Virtual worlds and other virtual environments offer an adaptable context for applied and situated learning experiences. In this book, educators, instructional designers, librarians, administrators and scholars reflect on how to leverage constructivist, authentic, collaborative and complex interactive educational experiences through the use of these multisensory environments.

Explore the intersection of presence, personal and group identity, culture, immersive learning experiences, multiuser virtual environments (MUVEs) and massive multiplayer online roleplaying games (MMORPGs) with eleven multidisciplinary researchers. The examples range from K-12 to university educational experiences and highlight critical information from a variety of MUVEs, such as Second Life, Active Worlds, There, and several MMORPGs, including Ultima Online, Everquest and the World of Warcraft.
Identity, Learning and Support in Virtual Environments
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Volume 36

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Identity, Learning and Support in Virtual Environments

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1. AN INTRODUCTION

Exploring Virtual Spaces

This book explores the educational use and implications of various virtual environments. We focus on the use of chat spaces, Web 2.0, 3D Web or object oriented/semantic web (Web 3.0), and virtual environment applications.

The World Wide Web, Internet and other digital technologies continue to evolve. The evolution is happening so quickly that it is difficult even for scholars and IT professionals to keep current with the latest developments in digital domains such as the new semantic web (Web 2.0). One such area of emerging and rapid development is the use of virtual worlds for e-learning. While virtual learning environments (VLEs) are not a new phenomena (Weiss, Nolan, Hunsinger & Trifonas, 2006) the way that they are defined has been transformed by digital technologies. For the purposes of this book we define VLEs as any space that is used for learning that is different from either formal or informal, brick or mortar classrooms. In particular, we focus on VLEs that are facilitated by electronic technologies with a focus on multi-user virtual environments (MUVEs).

The use of the term virtual environment has been around for many years. It has been defined and re-defined by scientists, humanitarians and everyday users. The major differences in time and space are not only where, but how is now an important attribute for defining virtual environments. In this book we define virtual environments very broadly. For us the term virtual environment can refer to a web based chat space, content/learning management application, or a three dimensional social virtual world, a massively multi-user online world, or an immersive virtual reality environment. In fact, some consider that the polycom provides a virtual environment to users/learners because the user/learner is not in a shared physical space with all involved in the communication event.

There have been innumerable discussions over the centuries about what reality is. Although a full discourse on these discussions and debates is well beyond the scope of this introduction, it is important to briefly touch upon the use of the world reality in relationship to virtual environments. When individuals engage in conversations about reality, most mean reality in the physical world. I’ve heard conversation about social virtual worlds where the conversant make the distinction between physical and virtual by making references to “the real world.” The term “physical” is used instead of real because both physical and virtual are in fact “real” One exists in the physical/material world and the other in the virtual world, but events in the virtual world are just as real as any event that occurs in the physical/material world. The individuals are real that are using the environments. The only difference is the space. It is a real space but cannot be physically touched.

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by the users. It can be experienced, but the actual body does not have the ability to walk around in it as one can walk around in a room in your house, and engage the physical artefacts. Both experiences are just as real because the experiences are real regardless of the space where the experience happens.

“Multi-user virtual environments,” such as social virtual worlds, transcend the static Web pages of Web 1.0 as well as the predetermined applications of Web 2.0 and 3.0. Some considerations given to Web 3.0 include the use of avatars in simulated worlds and other semantic environments (Strickland, 2009). Web 3.0 provide e-ecologies with the capacity to immerse the user in a “place” that cuts across time and space and affords opportunities for communication, exploration, collaboration, shared inquiry, and formal and informal learning. The chapters in this book introduce the reader to these spaces and the myriad possibilities they represent for the further evolution of education for early childhood, primary, secondary, post-secondary, and lifelong learning environments.

Our volume poses the following questions: “what does it mean to teach and learn within and with social virtual environments? And what does electronic identity, persona or avatar mean?” To answer these questions, the authors in this volume argue that we as learners are no longer engaged in one way interactions but we are engaged in complex interactions as we immerse ourselves in virtual and augmented reality spaces. Virtual environments have enabled us to be highly immersed in spaces that yield high social presence, constructivist learning, interactive problem solving, and surprisingly enjoyable and new types of experiences.

This book is divided into three sections: the first section focuses on theoretical perspectives; the second section focuses on applications of virtual environments with specific attention given to Second Life, and the third section bring virtual environments to life through a variety of discussion on virtual environments including Second Life and immersive spaces.

Kien’s chapter lays out a critical view/definition of virtual environments (VE) foreseening the future’s VEs and the possible effects on society and the ubiquitous nature of VE. He argues there is very little separation between virtual and real. The argument presented here is that both are in fact realities, just different realms, both exist one is more tangible while the other is more non-physical. In other words, physical space has matter and uses many of our senses (i.e., visual, auditory, tactile, taste, olfactory) while virtual spaces use only some of our senses (i.e., visual, auditory). Kien, argues we are on online or using a mobile device 24hours/7 days. Using McLuhan as a springboard for discussion Kien argues the notion of immersion and perspective taking are key for involvement. This type of key involvement can occur with text, television, and audio. It is what Csikszenmihalyi calls Flow. Flow is the mental state of operation in which the person is fully immersed in what he or she is doing by a feeling of energized focus, full involvement, and success in the process of the activity (Csikszenmihalyi, 1990).

Kien offers us examples of how his grandfather engaged television sports as though he was right there guiding his player of choice on the football field. He describes simulacra very much so similar to the matrix that it cannot help but to engage the reader to wonder where does reality begins and where does it end. He
describes the use and social problems associated with VE, and VE relationships. Through his exploration of different VE platforms, Kien discusses what it means today to exist between and among planes.

Weiss’ chapter takes us on a journey through the discussion of multi-user environments with a specific focus. Weiss offers us a view into the virtual world described by Neal Stephenson’s 1992 novel Snow Crash as a way of introducing the social virtual world Second Life. He argues social virtual worlds such as Second Life for teaching and learning are more flexible, and easier to manipulate, co-create and recreate than physical learning spaces. He follows up with a discussion on the physical space (i.e., brick and mortar classrooms) used for teaching and learning to a brief argument about John Dewey and school design. He concludes with how social virtual worlds like Second Life afford the manipulation of the body, buildings and Web 2.0’s characteristics of the semantic web and user created content to develop, and demonstrate sound pedagogy through creativity, meaning and intentionality.

Whang, Taylor, and Cash provides us with their visualization chapter of avatar identity and presence, and how the interaction between avatar and identity can effect on learning. They consider how thirds spaces have changed over time moving from bookstores and coffee houses to social virtual worlds such as Second Life, Facebook and other social networking applications, and other virtual environments. The focus of their chapter is avatar identity and its influence on presence in Second Life. They argue that Second Life is effective because of its complexity involving the creation of avatar and avatar interactions. For example an avatar can go shopping and gain realistic experiences and provide more opportunity for transference from the social virtual world to the physical world. In their chapter they use the term “real world,” however, and I argue that both worlds are aspects of reality with the difference being one is tangible (physical) and the other is intangible (virtual). They conclude with suggestions of how social virtual worlds can be used for many other educational opportunities.

The second section of the book introduces and exposes the reader to several applications of virtual environments with a specific focus on Second Life. Arlene DeStrulle’s chapter introduces the idea that science and technology has become essential and ubiquitous in our society (c.f. DeStrulle, this book). In her chapter, she investigates the role of virtual reality applications for school-based knowledge and learning. Her research questions guided by the study were: First, what characteristics and influence does virtual reality exhibits to facilitate learning? And second, what are the characteristics and influences that interfere or detract from learning? Her case study provides the reader with a thorough discussion of the visitors who participated in the virtual reality exhibit while visiting the Fleet Science Center. Effects of staff instruction, age-range and gender, audio narration, sound and music, movement, types of images, interactive tools, themes and avatars are presented. She concludes with a discussion on instructional design, instructional challenge, presence, control and cognitive load, with recommendations for future virtual reality exhibits.
Perez believes there are compelling reasons for teachers and other school personnel to integrate multi-user virtual environments, such as social virtual worlds like Second Life, into their teaching. She points out that there are multiple benefits using social virtual worlds. She argues that one of the main rationales is that today’s youth and adults are already using the spaces so why not leverage them for opportunities to create, develop and learn? Perez also notes that there are challenges associated with teaching and learning in social virtual worlds.

Trueman offers the student’s experience in Second Life. She takes us on a journey of the data gathering process of her experience as an educator and librarian. As she presents students responses to a set of questions she posed to them in Fall 2006, we hear student voices reflect advantages and disadvantages to using Second Life for their education. No doubt many things have changed in Second Life since that time but student experiences are valuable no matter when their voices are presented.

This section concludes with Teoh’s teaching experience with pre-service teachers in Second Life. Who are the net generation students? Teoh explains who these students are and how we can engage students of the net generation in social virtual world simulations such as Second Life. She raises the question of whether social virtual worlds as Second Life can be used to attain educational goals. She follows up by answering the question using her students’ experiences to reinforce her point about how we should teach, and how students can learn using today’s Web 2.0 technologies such as Second Life.

The authors in section three brings virtual applications to life through their discussions of various practices in virtual environments. Calongne provides us with an introduction to games and social virtual worlds by grouping massively multiplayer online role-playing games with multi-user environments to focus on cultural influences, players as trainers, social interactions, and presence in all worlds including social virtual worlds.

Bell provides a discussion specifically on Second Life and its role associated with librarians. She discusses challenges and benefits of using Second Life as a virtual library space.

Varvel and Weiss conclude with a discussion on the future of virtual environments offering some insight to educators as Plato offered insight to philosophers in the Allegory of the Cave.

NOTE

1 A polycom is a telepresent, teleconferencing tool developed by Polycom, Inc.

REFERENCES


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THEORETICAL PERSPECTIVES ON VIRTUAL ENVIRONMENTS
2. VIRTUAL ENVIRONMENT: THE MACHINE IS OUR WORLD

ABSTRACT

In the reality that our civilization’s children are growing up with, virtual vs. physical distinctions no longer accurately reflect lived experience. A collapse of the false dichotomy is needed to contend with the one reality one experiences as life. This chapter examines virtual environment in four parts, first constructing a technical definition, then exposing some of the social problems that arise from the perplexing conditions of the virtual. A look ahead at the virtual environment we can expect to evolve in the years ahead comprises the third section, leading to discussion of an approach that addresses some of the facts of life in our hyper-mediated world.

INTRODUCTION

This chapter discusses Virtual Environment (VE) in four parts, first laying out a technical definition, then exemplifying some of the types of social problems that arise from the confounding circumstances of virtuality. The third section looks ahead at the virtual environment we can expect to evolve in the years ahead, and the final section discusses an approach that addresses the reality of life in an always on, ubiquitously hyper-mediated world. The goal of this exposition is not to seduce readers into a futurist narcosis. Rather, to get us all thinking about what is now, what is most certain to someday actually be, and to take a step forward together. That is to say, to assert that much of what is described herein already exists and represents what we are most certainly striding towards.

The potential of what is now and what is to come may overwhelm some to a condition of paralysis, or wilful self-denial of the enormity of change we are facing. Some of humanity – primarily citizens of advanced capitalist nations – already lives everyday life in highly virtualized environments. We depend on it, even if we don’t always acknowledge its presence. Virtual programs guide our air, water, and ground transportation not just through imaging technologies, and in the mechanical operation of the machinery itself. It guards and keeps our money working for us while we work, play and sleep. It announces things to us while we are shopping and tells us when our automobiles and appliances need servicing. It connects us through time and space, granting us a performative connectivity and cultural consistency that stabilizes our ontological security (Kien, forthcoming). To be fully immersed and ubiquitously connected at all times is Western civilization’s...
present reality. That is to say our everyday environment is always-already virtualized to some extent, and virtuality no longer stands apart from reality, but rather is already somewhat naturalized as one very important characteristic of the one reality we each individually experience as life.

The earth’s environment as a whole is changing. Is it trivial to talk about the virtuality of our environment when the polar ice caps are melting? When much of the world’s population goes to bed hungry? When millions live with the agony of easily curable diseases simply because it is not profitable to treat them? No. It is all the more essential. Technology is foundational to such life and death issues, and the virtualization of our environment goes hand in hand with the everyday existence that precipitates these catastrophes. Technology brings both problems and solutions, never always good nor always bad. But technology it IS instrumental (Heidegger, 1977), and as such we as individuals and as a civilization do decide what we do with it and where we take it developmentally. It is a huge task, but it is the job we as educators are charged with. Thus this text is unabashedly pedantic, meant as a wake up call to some, and for those already awake, a spur to drive us forward.

This essay first exemplifies how the world as it is now already transcends traditional definitions of ‘virtual environment’ and ‘real environment’ just as it does ‘physical reality’ and ‘virtual reality’ bifurcation, then looks at how we can proactively proceed in light of this environmental circumstance. As Postman put it:

Once a technology is admitted, it plays out its hand; it does what it is designed to do. Our task is to understand what that design is — that is to say, when we admit a new technology to the culture, we must do so with our eyes wide open. (Postman, 1992, p. 7)

It is a McLuhanist dilemma in that we are here interested in the change of pace and social pattern that new media introduce as a result of its extending the human sensorium (McLuhan, 1995).

The present circumstances of virtuality confound our sense of space in ways that have yet to be fully grasped. Understanding virtual environment in the context of contemporary and emerging media requires understanding how the technology encourages one to re-imagine oneself and others, and participate in everyday life in ways otherwise closed to possibility. Of course, working from a distance has already become common practice, as doctors and other specialists already commonly use advanced communication technologies and robotics to perform sophisticated procedures across huge distances, and global teams work on projects coordinated across multiple time zones. Simulative programs made the leap from laboratory to video game console decades ago, and other assistive technologies such as GPS have been incorporated into consumer technology in such a way that the demarcation between ‘specialist’ and ‘user’ is in many areas becoming meaningless. The slippage between work time and leisure time continues to fill with an ever thickening fog of instantaneity, as the normalized proliferation of multitasking allows us to consume ever more media in the same amount of hours per day (McClellen, 2006). Our everyday life has changed profoundly, being always on and connected everywhere. It bears keeping in mind that less than 100 years ago ‘computer’ referred to a
It is widely acknowledged we entered the age of the “prosumer” some time ago (Toffler, 1980). We live in the era of the “entrepreneur of the self” (Gordan in du Gay, 2000: 120), the latest evolution in consumer culture in which subjectivity is an ongoing project of self-construction (Featherstone, 1991; Lury, 1996). Management guru Peter Drucker (2001) describes our present circumstances as an “entrepreneurial society” in which “individuals will have to learn new things well after they have become adults” (p. 325). And as Drucker aptly points out, everyone needs to take the challenges of this era seriously. This means responding to the virtualization of environment as a new reality, not just an after school playtime or after work fantasy. Virtualization IS work, and must also become school. Web portals such as BlackBoard, podcasting lectures and holding classes in SecondLife are reactionary efforts to reconcile the virtual media sea change that is taking place in society. What is needed as we step forward into one reality is an acknowledgement that, like it or not, the machine the collective ‘we’ have been building is our world.

VIRTUAL ENVIRONMENT DEFINED

The term virtual environment is most often encountered as a definition of virtual reality. VE is usually described as a form of human-computer interaction (HCI) consisting of a computer-generated visual and audio simulation of three-dimensional space (i.e. a 3D graphic), in which users have interactive experiences (i.e. they communicate with one another and/or have the ability to respond to or alter the aesthetic experience of the environment, such as controlling the movement of an avatar or changing some characteristics of the environment). Interactivity is the key element that sets VE apart from other forms of HCI, which is observable as “engagement, immersion, or presence”.

Beginning with training programs in the 1960s, VE has historically been conceptualized as simulative location set apart from where the rest of life takes place (Ellis, 1994), such as a media laboratory. This may have been a sufficient concept at one time, but in the contemporary world virtuality might pop up right in front of us at any moment, or more likely, already be such a benign part of our existing everyday world that one is hard put to distinguish it as anything but normal. As traditional technologies remediate into digital formats, they take on the characteristics of interactivity and become part of our virtual environment. For example, playing a networked PSP or chatting on an IM application while riding public transit hardly seems noteworthy in our present world, but in its banality is revealed the everydayness of the practice.

It’s easy to create a better working definition of virtual environment if that’s the tool we need right now. Perhaps I’m being academically unremarkable, but it’s my judgement that McLuhan already did most of the necessary intellectual work for us. In keeping with the distinguishing features of engagement, immersion, and presence, I suggest McLuhan’s notion of ‘involvement’ is the key (1964, 1995).
McLuhan describes involvement as the level of attention a medium demands of its user. In the case of most VE, the level of involvement is rather overwhelming. The speed of operation, level of detail and the need to multitask between numerous applications make most virtual interaction an all or nothing prospect. VE is experienced individually and firsthand. Even if it doesn’t yet always perfectly achieve absolute immersion, it does generally demand the user’s full attention to be successful. This attention includes interactive experiences and performances of identification, both with the machine and with other people (perhaps better expressed as other ‘virtual presences’).

Using McLuhan’s notion of involvement, virtual environment can be defined as electronic space in which real experiences happen. To an outside observer, the user looks like they’ve gone somewhere, ‘spaced out’, except they’re actually ‘re-spaced’ into a virtual territory, really experiencing what they’re doing. For example, my grandfather used to like watching wrestling on TV (or ‘wrassslng’ as he called it). He would sit in front of the TV on Saturday afternoons, and yell at the screen: “Look out behind you! Watch out for that one!” Anyone looking at him objectively could easily see he had conceptually entered the space in which the event was taking place. Even without the interactive ability that we now take for granted, he was obviously quite involved with the content he was consuming, and the phenomenon remains consistent throughout the development of new digital media.

Scoring a goal in virtual hockey is experienced just as emotionally real as scoring a goal in physical hockey, and in the present context of MMORPGs, Web 2.0 etc., just as or even more social. The virtual environment is the ecosystem that structures, creates, reproduces and imposes relationships and regimes of behavior on the virtual subject, just like a physical environment. Just like our physical environment, the role of culture is essential to survival in virtual environments. But here we already have the root of the problem.

Virtual space (aka electronic space) is as entirely physical as the space your chair occupies, just on a scale human beings can’t understand (Kien, 2002). It has mass. It has movement. It is experienced by humans only through hyper-mediation – a version of Benjamin’s “optical unconsciousness” (Benjamin, 1978; Krauss, 1993) in which we come to trust and rely on machines to reveal the truth about the world we live in. There is no physical basis for a conceptual distinction between physical and virtual (mediated) reality; no reason other than conceptual utility to distinguish between virtual and physical environments. Digital text is described as creating a “discrete and synthetic microworld image of the original” (Hasslacher in Kittler, 1995) including much of the original world’s conceptual foibles and problems. And as the virtual continually evolves and manifests in more and more spaces we think of as traditionally technology-free, it becomes continually harder to hold these environmental concepts apart. In so far as we are technologically loyal to an optical unconsciousness, our ‘World’ becomes a purely aesthetic construct and ultimately, a simulacrum.

Baudrillard (1983) describes simulacra as a world of copies without originals, in which the authentic object is so far removed it is no longer remembered. Such a world is always vulnerable to “terroristic situational transfer” (Baudrillard, 2002), in which the entire system can be suddenly hacked and repurposed to the benefit of
an interloper. This creates a world of constant uncertainty in terms of the content. Like the computer display itself, aesthetics appear without any trace of history or continuity, and disappear as if they never existed. Hence Bill Nichols (2003) claims there is no new media ‘text’. Rather, the emphasis on interactivity as a defining characteristic gives rise to process and flow as a replacement for textual fixity.

Although computers are the appliances at the center of it, the issues of virtuality are social and cultural in nature. The naturalization of digital technology has broad societal and cultural repercussions that few can recognize as media specific change. For example, the digitalization of economics has led to economic phenomena that goes practically unnoticed, but which would hardly be considered unexpected. Consider a Dec., 2005, incident known as the Mizuho error in Tokyo’s virtualized stock market. A typing error caused market mayhem when 610,000 shares of J-Com were made available at 1 yen a piece. The company had intended to sell one share at 610,000 yen and immediately realized the error, but the program used by the exchange wouldn’t accept a cancellation of the order. The error cost $350 million and had global market repercussions. An error this size caused by one person miskeying some information is possible because the system runs on virtual money, moved in and out of virtual accounts through programs set to run automatically on machines we cannot understand. What we used to know as the market – the ‘outcry’ system where brokers shouted their trade orders from a trading pit – has been replaced with an automated virtual system that users interact with through their various interface options. The whole incident is in some ways rather unremarkable, as we would expect typing errors to arise from time to time as a matter of routine. Even so, it’s hard to visualize such a market as a ‘real’ place, but it most certainly is. It may be easier to understand, though, that the president of the Tokyo Stock Exchange, Takuo Tsurushima, lost his job over the incident. We know the TSE exists through the process and result if nothing else. This is only one very small example of how a virtual burp in the global system might suddenly have very real widespread repercussions.

The scale and impersonal nature of virtual systems catastrophes may sometimes be difficult to understand as human tragedies. Unfortunately, we don’t need to look at such an abstract level to understand how virtual disasters play out in the everyday lives of actual people.

SOCIAL PROBLEMS IN VIRTUAL ENVIRONMENT

One night in mid October, 2006, thirteen year old Megan Meier stepped into her bedroom closet and hung herself with a belt. Already a teen on the edge, the pain and confusion of a cyber-bullying attack from her MySpace crush, Josh Evans, was too much for her to bear. The last message she read from him before ending her own existence said “The world would be a better place without you in it” (Pokin, 2007). But it turns out that Josh wasn’t ‘real’, just Megan’s experience of him was. It was later discovered that ‘Josh’ was in fact 47 year old Lori Drew, the mother of Megan’s friend, who was seeking revenge on her daughter’s behalf for a fight between the two teenagers. Megan’s parents tried to have charges laid against
Drew, but were later informed that no law exists that covers this kind of moral offense.

Megan’s parents were in fact quite vigilant in monitoring their daughter’s MySpace use, and reviewing the details of the case, it would be a feeble stretch to suggest they were responsible for the outcome. MySpace, for its part, does have a plainly stated 15-year-old minimum age requirement, relieving them of any guilt for this tragedy. So the blame in this case rests clearly on the reprehensible behavior of Lori Drew, someone who as a parent should undoubtedly know better than to try to emotionally destroy a teenage girl, but whose actions society is not yet legally equipped to deal with. If this were the only case.

Several plots similar to the one Megan Meier fell victim to have been reported in New Zealand, also involving adults. And of course, although still sporadic, the phenomenon is not just limited to these two nations. Nor is it limited in terms of age. It’s somewhat easier to point the finger when adults are involved, but what about teen on teen or adult on adult cyber-bullying? Or even teen on adult? Who do we hold accountable then? Or when virtual relationships otherwise invade the physical world, such as the case of a woman filing for divorce because her husband refuses to give up his online spouse, arguing that it’s not a ‘real’ marriage?

Is Megan Meier’s tragic suicide merely a case of media effects? I say to a large extent, yes, but the solution is not so simple as turning off the appliance as in the days of mass media. Punishing the individual perpetrator after the fact communicates the moral judgment of the action, but will not address the issue as a global phenomenon. Megan’s very real pain and suffering illustrates how seriously we need to reconsider the importance of new media in everyday experience, and take seriously the way new media reconfigures the audience as individual prosumers. Media consumption is not something we turn on and off any more, for to not participate is to not exist in today’s world. It is constantly part of our daily, lived experience, and we need to recognize it as such. From banks and credit cards to mapping systems to cell phones to ubiquitous surveillance… even when one thinks they are offline, one’s virtual subjectivities are still out there working on your behalf.

Megan Meier’s suicide is an extreme example of the kinds of issues that are starting to reveal themselves. The presence of virtuality in everyday life raises serious philosophical issues. What is life? (are my own or the avatars I encounter online alive?). What is our purpose in the world? (how should I behave?). What is Truth? (how should I interpret the experiences I have?). How can we know ourselves and the truth about the world, when we know all we see is potentially virtual and cannot be trusted? Foremost, the removal of the body raises some very primal issues of virtual identity. It becomes difficult to know how much one should trust others online, and exactly how ‘real’ oneself should be.

Even so, we still act online as if we have bodies. We use traditionally stereotyped signifiers to participate in most online activity, and we generally strive to reproduce our actual physical and biological behavior. This is, actually, one of the important attractions of virtual life, as individuals may choose every aspect of their appearance online. As Lisa Nakamura (2001) has pointed out, technology enables ‘passing’, acting as if one is some other-identified person. However, one MUST identify somehow
to participate, in terms of the traditionally stereotyped signifiers (race and gender). In many cases, the identity choices of users result in a collage of hyper-stereotypes.

Cameron Bailey wrote some ground-breaking insights on "Digitally assisted subjectivity" (2001), discussing the idea that life can be constructed in aesthetic visions, but that one is constantly recalled to their embodied presence. He points out that the physical body remains crucial to identity. Further, consistent with Hasslacher’s description of digital text as a ‘microworld’ reproduction, Bailey points out that cyberspace simulates physical communities, complete with existing hierarchies. Access is, of course, one aspect of hierarchy, immediately excluding millions and deepening the chasm between information rich and information poor. But culture also plays a huge role with knowledge and language within the virtual environment imposing internal hierarchies. The physical structure and aesthetic representations of space also reflect traditional human interdependencies. Although cyberspace is emphatically ‘neutral’, the people who work with and on it every day are clearly racialized, gendered, and subjected to all the same normative erasures experienced everywhere else in society. And as Megan Meier demonstrated for us, they are just as painful.

Issues of identity are clearly an important part of physical reality, as crimes such as identity theft and cyber-fraud have had devastating effects on the lives of the victims. And when it comes time to mete out justice, it is the physical body of the criminal that does the time. The issues and examples mentioned thus far are obviously quite serious, but for the most part still adhere to the traditional ‘on screen/off screen’ demarcations of virtual and physical space. What happens, though, when virtuality is inserted seamlessly into the physical world? When we start to see avatars walking down the street, and meandering up and down the aisles of physical stores? When we’re suddenly not sure if the object blocking the street in front of us is physically real, a haptic, or pure digital aesthetic?

THE WORLD TO COME

John Cage once cautioned that contrary to what our technological hubris would have us believe, humanity was only just entering the infant stage of technological development in the 20th century. His reckoning is no less relevant in 2008. Looking back, we might congratulate ourselves on how far we’ve come. Looking ahead, we can easily see what baby steps we’ve actually taken. We’re only just beginning to be able to imagine what our everyday world will be like in a few decades time.

What happens when fictional avatars transgress the borders between imagined and ‘real’ environments? What happens when your child’s favorite stuffed toy becomes the star of exciting adventures in an internet gaming environment? Like Who Framed Roger Rabbit (1988) and countless other movies before it, Enchanted (2007) is one of the latest films to explore the foibles that arise when fantasy characters who are not subject to the rules of physical ‘reality’ appear in our everyday world. The theme works as comedy only because of a generally accepted premise of impossibility. We can still take it as entertainment because we don’t yet see avatars walking down the sidewalk in our everyday lives. But someday we will.
In a reversal of this theme, Webkinz sells stuffed toys that have ‘lives’ online, showing the inertness of their physical presence to be only one dimension of an ongoing, complex narrative of your child’s new ‘friend’. Inside the machine, the toys become capable of having their own personalities. The machine appears to bring inanimate things to life. Webkinz is one of the first examples of a business based on successfully blending virtual and physical environments, and is only the first step in what will no doubt be a long and inevitable evolution in how humanity comes to conceptualize the world with a naturalized understanding of virtuality. The question becomes an issue of asking what we can take for real in a world that is quickly becoming ubiquitously hyper-mediated.

The imaginary line between physical environment and virtual environment becomes less meaningful every day. It soon won’t be worth the effort of imagining it at all. For some, that moment has already passed. For others, it is still strategically advantageous to demarcate mundanities of everyday life as a privileged physical ‘real’ over the supposed ‘artificiality’ of virtual reality, as if virtuality were only some kind of fantasyland where people might take a vacation from daily physical toil. Such a view may allow technological deniers to feel a sense of control and empowerment over their daily lives, but at the same time invokes an erasure of the ways in which the regular lives and jobs of people are already highly inscribed by virtual experiences. Even so, the fact that this article needs to be written at all exemplifies that we’re not quite ready to do away with the border imagined between ‘realities’. Someday, someone might find this essay archived as a historical document and laugh at the naivety necessitating an explanation of such an obvious understanding. But we’re not quite there yet.

An almost mantra-like repetition of three company names characterized ‘technology-themed’ panels the 2007 conference of the National Communications Association: Facebook, Second Life, and World of Warcraft. Speaker after speaker brought up the need to understand what is happening ‘in these virtual worlds’, and whether virtual experiences are beneficial or harmful to society. Other technological brand names such as the Blackberry and iPhone were deployed as examples of communications change yet to be understood. Discussions rife with anecdotal sensationalism and technological paranoia ripened speculations both good and (more often) bad. To be fair, there were many fantastic presenters and respected scholars contributing sound and rigorous research to the conversation, but what was missed was the connection between these two technological advances. Second Life might not yet be on the iPhone, but there can be little doubt that some day it, or something like it, will be. Perhaps due to technical issues such as bandwidth and processing power, ‘virtual worlds’ are presently thought of as places one gets to through non-mobile equipment, but this is changing as exponentially fast as the number of cores in our PC processors. Graphics cards are crucial to these advances, but mobile technologies are already looking to alternate display interfaces such as visors, eyeglass interfaces, and even retinal projection. And here we come to yet another advancement that will make meaningless any need to distinguish between virtual and real environments.

Cisco Systems has been championing its ‘Human Network’ technology for the past couple of years. While the most public of their advertising have been crass
celebrations of idealized global inter-connectivity, a quieter, but, for my purposes here, more important product line is branded as ‘Telepresence’. Telepresence is much like a new incarnation of Virilio’s (2000) original description of telepresence, situating users as nexuses in a network that unifies all time and space into the present moment and location. Cisco’s Telepresence is unique in that it situates users in physical spaces that are hybrids of both physical and virtual sets, to recreate the feel of a full sized conference room. Life-sized, hi-def images of colleagues sitting at a table that seamlessly continues from the screen to the table in front of the user, along with surround-sound audio, create an immersive experience that provokes a visceral sensation. Testimonial characters in their advertising claim, “It’s just like all being in the same room at the same time”. And so, here we come to the next major leap in eliminating the PR/VR demarcation. Cisco has effectively brought the screen not to life, but into life, by allowing users to project themselves in real time hi-definition such that they appear to be physically elsewhere. It’s not yet a haptic hologram, but we can certainly guess that is where we’re headed.

When I was a child, I would run home after school to play street hockey with my friends, and later to play guitar in a band. Now children run home to play sporting games on their Wii or Guitar Hero. These can be understood as phenomenologically very similar patterns. Phenomenologically, perhaps our cultural changes aren’t so dramatic. In the post-Wii world, it is not inconceivable that children will someday play outside again, this time with avatars; perhaps their Webkinz friends, for example.

When Second Life, World of WarCraft and other networked environments can finally ramp up their graphics to the same definition and refinement that Cisco offers and the quality of animation Hollywood is capable of producing, and when the consumer technology market breaks out of the confines of the traditional display monitor and into 3D holographic images cast by laser-technology or eyeglass interfaces, it will no longer be useful to define realities as belonging to different domains or plains of existence. PR and VR will be mashed up in everyday life in such a way that we will no longer be able to distinguish the difference. Your automobile windows will also double as screens. Shopping with an avatar or dueling with a monster will no longer be something that has to be done within the confines of a screened environment, as Nintendo is already showing us with the Wii. Likewise, we will be able to send our images and avatars out into the world several at a time; one may do your banking, another escorts your child down the street to school, while you sit at your work desk multitasking all of these events and more. True, just as they do in Second Life or World of Warcraft, some of our ‘selves’ might stand idle on the street when attention is drawn to something else, such as driving a car or a telephone call. But this will become the new normal, and society will eventually respond with appropriate rules and regulations such as laws against avatar abandonment. Crime will be redefined to include what we now think of as merely ‘virtual’ trespasses such as vandalism, copying property (theft), mafia and gang harassment, child porn and even rape happening in Second Life (Holahan, 2006; Lynn, 2007; O’Hear, 2006), and with the incorporation of tactile clothing, the sacredness of the body will need to be rethought and redefined. With
innovations in medical technology, the body itself is already being used as a conductor to transmit video signals.\textsuperscript{12}

Laws regarding virtual characters will need to be conceived that can contend with changes in technology. Equally important, we must also as educators take seriously what is on the one real horizon, and begin to prepare our students for what is to come.

**STEPPING INTO ONE REALITY**

“You can just hang outside in the sun all day tossing a ball around, or you can sit at your computer and do something that matters.” (Eric Cartman, South Park, 2007)

This past year I had the experience of teaching my Intro to New Media class in a computer lab. The horror, I imagine the powers that be thought they were doing me an unasked favor, innocently judging my course to entail applied skills. But it doesn’t, and anyone who has lectured in a room full of fully networked computer terminals knows the trepidation of looking out upon the backs of computer monitors where you know your students’ faces should be. The best one can hope for in terms of face to face communication is to see some sets of eyeballs poke out above or around the material object, to catch a glimpse of half a face every once in a while. I make an effort to compensate for this by physically wandering through the classroom as much as the aisles will comfortably allow.

Given the circumstances, I made a choice from the very first day not to fight the irresistible seduction of the technology and arbitrarily impose rules on my students I know would ultimately be unenforceable. Rather, I announced that I knew they would multitask regardless of any mandate not to, and that I know multitasking is part of the culture we now live in. I assured them that I had faith in their multitasking prowess. I explained that I understand that a feeling of disconnection can be boring at best and anxiety inducing at worst, and that it is normal to be networked through multiple devices 24/7. And with that caveat, I then asked that they simply make sure that one of the channels they keep open during class time be my lecture, that they at least devote MOST of their attention to the lecture.

The first few minutes of class were a bit uncertain for me. I looked out from the front of the room, and the eyeballs I could see were for the most part directed towards the monitors in front of them. I started strolling through the aisle while lecturing, and began surveying what students had open on their terminals. Most had chat programs open, email interfaces, and some had YouTube on-screen, but I was visibly startled to see that every screen I looked at had my PowerPoint slideshow open, and was sitting on the right slide. My students had all downloaded the file from BlackBoard and were following along as if it were perfectly natural. It first seemed a little uncanny that the same thing I was projecting on the screen at the front of the room was also appearing on every individual monitor. However, as one week blended into the next I realized that it is, in fact, perfectly natural for students to remediate my slideshows to their own preferred device. My display at the front of the room became functionally repurposed as the cueing device for my students to advance their own slides.
The ubiquity of virtual devices makes it imperative that we overcome the old world habit of opposing literacy against electronic media. This is clearly not a new message, but rather a parroting of McLuhan’s ruminations on education from four decades ago (Playboy, 1969). The digitalization project—the ongoing project to partition the analog world and transcribe it into discrete stored code for later retrieval—makes us continually more technologically loyal. Our world is ever more translated into mathematical code, and then aesthetically reassembled for us by the machine. This is the reality that our civilization’s children are growing up with, and virtual vs. physical distinctions no longer accurately reflect lived experience. And it doesn’t help the situation to throw up our hands and play victim to technology.

We are not merely victims to the machine; far from it. Interactivity produces the ‘fractured’ audience (Oliver and Rust, 1994). Ideologically, the individual user is conceived as an empowered consumer, while instrumentally users can in fact manipulate and control much of the content they are consuming. Understood through the theoretical paradigm of consumer culture (Featherstone, 1991; Lury, 1996), individuals consume ‘experience’ rather than material product. Consumers are rational actors, in control of their own experiences, and proliferation of choice is desirable, allowing users to play, experiment, explore, and modify their world. By way of explanation, I deploy the terminology of ‘spirit’ and ‘avatar’ as an evolutionary step from the notion of cyborg.

Donna Haraway theorized, “The cyborg is resolutely committed to partiality, irony, intimacy, and perversity. It is oppositional, utopian, and completely without innocence” (2001, p. 29). For her, cyborgs are floating signifiers that breakdown three conceptual borders: the boundary between human and animal, the boundary between human/animal and machine, the boundary between technology/nature (2001, p. 31). Cyborgism fractures identity in such a way that there is no longer a clear picture of a singular ‘subject’, and it becomes impossible to speak in generalities. Notions of public and private are disrupted. Haraway described this as an opportunity to empowerment, claiming that this transcendent state allows cyborgs to ‘write themselves’ into their own life texts. As she described, “the cyborg ontology is granted an agency and understanding that is unique to this historical time” (2001).

Along with cyborgism becoming our ontology came the naturalization of a hyper-mediated networked environment. But this itself has spawned a whole new approach to life with (rather than against) virtuality. What was once easy to explain as Benjaminian mimesis (1978) – a performative flow from simulation to reality – is confounded when the simulated environment no longer stands apart from the rest of the world within the confines of a screen. With nothing authentic to serve as anchor, the individual’s position is always relational, never solid. The individual is always mobile in relation to the ever-shifting relationship to the text. Control in the new media environment is exercised as the ability to choose one’s own image, to have some agency in the relationship to the simulacra rather than the real. Hence the proliferation of choice is essential to virtual ontology.

Virtualizing technology makes it somewhat easy to imagine oneself outside one’s body and experiment with a Goffmanesque “presentation of self in everyday
Virtual identities (in the plural) allow one to have multiple experiences through construction of second, third, fourth etc. character subjectivities. Throughout, one is still ‘behind’ the images, as any one image is not the self.

The symptoms of our new ontology are reflected in an evolution from cyborg to avatar. More accurately stated avatars (plural) are with ‘us’ sitting god-like, tele-present, at the nexus of our own individual media-worlds. MySpace, FaceBook, YouTube, SecondLife, World of Warcraft, eBay, Linkedin, Blogger… Like Grecian gods overlooking the gameboard of life, we deploy our various constructed subjectivities and set into play comedies and tragedies for our own amusement. But what gameboard is this we now play on? A network that has evolved from telegraphic chain to rhizome, and from a distinct physical/virtual territorial demarcation to a hybrid in which geography and geometry no longer stand apart from one another, but in which everything that exists is aesthetic, and in which aesthetic singularity is a network effect (Law, 1992). It matters not what it is, but rather, how one experiences it.

The masterful player’s life is a continuum of managed presence. Like the SciFi character Neo from the movie The Matrix, we know there are rules governing our world, but some rules can be bent, broken and rewritten. And, why not? Isn’t that why modernity first set man against nature, mind against body? So we could transcend the limitations of our circumstances? It has been a handy intellectual tool, but we’ve now gone so far that the tool itself has become a limitation. It is merely another technology… an enframing in Heideggerian parlance (1977). It hides the truth from us. It is time to get rid of it and refocus. We must refocus from avatar (symptom) to spirit (essence of being). And with it, time to reconceptualize from reaction to proaction.

It is the age of what Alvin Toffler (1980) long ago foretold as the Prosumer, in which consumers participate in the production of what they consume. People have become producers of what they consume, have a hand in the design of the content delivered to them. This is exactly the premise of TV programming such as American Idol, and even more mundane things like individually ordered Nike products. Myspace, blogging sites and other social networking technologies depend on this interactive feature. Empowered consumers mean audience members become individual navigators of their own media consumption, planting and harvesting in our vast virtual ocean.

We have a new common environment, much different from what we had just half a decade ago. Whether because of or causal of, along with our new environment is arising a new common sense. The name of the game might be Second Life, but in spite of the myriad disjointed experiences one might have, I’m sure we can agree a human being only experiences one life. This is an important distinction for my purposes here. In our ever more virtualized world, one might have numerous subjectivities, but only towards the total experience of one lived reality. This is the understanding that we must proceed forward from, to assert this common sense in every opportunity.

In the context of our post-Photoshop post-modern world, objective reality is no longer a useful concept. We now construct reality from a contingency of subjectivities. Where it used to be thought that the aesthetic surface was merely an entry point to
a rationally attainable Platonic ideal ‘reality’ at the core of a thing, our present
commonsense logic tells us any attempt at solidity is to be mistrusted as a constructed
illusion. An aesthetic understanding of the world takes this as fact based on lived
experience. Photoshop and other advanced graphics programs taught us not to believe
what we’re seeing, while at about the same time postmodernism revealed all truth
to be a leap of faith. It’s no accident digital technology requires this leap from us, as
this is what digital code’s philosophical precept ascribes and demands (Kien, 2002)

One may come to full consciousness of their telepresence, to know that the
avatars one deploys are mere imposters for real people, potentially constructed
equally from fantasy as necessity. But one must also become conscious that all
other avatars are of the same nature. They are all potentially dubious. Where one
puts one’s faith and when is a crucial decision when all virtual eventualities are
brought to the fore. This is the most important point we as educators need to
address if we are to produce strong citizens of tomorrow.

It may very well be that the machine is our world, but let us not mistake the
avatar for the spirit itself and put all our effort into production of better virtual
subjectivities. Let us not forget that there still remains something sacred about the
human spirit that continues to be equally worth protecting and respecting. Let us
not forget that virtual can also mean ‘having virtue’.

NOTES

   html, http://www.atix.org/ig2k/virtual_reality.html
3 In effect, in his immersive euphoria he simply ignored the interactive limitation and acted as if it
   were anyway.
7 In a fully-mediated environment, all physical objects become haptics – things that are sensorially
   perceived as physical objects, but which we know are machine-generated physical sensations
   irregardless of whether there is an actual physical object or not.
9 see http://www.webkinz.com/
11 Note that Second Life’s definition of assault includes shooting, pushing, and shoving. See

REFERENCES


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