNA that link the real world and the virtual persona, with suggestions as to how this might equate to transversal patterns of behaviour between the virtual and reality.

4 Case Studies

4.1 Case Study I: Christi Nielsen, Crystal Merit or Juliette Cordeaux?

Christi Nielsen recently received her Masters in Fine Arts (MFA) from UTD and is the curator of the previously mentioned Metaverse Gallery on the UTD Second Life research island. She started her career in traditional fine arts, specializing in black and white photography. While her art largely features self-portraits, Christi explains that "my art focuses on women's issues and self portraits, the bombardment of media, the beauty industry, and messages we get. I don't see me in the images, it could be any woman, it is just a reaction to things that I read. Examples of Christi's art are below:



Figure 2: Several of Christi's self portraits from her Flickr Website. Her art focuses on health, weight and women's issues. (Images used with permission.)

4.2 I'm Just About to Get Skinny

Christi also has a blog on her website, "I'm Just about to Get Skinny," which was nominated for a 2006 "Blogger's Choice" award. Christi explains that the blog has allowed her to meet an audience such as weight loss surgery people, who tell her that she puts into images what they could not put into words. She says friends tell her that she's not fat and she needs to get over it. "But this is not about me," she explains, "It's about obsession in general." Christi's website, christinielsen.com contains the keywords diet, skinny then fat, obesity, Christi Nielsen, women, obsession, and societal pressure.

4.3 Eight Gallery Openings a Week

As curator of the Metaverse Gallery, Christi, or one of Christi's Second Life Avatars, Juliette Cordeaux, goes to about eight openings a week in Second Life looking for potential artists to showcase. As per the gallery mission, she tries to find art created "in world." Openings are similar to real-life events complete with tables of champagne. "When I go, I have to get an outfit," she explains. I can make it, but it's faster to buy it. You can try things on before you buy. Sometimes there are people in the store -- for information or if you have trouble buying. People get paid to be there, so it looks like there is activity. Sometimes an event is desolate, so you get paid to hang out."

4.4 The Guys Give Her Clothes

Christi explains that most clothes are given to her by "guys," in Second Life who tell her that she will "look good" in the gift outfit. Christi explains that she is not sure that she wants to be someone completely different or not in Second Life. "Nobody knows that it's me," she says. "Do I want to be someone completely different or not? "People do things that they couldn't do in real life; they're less inhibited, yet there is still someone driving that avatar. How do you get away from that? Are they people? I sometimes don't know if I should call them an avatar or not. "

4.5 Crystal Merit

Christi, in fact, has a few different avatars. One in particular, Crystal Merit, appears quite different from the gallery hopping Juliette Cordeaux and is obese and somewhat slovenly. The two contrasting avatars are depicted below.



Figure 3: Christi's Avatars in Second Life: Crystal Merit and Juliette Cordeaux. According to Christi, the avatars receive different types of gifts in Second Life. (Images used with permission.)

Christi enjoys observing the different reactions she receives as each of her avatars. As explained earlier, in Second Life other avatars give each other gifts. Gifts are scripts that might be dances or other social animations.

For her own research, Christi monitors what she gets as her different avatars. “As the hot babe, Juliette Coredeaux, I get cars, motorcycles, clothing, or jewelry,” she explains. “Crystal Merit gets foods, drinks. The drink is a script that makes you fall down every five seconds. She also receives silly dances.” Christi’s two avatars also have different personalities, as well as appearances. “Crystal Merit is more like me, really,” Christi says. “She is somewhat antisocial. It’s the same with me until I get comfortable with an environment. When I switch over to the other one, I become more social, the hot babe, but I don’t know if I am more comfortable in the environment or not.”



Figure 4: Title and graphic from Christi’s blog, “I’m Just About to Get Skinny: The Struggle with Expectations Placed Upon Women in Contemporary Society. (Image used with permission.)

4.6 You are the Avatar

As we conclude the interview, Christi shares one more thought. “You are going to laugh the next time you see me,” she says. “Next time you see me, my hair will be red. People tease me because they say I am looking more and more like Juliette. Dean (Dean Terry, the director of the Virtual Worlds Lab) always says, “*you* are the avatar; you’re always changing something.”

5.2 Case Study II: The Photographer

The first artist that gallery curator Juliette Cordeaux chose to exhibit in the Metaverse Gallery was Shoshana Epsilon, a photographer in Second Life, specializing in weddings and other events and portraiture. Her business card and samples of her avatar wedding photos are illustrated below. Shoshana became involved in Second Life through her husband shortly after she was laid off. “I suddenly had a lot of time on my hands,” she explained, “and I started using the snapshot button and one of my photographs turned out really good. I am not a photographer, I have a camera. For me this has been a way to experience an artistic side of myself that I didn’t know I had.”



Figure 5: Shoshana Epsilon’s Second Life Business Card and samples of her Wedding Photography (Images used with permission.)

“I think Second Life is very individual,” Shoshana conjectured. “There are different approaches, different ways. It can be an extension of real life, or a great way to meet chicks, maybe find true love and so forth. We can be exactly like ourselves or not, married or not married. It can be a great big chat room. Others come to experiment.”

In real life Shoshana has been a software programmer for 17 years and a manager for five. “That’s what I do during the day,” she explains. “I’ve never been that into art, I don’t know what’s good about pictures, I just know what I like. That’s what I take pictures of.”

Shoshana may never have been a wedding photographer in real life, but her brother is. “He told me some of his experiences, and they are just the same,” she said. “There was one wedding where the bride didn’t want to come. Some people take it very seriously.”

5.3 Case Study III: The Immersed Couple

Finally, in conjunction with the 2007 Dallas Film Festival, the Metaverse Gallery launched a series of companion in-world events. Termed Dallas Film Festival 2.0, one of the events included the film, “Our Brilliant Second Life,” which is about an Australian couple, Blair and Diana, who although together in real life, choose to spend much of their relationship virtually, in world. Captured below are images from the film.



Figure 6: Blair and Diana, although together in real life, choose to spend much of their time together “in world.” (Script and images used with permission.)

The movie explains their reasons for preferring the virtual to the real. As Blair says, “What I wanted to do in the real world is become a DJ and play in night clubs, I haven’t been able to do that because competition in the real world it’s very fierce. Second Life gives you an opportunity to live your real-life dreams. When I realized I could be a DJ in Second Life, it was like finding the dream job. And I focused a 110 percent on it. The internet is so big that my audience could be a half a million.”

Diana equally appears to have found greater career success from Second Life. “When I was younger, I wanted to be a fashion designer and in Second Life I can do it,” she explains in the film. And finally, as a couple they appear to be equally engaged with their digital success. “If we are in the world together and we both jump in,” Blair says. “there’s no need to come out. You can live a life in there if you want.”

6.0 Research Implications and Summary

Several aspects of this digital ethnographic study link virtual behaviour with the real, but the relationships point to a much more intertwined complexity between the real, the internet and the 3D than might be initially imagined. While the initial concept was to isolate the relationship between the real and the virtual, it became clear throughout the digital ethnographic study that 3D worlds are increasingly creating their own reality. As people/avatars are able to have careers

“in world,” with meaningful compensation and fulfil needs virtually that they have been denied physically, the need to use virtual behaviour to per se “predict” real world outcomes becomes less critical. In essence, the virtual becomes reality. The implication for product and service development is substantial.

Further, as illustrated by the case studies, it does seem that there is a clear connection between per se “real world” focus and virtual world manifestations. In some cases, the parallels were very evident such as the women’s issues theme that could clearly be followed from Christi Nielsen’s website to her avatar. In other cases, it was the discovery of an unknown talent, or fulfilment of an unmet need or want. But the connections between the virtual and the physical were clearly evident. The literature supports this general conclusion, and in fact an update of the “Online Disinhibition Effect” for a 3D world might even point to a stronger connection between the virtual and real behavioural constellations.

The 3D web points to even greater individual sensory expression and perhaps the era of the virtual human. The true opportunity may be to realize that the 3D web has created its own reality.

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