Avatars and the Invisible Omniscience: The panoptical model within virtual worlds.

An Exegesis submitted in fulfillment of the requirements for the degree of Master of Arts by Research

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Declaration

I certify that except where due acknowledgement has been made, the work is that of the author alone; the work has not been submitted previously, in whole or in part, to qualify for any other academic award; the content of the thesis is the result of work which has been carried out since the official commencement date of the approved research program; and, any editorial work, paid or unpaid, carried out by a third party is acknowledged.

Signed

[Signature]

31 August 2007
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Abstract

This Exegesis and accompanying artworks are the culmination of research conducted into the existence of surveillance in virtual worlds. A panoptical model has been used, and its premise tested through the extension into these communal spaces. Issues such as data security, personal and corporate privacy have been investigated, as has the use of art as a propositional mode.

This Exegesis contains existing and new theoretical arguments and observations that have aided the development of research outcomes; a discussion of action research as a methodology; and questionnaire outcomes assisting in understanding player perceptions and concerns.

A series of artworks were completed during the research to aid in understanding the nature of virtual surveillance; as a method to examine outcomes; and as an experiential interface for viewers of the research. The artworks investigate a series of surveillance perspectives including parental gaze, machine surveillance and self-surveillance.

The outcomes include considerations into the influence surveillance has on player behaviour, security issues pertaining to the extension of corporations into virtual worlds, the acceptance of surveillance by virtual communities, and the merits of applying artworks as proposition.
Acknowledgements

My life was busy enough without undertaking a research degree. Spurred on in a Berlin café by Trevor and Elizabeth Parsons Morgan, I approached Lyndal Jones whose encouragement and support has been critical in the realisation of this project, and of my abilities as an artist and critical thinker. Early notes were guided by Rebecca Cannon who introduced me to the world of artistic computer game modification, and invited me to participate as a contributor to Selectparks.net. Special thanks go to David Atkinson, John Power and Jeremy Parker of AIM for allowing the time and space to show early works and research findings in a protective and nurturing environment. Ongoing direction came via RMIT’s Virtual World Research Lab, with Dr Lisa Dethridge providing broad insight and passionate support into my research and writing efforts. Future artistic endeavors have been encouraged and nurtured by Adam Nash whose enthusiasm for real-time 3D spaces as artistic platforms is endlessly inspiring. My parents, Judith and Peter, nurtured an open-mind and supplied endless home support when I needed time and space. My partner, Joanne Painter, has allowed me the emotional and practical space to conduct this research. Without her support I could never have believed I was capable of seeing this through.

This project is dedicated to my children Saskia and Sebastian. Your encouragement to never stop playing rekindled the importance of make-believe and the existence of other worlds.
Glossary

**Avatar**
A digital representation of the self within a virtual environment.

**Emergent play**
A form of computer-based game-play where users interact with games in unexpected, and often creative ways to create unique outcomes beyond the game designer’s intended purpose.

**Entanglement**
The interplay between real and virtual worlds where information passes through the ‘membrane’ that separates the two, or where the beginning and end of each space can’t be easily differentiated.

**Digital persona**
A model or profile of an individual established through the collection, storage and analysis of personal data, transactions and movements.

**Machinima**
A film production method where computer games are used to stage and film movies.

**Metaverse**
A term coined by the science fiction author Neil Stephenson to describe the virtual world his characters log into.

**MMORPG or MMO**
Massively Multiplayer Online Role-Playing Game (often abbreviated as “MMO”) are Internet-based games where many players interact simultaneously in the same space.

**MMOSG**
A Massively Multiplayer Online Social Game is similar to an MMO, but weighted toward social rather than goal or violence-based interaction.

**MUVE**
Multi-User Virtual Environment. A term used to encapsulate all forms of MMOs and virtual worlds.

**Panopticon**
A prison model developed by Jeremy Bentham in 1787.

**Spy-bot**
A scripted object planted on an avatar or object to record and playback chat.

**Virtual world**
A computer-based, simulated environment experienced in real-time.
What would you say, if by the gradual adoption and diversified application of this single principle, you should see a new scene of things spread itself over the face of civilized society? – morals reformed, health preserved, industry invigorated, instruction diffused, public burthens lightened, economy seated as it were upon a rock, the Gordian knot of the poor-laws not cut but untied – all by a simple idea in architecture?
– Jeremy Bentham, 1787

Art as a radar environment takes on the function of indispensable perceptual training rather than the role of a privileged diet for the elite.
– Marshal McLuhan, 1964

Inspection functions ceaselessly.
The gaze is alert everywhere.
– Michel Foucault, 1977

For the privileged and powerful, this densely and inextricably inter-connected world can be a dangerous and frightening place. It must be controlled through total surveillance, comprehensive access management, preemptive arrests and strikes, and electronically administered high-tech violence. If you are not with the global superpower in this, then you are against it. For the marginalized and alienated, by contrast, it can provide opportunities to turn networks against their makers through infiltration, subversion, hijacking, and terrorism.
– William Mitchell, 2003
INTRODUCTION

Overview

Traditional forms of surveillance and panoptic structures have been the subjects of art (Baudrillard & Calle 1988, David Rokeby 2002, 2004, Leber and Chesworth 2007) and critical theory (Foucault 1975, Bogard 1996, Brignall 2002, Mitchell 2003), but very little has been written about the presence of surveillance in virtual worlds. With the rise of these spaces as legitimate constructs to interact with friends, conduct business and create careers, research into the types of surveillance taking place and their impact on privacy is both timely and important.

For instance, multi-user virtual environments (MUVEs) such as Second Life contain surveillance devices capable of recording location and chat data by other users. Administrators also rely on data-mining (the skimming of game-data for specific content) to prosecute in-world offences and monitor the environment’s stability. With the rapid increase of companies establishing a commercial presence in Second Life, issues such as corporate privacy and espionage are gaining attention. Moreover, the growth in MUVEs targeted toward children emphasises the importance of researching the phenomenon of virtual surveillance.

Jeremy Bentham’s (1787) panoptical model has been applied here as a framework to understand the historical/theoretical underpinnings of surveillance. This model is tested in a new environment with outcomes explored through this Exegesis and accompanying artworks. Michel Foucault’s (1975) extension of Bentham’s premise is used to address the implications of surveillance on the growing population of virtual world ‘citizens’.

This research project extends the notion of panoptical surveillance into virtual worlds, and discusses the security and privacy repercussions virtual surveillance imposes on these communal spaces. An action research methodology has been used, involving the creation of artworks to engage experientially with the idea of virtual surveillance, and through an online questionnaire targeting the players of MUVEs. The artworks investigate a series of surveillance perspectives, including parental gaze, machine surveillance and self-surveillance. The merits of this technique and the creative outcomes are discussed under Methodology and further explored in Chapter 3.

When discussing the nature of digital public and private spaces, Philip E. Agre and Marc Rotenburg (2001) believe:
Innovations in multimedia communications and computing technology increase the connections between places and the connections between people distributed in space, and as a result the intuitive sense of place and presence that governs our observable behaviour can no longer be relied upon to ensure that we will not be seen, overheard or even recorded. (p.64)

In virtual worlds, the “observable behaviour” is supplied by an avatar, or digital persona as described by Roger Clarke (1994):

The digital persona is a model of the individual established through the collection, storage and analysis of data about that person. It is a very useful and even necessary concept for developing an understanding of the behaviour of the new, networked world… The digital persona is also a potentially threatening, demeaning, and perhaps socially dangerous phenomenon. One area in which its more threatening aspects require consideration is in data surveillance, the monitoring of people through their data.

Acquiring information by way of a digital persona, and the suggested surveillance of that data as a means to control, are topics central to this research project.

The types of surveillance and counter-surveillance taking place in and around virtual worlds – by way of users and administrators – has been documented and classified during this research. The privacy and safety systems of the largest youth-oriented MUVE (Club Penguin) have also been investigated to better understand industry responses to parental concerns. Much of this research has been conducted inside virtual worlds. Interviews and first-hand accounts of surveillance technologies have been collected from World of Warcraft and Second Life players (two of the largest MUVEs to date) via an online questionnaire. Industry responses and repercussions of virtual surveillance on corporate practice are discussed in Chapter 1.

What are virtual worlds?

Virtual worlds are multi-user, real-time 3D environments where participants often create their own non-linear story rather than relying on that of the designer-producer. These worlds have evolved from linear computer games into sophisticated social spaces where participants congregate to play, learn and create.

Wagner James Au (2006), an independent, embedded Second Life journalist and publisher of New World Notes, believes virtual worlds:

…speak to the reality of online worlds as a model for our own, a collectively shared and collaboratively created thought experiment, or something resembling the parables of magic rings, dungeons, and eternal cities that Plato spun out for his students to help them discern the real principles of right action through the filter of the fantastic.
The opportunity to generate and engage with content has provoked a groundswell of players demanding a say in the ongoing development of virtual communities. This demand is born of a player’s vested interest in their surrounds and sense of shared community. A growing sense of ownership and the emotional attachment many have with their avatars has increased the seriousness of these environments. Indeed, terms such as ‘player’ and ‘game’ could be considered redundant when used to describe a space that has evolved beyond a rule-based, win-lose scenario. Players are becoming ‘residents’ and worlds such as Second Life and There are designed to be social networking environments where gaming is an option but not a requirement.

Second Life is the most successful Massively Multiplayer Online Social Game (MMOSGs), its proliferation attributed to Linden Lab (the publisher) advancing intellectual property rights to resident creations. As a resident of Second Life you own everything you create and can sell your wares to other residents for Linden Dollars. The ‘Linden’ can be bought and sold on the Linden Currency Exchange using US dollars, with many residents running successful businesses. Many other MUVEs trade currency and wares through virtual currency exchanges such as IGE.

The idea of ‘serious games’ where issues such as politics, racism and gender can be explored has existed since the early 1990’s. The serious game usually discards its function as entertainment, and instead assumes that of education, provocation, political discussion or art. Virtual worlds play an important role in the evolution of serious gaming environments by offering a broad group of users the opportunity to express creativity and innovation on a massively collaborative scale.

As the participant’s sense of embodiment evolves, and virtual worlds are regarded as more than playgrounds, the seriousness of these spaces will flourish (T.L. Tayor, 2002). The emergence of distance learning, virtual currency exchanges, virtual economies, tax debates and governance is testimony to the seriousness of the space. While still in their infancy, virtual worlds are becoming places to conduct serious business, invest in brands, interact with products and simulate systems before deploying them in the real-world.

Traditional media companies are realising the value of virtual worlds too, with Disney recently purchasing Club Penguin (which has 12 million registered users) for US$350 million, and MMO’s such as World of Warcraft (WoW) topping 8.5 million subscribers (that’s close to the population of Austria for those who are counting).

Virtual worlds are sophisticated, diverse and creative environments. They are also hyper-networked spaces where residents conduct themselves under the omniscient eye of their
world’s administrators. Yet it is important to remember that these are privately owned corporate constructs whose success depends heavily on the monitoring of their inhabitants. The complex social, economic and creative nature of virtual worlds, plus rapid changes in the technology that drives them, makes research challenging.

**Research methodology**

I have utilised an action research methodology to help understand the impact surveillance will have on their development, with the act of participating in and engaging with the research space enabling greater insights and outcomes. Research has been conducted into the existence of virtual surveillance, its impact on player behaviour and on the development of virtual worlds as a whole.

The following core research questions were posed at the beginning of the project:

Q1. How are MMO players surveyed and what type of information is recorded?
Q2. How are these players protecting themselves from surveillance?
Q3. Does surveillance enhance or distract game-play immersion?
Q4. How can the theme of virtual surveillance be represented through art?

New questions arose as the research was taking place. These included:

Q4. Are residents becoming responsible for the surveillance and policing of virtual worlds, and what are the real-world correlations?
Q5. How will surveillance affect the nature of conducting business in virtual worlds?

These questions have been answered in part by the creation of a series of artworks, and through the development of an online questionnaire targeting MMO game players. The outcomes can be found in *Chapters 3 and 4*.

**Using art as propositions**

Looking to Kurt Lewin’s (1946) original description of action research as an apparatus of cyclical and critical reflection, I developed an iterative process utilising five key stages: read surrounding theory; investigate discovered themes via art; use creative insights as a ‘probe’; develop outcomes into written form; and then conduct further research into existing theories. By creating a series of artworks I could then draw on a system of questions, research insight and outcomes not available using traditional quantitative techniques. The visual metaphors and complex emotional experiences acquired when working through an artistic concept (and its subsequent viewing) were used to better understand the subject and outcomes. On one level, the artworks can be considered tools used to disassemble theory and experience it on a
subconscious or visceral level. They are also a direct manifestation of the research subject and stand as outcomes in their own right.

When describing Media Ecology, Em Griffin and E.J. Park describe McLuhan’s “probe versus theory” as a process to:

…launch probes as opposed to what he regards as the obsolete mode of constructing academic theory. To probe is to investigate, to search, to explore. (p.2)

My use of art as a proposition (Lyndal Jones, 2005) – a subject that allows the viewer room to attach their own meaning; as a probe – to investigate, to search, to explore; and as interaction analysis – a physical system to experience the subject matter, has allowed this project room to expand the notion of research as an experiential, emotional journey for the viewer (myself included). The final series of artworks stand as a trace through the body of research, and an outcome to be interpreted by the viewer.

By investigating the works of other artists using surveillance as a subject (Calle 1978–2003, Rokeby 2002, 20045) I gained insights into how it can define (and misinform) the individual, and on using the self as subject matter. Calle’s The Shadow (2003, p.101) was of particular interest. I had intended extending her premise of objective and subjective surveillance into the environment of Second Life, but the issue of privacy and disclosure made it impossible. This in itself confirmed the nature of the space as one dictated by a complex and fluid set of rules.

The use of art as a sensory layer to the research, in conjunction with a questionnaire, has allowed me to observe, document and interpret occurrences of virtual surveillance from a number of viewpoints. This combined technique was employed to provide insight, provoke discussion, inspire research directions, and assist in understanding the implications of virtual surveillance. The artistic outcomes and associated exegesis seek to address issues such as societal self-surveillance, appropriation, and personal/corporate privacy as significant influences in the ongoing development of virtual worlds.

Research as interaction and location

When discussing the dematerialisation of art, labor and information, Matthew Fuller (2005) questions the types of tools needed to conduct research:

The only way to find things out about what happens when complex objects such as media systems interact is to carry out such interactions – it has to be done live, with no control sample. (p.1)
Much of my research was conducted live and inside virtual worlds. While researching surveillance in Second Life, I visited many technology designers and resellers, interviewed them about capabilities and customers, purchased equipment and tested it in-situ. I interviewed in-world detectives regarding their work, visited workplaces and discussed the type of surveillance services available. I also spoke with questionnaire respondents who wanted to comment off the record. The ongoing formulation of research insights and outcomes benefited from the local interactions and direct observations that took place.

Networked virtual worlds are a location in their own right, and I have approached them as just that – complex environments with cultural, social and emotional layers. When discussing the important role place plays in research, Lyndal Jones (2006) speaks of travel and immersion as a method developed from the Darwin Translations:

Now, though, I had a personal research method that could be articulated. It centred upon immersing myself in an unknown (unknowable?) area of study/place/culture and trusting that something important would become evident, even in retrospect. (p.4)

Jones also highlighted the importance of events when quoting Harold Rosenburg’s observations of Jackson Pollock’s ‘action painting’ technique:

At a certain moment the canvas began to appear to one American painter after another as an arena in which to act rather than as a space in which to reproduce, re-design, analyse or ‘express’ an object, actual or imagined. What was to go on a canvas was not a picture but an event. The painter no longer approached his easel with an image in his mind: he went up to it with material in his hand to do something to that other piece of material in front of him. The image would be the result of the encounter. (p.6)

This kinesthetic approach—when applied to the act of discovering a space—allowed me (as an artist and researcher) the opportunity to discover and express at a sensory level. By approaching virtual worlds as a performance location (as with my work Enemies of Art), I was better able to understand their complexity by allowing outcomes to unfold during the act of engagement. This “what happens if…” approach was a direct application of Fuller’s research method.

Free association as a process of discovery

It is in my nature to seek out a visual method of explanation, and to look to the “optical unconsciousness” as Krauss suggested, to better understand the subject. Arthur C. Danto (1993) summarised Krauss’ exploratory style as:

“…a sort of free association, writing down what is suggested to her by what she has written down…” (p.1)
William Bogard (1996) also highlighted this method of exploration when discussing Foucault’s “experience books”:

Michel Foucault once said that he didn’t know where his books would end when he began them and that his writing was a way to change his thinking about a problem. (p.6)

The act of free association was used to advance the research into unknown territories. By approaching a subject, environment or artwork without presupposing an outcome, I allowed the subject’s true nature to reveal itself. For instance, when conducting test shots for artwork enTrance I was not aware of the intense gaze and vulnerable nature of the subjects until viewing the footage. enTrance assisted in defining parental surveillance as an important part of the classification system developed for the research. The same approach was used with exploring virtual environments such as Second Life. On many occasions I would enter these environments without a pre-determined purpose – but to observe behaviour, listen to opinions, apply them to the research and allow the outcomes to dictate future directions. This uncensored approach allowed a sequence of ideas and insights to unfold spontaneously.

**Player questionnaire**

I felt it was important to engage directly with the users of virtual worlds given these are the people who will be affected by advances in virtual surveillance. With a growing investment in time, money and emotional energy comes a greater need to document, classify and discuss the repercussions surveillance will have. To address this need I developed an online questionnaire⁶, designed and published across multiple websites frequented by players of MMOs. The questionnaire was designed to garner opinions, gather first hand accounts of virtual surveillance, and inspire research directions. The outcomes can be found in Chapter 4.
CHAPTER 1: Background and panopticism

Why are virtual worlds important?

To emphasise the importance of virtual worlds as a research topic, I will briefly outline their impact on **artistic endeavor**, **social interaction** and **corporate development**. To understand this impact is to appreciate the consequence of virtual surveillance and its affect on the space as a whole. I will also discuss the choice of *Second Life* as a main research platform. But first, it’s important to understand where virtual worlds began.

**Appropriation and user-produced content as a precursor to virtual worlds**

Multi-User Dungeons or Dimensions or “MUDs” were the first multi-user virtual environments dedicated to role-playing and socialising (Richard Bartle, 1990). Developed in the mid 1970s, their popularity spread from university science labs and onto the Internet. Their status as the dominant form of virtual world peaked in the 1990s before real-time 3D games began to take over the market. The rise of these simulated 3D environments offered players an engaging visual and aural experience. Along with increases in network and computer processor speed, they helped change virtual worlds from a playful distraction to a medium now used for socialising, business and creative practice.

Virtual Worlds such as *World of Warcraft*, *Runescape* and *Second Life* now dominate the MMO market. The success of environments such as *Second Life* owes much to its reliance on user-generated content. Inhabitants expect unprecedented control over their world and its worth, with the entire Web 2.0 movement indicative of a shift away from passive content consumption to participatory, networked, grass-roots production. I believe this expectation is linked to a shift in acceptance of appropriation as a valid form of consumption and expression, and is in fact crucial to the form’s future.

When exploring advancements in electronic content-delivery, Lawrence Lessig (2004) notes an historical trend in pilfering the past:

> Every important sector of “big media” today – film, records, radio, and cable TV – was born of a kind of piracy so defined. The consistent story is how last generation’s pirates join this generation’s country club. (p.53)

Marshal McLuhan (1964) wrote about appropriation when observing new media’s trend of consuming its predecessor’s content as a path to defining its own unique form:
…the “content” of any medium is always another medium. The content of writing is speech, just as the written word is the content of print, and print is the content of the telegraph. (p.8)

When discussing the behaviour of digital content, William Mitchell (2003) helps us understand its unique position as a non-depleting reproduction:

Digital texts, images, and other artifacts begin to behave differently from their heavier, materially embedded predecessors. They become non-rival assets – they are neither depleted nor divided when shared, they can be reproduced indefinitely without cost or loss of quality, and they can be given away without loss to the giver. (p.83)

Digital content’s inherent copy/paste nature makes it easy for consumers to appropriate, repurpose and reuse existing subject matter for their own work, although the struggle over fair use has existed for some time (Lessig 2004). Digital rights management and copyright infringement laws have become an increasingly ineffectual method to safeguard original content with hackers breaking apart the protection methods soon after release. Nevertheless, lawmakers continue to lock-down the sharing of content (images, music, TV) to the detriment of creative practices and industries alike. Lessig believes laws used to prosecute copyright infringement actually stifle creativity and industry development, and uses the development of photography as a case study:

We can only speculate about how photography would have developed had the law gone the other way. If the presumption had been against the photographer, then the photographer would have had to demonstrate permission. Perhaps Eastman Kodak would have had to demonstrate permission too, before it developed the film upon which the images were captured. (p.34)

Lessig noted almost all new copy-enabled technologies were derided as an instigator of industrial downfall by those struggling to control their intellectual property. Early Disney animators were ‘stealing’ classical stories; Eastman’s camera was capturing images without the subject’s consent; audiocassette tapes and CD burners were destroying the music industry; and video recorders, VCRs and DVD burners were to be the film industry’s downfall. Now the Internet has usurped them all as the number one ‘enemy’ of copyright holders (Lessig, p.19)

Faced with the uncontrollable nature of digital information (such as music and video), some entertainment and networking businesses responded with unconventional models that acknowledged consumer’s desires to appropriate and control content. Much of the momentum came from Internet start-ups who understood the medium and its users (they are their own audience). Social media such as blogs, vlogs, podcasting and wikis, are now pervasive
examples of user-controlled content acquiring preference over traditional big media programming. A new generation of consumers is now reaching into this vast, digital whirlpool of bits and reassembling their own end product, and in turn impacting the structure of content creation and delivery.

Computer game designers (such as id Software) were among the first to realise users had begun manipulating games for their own means, and rather than locking-out emergent play (unexpected outcomes from the use of computer games), they capitalised on the sub-genre by building tools to enable greater levels of appropriation and manipulation. These materialised as simple tools to record machinima, edit game levels and customise avatars.

An early instance of emergent play was the distribution of ‘speedruns’ by the players of *Doom* and *Quake*. Players would record run-throughs of game levels and release them as movies to showcase skills, techniques and the fastest path through a game. The popular game *Doom* included the ability to record ‘demo files’. These files weren’t movies, but small data packets containing location, speed and trajectory information that could be easily distributed and replayed in realtime via the game’s 3D render engine. The process of recording gameplay evolved into machinima (the first widespread example of users taking control of game content and manipulating it for their own means) when players began to stage in-game narrative and frame shots in a filmic style. Marino (2004) attributes *Diary of a Camper* as the first true machinima movie:

> As the audience grew for demo files, some clans began to put “signature” movies together. These demos allowed the clans to show off. They incorporated various shots of the team players in the game… One well-known clan, the Rangers, took an important step in creating a demo that included narrative. Its film, *Diary of a Camper*, was a one-shot film that centered around a lone player challenging the Rangers. (p.6)

The development of increasingly sophisticated networked games gave rise to communities of players who relied on in-built editing tools design and distribute customised game levels and machinima movies. The size of this community prompted games such as *The SIMS* and *The Movies* – both successful gaming titles based on the premise of customisation and machinima making. This was an important shift in the nature of mainstream computer gaming as the tools to deconstruct narrative were now embedded in the medium.

The ethos of appropriation and manipulation has blossomed into virtual environments, where in some instances players are expected to control the manufacture of content, and participate in the management and governance of its existence. Consumers have come to expect unprecedented levels of control and input, be it choosing a ring tone for their mobile (the irony being one popular tone is a sample of an analog phone); voting for *Big Brother*
contestants; social networking on Facebook and MySpace; life-caching via Flickr and Twitter; customising local news and weather details through Google; sharing bookmarks on del.icio.us; becoming citizen journalists; or selling architectural and sex services in Second Life – the list goes on (and on). This trend owes a great deal to the appropriated-content mavericks of past. The network has been the facilitator, but its drivers can be traced back to the appropriation of every day objects in modern art, hip hop audio sampling (1980s) and the sharing of speed runs from the computer games Doom and Quake (1990s). All were associated with re-interpreting an existing model, the appropriation of that model’s content, and the eventual prompting of audiences to sit-forward and participate (or at least look beyond the medium’s original purpose).

 Appropriation and the user-generated content model have in some senses become a philosophy of engagement rather than a subversive practice, with consumers entertaining each other instead of relying on a limited group of producers. Why watch TV when you can time-shift it, why play a computer game when you can disassemble and edit it, why buy a Star Wars DVD when you can shoot your own and get famous on YouTube? It’s no wonder old media companies are buying Internet start-ups – they’re after the latest platform that’s empowering their dwindling audience – that of the producer/consumer. Two recent examples include the purchase of MySpace by News Corp, and Disney’s Club Penguin purchase. Both instances represent traditional media companies buying back audiences lost to participatory content start-ups.

 Cultural and media artifacts are now remixed at blinding speed and feed back into the network for entertainment, communication, creativity and fame. It’s an iterative, massively-collaborative creative outlet. This growing desire for consumers to control content has influenced the structure of computer games, and provided momentum for virtual worlds such as Second Life to evolve into the complex user-built structures they have become. Rather than a pacifying opiate of the masses, virtual worlds are a sit-forward stimulant.

 **Computer games and virtual worlds as artistic platforms**

 To assist in distinguishing the variety of art forms derived from computer games, Cannon (2006) provides us with the following clarification:

  Art games may be made in a variety of media, sometimes from scratch without the use of a prior existing game. They always comprise an entire, (to some degree) playable game. Art mods always modify or reuse an existing computer game but they only rarely include reward systems, and if so, only when of thematic relevance. The issue of playability, integral to a successful game, remains important to art games.
Some of the form’s most prolific artists include Julian Oliver\textsuperscript{11}, Cory Arcangel\textsuperscript{12}, Eddo Stern\textsuperscript{13}, and Brody Condon\textsuperscript{14} – all of whom use games or their structural/aesthetic nature – as a platform for inspiration and commentary.

Cannon (2006) supplies us with further classification:

- **Machinima** fulfill the role of screen-based narratives, or, in more abstract moments, they result in entrancing, temporal wallpaper. **Sonichima** are sound works produced within a game-based production environment. **Art game mods** and **political game mods** place less emphasis on commercial success so as to forge new terrain into gameplay and ideology. **Generative art mods** exploit the real time capabilities of game technologies to produce ever-renewing art works. **Performative interventions** disrupt in-game norms to expose underlying functions of gameplay. **Site-specific installations** and site-relative mods compare similarities and differences between real and virtual worlds, drawing us further into a reality of fantasy. **Real time performance instruments** allow audio and visual artists to create stunning, live performances in a range of entertainment venues.

More recently, *Second Life* has seen a plethora of artists embracing virtual worlds as a production and performance space. Artists such as Adam Nash are challenging notions of virtual art through works such as *Seventeen Unsung Songs*\textsuperscript{15} and *A Rose Heard at Dusk*\textsuperscript{16}. Nash describes these sculptural pieces as “post-convergent interactive audiovisual 3D art” and his contextual aesthetic/audio sensibilities are reflected in the work – they exist as embedded artworks, limited by and built for the medium.

The ongoing development of virtual world art is indicative of the medium’s sophistication, and reflects on its ability to support intricate participatory constructs. Its growth in popularity as a subject of complex discourse also indicates a dramatic shift away from computer games as mere entertainment. Artists, academics and industry are as big a fans as teenage boys looking for the next first-person shooter. Computer games are becoming an expressive platform built around the aesthetic sensibilities, and preferred mode of engagement of a networked generation. They contain the natural social interfaces their parents found in television, telephones and email, and their grandparents found in movie theatres, radio and hand-written letters.

**The growing social layer**

So my sensorium is no longer localized by the inexorable laws of visual occlusion and acoustic delay, the range of my exploring fingertips, and the wavelengths and scales to which evolution has tuned my original sensory equipment. It reaches to wherever there are sensors with network connections. (Mitchell, 2003, p.31).

Mitchell goes on to tell us the earth is growing a “continuous sensate skin”, and that “we have bolted beyond modernity’s spatial and temporal extensions to a condition of global
hyperconnectedness” (Ibid). This state of connectedness is affecting social interaction in profound ways, with virtual worlds becoming complex, global social environments. Via an avatar, ‘netizens’ come to interact, conduct business, and express themselves through the perceived safety of a virtualised persona.

Most computer games have a linear structure where a series of goals must be reached to complete a level. By adapting the game’s ‘rules’, players use these environments as open, non-linear playgrounds to create their own experiences on the fly. They also rely on intricate social interactions to assist in completing levels, and broadening the game’s premise to that of an interdependent community.

Ducheneaut and Moore (2004) highlight player interdependence as playing an important role in the formation of a social layer in the MMORPG Star Wars Galaxies (SWG):

Professions have an enormous impact on the interactions between players. Indeed all of them are essential to the game, and they were also purposefully designed to be interdependent. To pick a simple example, marksmen need medics and entertainers to heal their wounds and battle fatigues. Medics, in turn, need wounded marksmen to heal and scouts to procure the resources needed to make drugs. Entertainers need tired combatants to relax but also tailors to manufacture their stage outfit.

The development of internal economies also encourages players to interact in a complex manner:

Players need to procure the items necessary for their trade, and crafters need to find outlets for their wares. In SWG supply meets demand in several ways. Each city has a bazaar where anybody can sell goods, either at a fixed price or at auction (Ibid).

MUVEs are designed to facilitate social interaction, and rely on the interactions of their inhabitants to create complex and engaging environments. The social layer defines the genre, and creates a sense of intimacy and responsibility. For many, virtual worlds (by way of the network) are becoming the new town square, where friends and associates gather to talk and play. Mitchell believes:

“We are all tied together by our networks — both materially and morally — like climbers on a rope. If we are to reap the benefits of our electronically expanded social, economic and cultural circles without succumbing to their dangers, we must recognize that they actualize our common humanity”. (p.208)

The rationale behind the rise of electronic communities is multifaceted. The combination of expanding digital networks, access to technology, and the growing trend of parents ‘cotton-wooling’ their children’s life experiences are all major influences on the way we interact. Where children of the 1970s were tearing up neighborhoods on their bikes, today’s kids are
more likely to be tearing apart adversaries in WoW. This behavioural change has been widely commented on by popular press although it remains to be seen whether its impact will cripple, or enhance a generation’s sense of moral responsibility to community.

Nick Yee’s (2003–2007) *Daedalus Project* – an investigation into the psychology of MMORPGs – has uncovered many insights into the serious nature of relationships formed within virtual worlds. Highlights include:

About 40% of players feel that their online friends are comparable or even better than their real life friends. While it may seem strange that strong relationships can develop in these worlds where everyone is pretending to be someone else, the architecture of these environments actually facilitates these relationships.

People are more willing to talk about personal issues when they can maintain their anonymity, and about 30% of MMORPG players have told personal issues or secrets to online friends that they have never told anyone else.

Players are also marrying in avatar form and grieving for deceased friends they’ve only met virtually (see images below). The debate over whether ambushing a virtual funeral for a real person, and killing those paying their respects is an interesting one. It points to the growing divide between people who think MUVEs are extensions of the real world, and those who believe they are not governed by the same moral imperatives.

T.L. Taylor (2002) believes the sense of embodiment experienced in MMOs, enhances the experience of social interaction:

Beyond explicit signals of group affiliation, people use their online bodies to facilitate basic social interaction. They don’t simply chat in disembodied spaces, but use their avatars to gather for social events like weddings, community meetings, games, and simply hanging out. (p.47)

Yee believes the ability to alter our self-representation influences the way we interact with others, and our overall behaviour when experiencing this embodied state:
I conducted a series of four pilot studies that explore the Proteus Effect. In the first study, I found that participants in attractive avatars walked closer to and disclosed more information to a stranger than participants in unattractive avatars. In the second study, I found that participants in taller avatars negotiated more aggressively in a bargaining task than participants in shorter avatars. In the third study, I demonstrated that the Proteus Effect occurs in an actual online community. And in the final study, I showed that the Proteus Effect persists outside of the virtual environment. Placing someone in a taller avatar changes how they consequently negotiate in a face-to-face setting. (p.iv)

In particular, these transformations can have an effect on attitude modification; being in someone else’s body can change how we think about the world. (Ibid)

These transformations make virtual worlds pervasive, engaging places to interact. In the guise of an alter ego, players are able to live out fantasies and socialise on levels unattainable in the real world – with the presumed promise of anonymity providing protection and provoking behavioral change.

The entangled nature of real and virtual social space is changing the way people perceive of themselves, their environment and the boundaries of public and private interactions. Yee has highlighted the prevalence of intimate relationships taking place in virtual worlds, and of their growing phenomena as a complex social and cultural environment.

Virtual worlds are the outermost layer in the history of the social network, and this layer will continue to expand with the ongoing evolution of participatory online cultures. The impact surveillance has on the formation and structure of these cultures will be profound. It will dictate the boundaries that define digital personas, and the ways in which surrounding information is collected and disseminated into the network.

**Corporatisation in virtual worlds**

Virtual worlds are “walled gardens” in cyberspace, built by private companies for their subscribers and controlled by the games’ creators. As these games evolve into online societies, should the law step in to protect their inhabitants from the whims of the “game gods” and the all-encompassing end-user license agreements (EULAs) that proclaim their power? Must the creators of the games be free to reign supreme within the confines of the virtua world or should the law prevail over the virtual Leviathan? (Noveck, 2004, p.5)

Buoyed by a growing interest in virtual worlds, companies, institutions and educational facilities are now entering *Second Life* in unprecedented numbers. Australian organisations such as ABC, BigPond, STA Travel and RMIT University launched operations in 2007. International interests include Intel, Adidas, Vodafone and Mercedes-Benz, to name a few.
IBM’s foray into *Second Life* would have to be one of the more interesting. Their virtual offices have been built to interface with a global community of customers, engage in recruitment and assist with inter-office management. They have also established *PartnerWorld Industry Network* where people can “Network with IBM and IBM Business Partners from the comfort of your desk.” Participants are able to interact and hold group meetings in an environment that provides a greater level of embodiment than email, telephone or video conferencing. These networked spaces are referred to as branch offices by IBM and behave in much the same way.

An IBM investigation into the management prowess of MMO player’s states:

> While these games attract players of all ages, the first generation that grew up navigating these environments is beginning to enter the workforce in earnest, and managers will need to adjust their styles accordingly. Winning in business will require enterprises to fully understand how these games are shaping the next generation of leaders and to apply those learnings to their own operations.

Their internal research into the leadership qualities of gamers found 40% of the respondents had used MMORPG leadership techniques in their real-world jobs.

IBM’s entry into virtual worlds hasn’t been without recognition of surveillance as a serious threat to privacy and trade secrets. As part of their *Virtual World Guidelines*, IBM states:

> Virtual worlds residing outside the IBM firewall should be viewed as public spaces, because they are provided and physically controlled by third parties who generally offer no guarantee to protect the confidentiality or privacy of information, or even to retain information reliably. Individuals employed by virtual world providers (e.g., “administrators”) have broad powers to monitor and control action within the world with very few, if any, checks on their powers. They are not necessarily obligated to treat user information with any particular level of care.

Gartner Research have also commented on confidentiality and regulatory issues when conducting business in virtual worlds:

> Gartner also stressed that because virtual worlds are not secure environments discussions regarding confidential and commercially sensitive information should not take place in them. In addition, these electronic conversations could fall under regulatory rules involved in storing records.

Given the inherent lack of privacy for corporations conducting business in virtual worlds, there is evidence that private virtual worlds will be built by businesses in the near future. The possible release of an open-source version of *Second Life* would see the development of fully private worlds where businesses and individuals could define the local rules of engagement. Within this standardised platform, users could move between worlds without the need of
multiple avatars. Of course the surveillance-based administration of these worlds would still exist, but on the macro level and managed by individual owners.

**Democracy in virtual worlds**

In an effort to counter accusations of corruption and favoritism, the publishers of *Eve Online* – a space-based science fiction world with a population of 200,000 – has recently allowed its citizens the right to elect in-game representatives capable of overseeing the company’s operations:

> So now, in a sociological twist, the company that makes *Eve*, CCP, based in Iceland (population 300,000), says it will tackle the problem the way a democracy would. In what appears to be a first, the company plans to hold elections so that players can select members of an oversight committee. The company will then fly those players to Iceland regularly so they can audit CCP’s operations and report back to their player-constituents. And taking cues from transitions to democracy in the developing world, CCP says it will call in election monitors from universities in Europe and the United States.³¹

Virtual worlds are privately run environments. Even so, debates over the emergence of democracy exist³², and democratic-like structures are beginning to manifest.

The development of virtual world platforms such as *Multiverse³³* and *Active Worlds³⁴*, may herald the beginning of a democratic platform run by its citizens alone. In this world, subscriber fees would pay for the real-world infrastructure, and the in-world economy would support democratically elected representatives to govern, develop laws and police the virtual state. As seen with many MUVEs, complex economic structures often develop as a consequence of natural supply and demand from the residents themselves. I believe the evolution of a truly democratic virtual state may not be far behind.

**Second Life as a research platform**

*Second Life* was chosen as a research platform because of the complex socio-economic development occurring, its reliance on user-created content, and the creative nature of its embedded and surrounding communities. The increasing degrees of social, structural and legal complexity found in *Second Life* have made it a focus of intense research in academic, governmental and commercial fields. The educational interest³⁵ prompted Linden Lab to establish a dedicated web portal for interfacing with educational institutions and facilitating in-world research.³⁶ As a student of RMIT University, I had to apply to Linden Lab for permission to collect in-world information, and was supplied guidelines on disclosing my status as a researcher when interacting with residents.
A resident’s desire to leave a mark is as big a point of differentiation for MMOSGs as their massively-social underpinnings are, and the skills required to create engaging content – be it architecture, clothing, avatars or art – are conducive to a higher in-world social status. The ability to interact, role-play and show-off under the guise of anonymity has also created an environment where innovation flourishes and systems of engagement are being re-invented. *Second Life*’s core platform does have limitations, but its functionality and developmental capabilities become increasingly sophisticated with each upgrade.

*Second Life*’s publisher, Linden Lab, has created a blank canvas for residents to live out their fantasies, conduct business and experiment with the virtualisation of space. Of great importance is access to the scripting language that underpins much of *Second Life*’s functionality, with residents able to program sophisticated constructs capable of interacting with and monitoring the environment. It is also possible to create objects that extract information from avatars that stray into their field, and transmit this information out of the game. As with all networked systems, the world is vulnerable to attack, with hackers gaining access a customer information database, disrupting public events, and building ‘copy-bots’ capable of removing copy-protected status and duplicating locked-down content.

Surveillance technologies are easy to come by, and *Second Life* could be considered a test-bed for the emergence of ultra surveillance-enabled citizens. It offers unprecedented access to tools and expertise, with residents able to construct or buy sophisticated monitoring and tracking devices whose capabilities far outstrip their real-world counterparts. It is the largest, adult orientated MMOSG available with a total registered user figure of almost ten million and over US$1 million being spent on virtual goods and services each day. It should be noted that these figures don’t reflect the true number of residents. A more indicative figure is that of concurrent users which hovers around the 30,000 mark, with approximately 1 million users logging in each month (as of August 2007).

*Second Life* was also chosen because of its abundant surveillance technology. A quick search for “surveillance”, “spy” or “detective” via the in-game classifieds will list an assortment of devices and services available for purchase. Linden Lab prohibits the recording of chat and personal data, and offenders are only investigated and prosecuted if residents report an offence, or the offence was large enough to come to their attention. If a resident is in breach of Linden Lab Terms of Use, they are only prosecuted in-world through the temporary or permanent suspension of their account. While other popular MMOs, such as *World of Warcraft* do contain surveillance-based behavior, it is generally related to the game’s tactical nature and not as an emergent consequence of the environment’s malleability.
An early form of punishment in Second Life was banishment to the ‘prison simulator’ – an inescapable cornfield with only a broken-down tractor and TV for company. Rumors of serial offender’s avatars being trapped in an abandoned field of corn circulated for some time before images arose on the web and the cornfield’s existence was confirmed⁴³.

Image 2: “The Cornfield” – Second Life’s prison simulator

**On using ‘virtual surveillance’ as a descriptor**

The term ‘virtual surveillance’ is used extensively throughout this text and refers to my expansion of Jeremy Bentham’s (1787) *Panoptical* model (Foucault 1975, Bozovi 1995, Bogard 1996) into networked computer gaming environments. Bentham was an English philosopher and social reformist who published plans for the *Panopticon; or The Inspection House* – a prison modeled on a “visible and unverifiable” system of observation and control (Foucault, 1977: p201). His designs were revolutionary from an architectural and socio-structural stand-point as they were designed to lift prisoners (and their punishment) from the
depths of hidden incarceration and into an observable space (Foucault). While the original design was never realised, the concept of a ‘panoptical algorithm’ was established, and by the beginning of the 19th century was being applied to social institutions requiring greater levels of surveillance and control. Prisons, schools, hospitals and military establishments acquired and adapted the model as a method of observation and accountability. Two centuries later, Bentham’s model had become an omniscient presence in modern societies, with surveillance technologies observing our most banal and intimate moments. The dream of a small-scale architectural solution had become a powerful system of control operating at most levels of the modern state.

Bentham’s *Panopticon* was destined to become “a marvelous machine which, whatever use one may wish to put it to, produces an homogeneous effect of power.” (Foucault, p.202). Foucault saw the *Panopticon* as indicative of a shift toward **unverifiable observation** – where the incarcerated were moved out of dungeons and into the **possibility** of view. Its unverifiable nature was of most importance. By removing the surveyor (in Bentham’s case the Warden) from sight, the subjects were left to guess if they were being watched or not. The effect was one of mass control through minimal input, with subjects learning to curtail their behaviour as an outcome of the environment. If you couldn’t verify the existence of surveillance but knew it was possible at any moment, then the presumption was you were under constant observation.

In recognising the impact of surveillance on the body, Foucault (1977) writes:

The classic age discovered the body as an object and target of power. It is east enough to find signs of the attention then paid to the body – to the body that is manipulated, shaped, trained, which obeys, responds, becomes skillful and increases its forces. (p.136)
As the application of surveillance evolved the *Panopticon* became a general model for division and classification. As a model it could be applied to schools looking to evaluate programs and outcomes, hospitals wishing to classify and monitor patients and treatments, and newly industrialised businesses looking to streamline output (Foucault, p.149).

Foucault noted that observation had moved away from the body-direct and been replaced by a systematic collection of data, under the control of an omniscient gaze. We now looked to a patient’s chart, a student’s report, and a prisoner’s record to ascertain their wellbeing, performance and behaviour. This was an important step toward the system of surveillance we now find ourselves subject to – a system where an individual’s digital footprint tells us more than direct, physical observation (Bogard, Agre and Rotenberg, 1996). In virtual worlds the body is now represented via an avatar, which is in itself an object of intense gaze.

Bogard (1996) saw the future of surveillance as that of a predictive tool. By simulating environments (and the technology used to surveil them) the system would be capable of foreseeing a crime – a theme explored in Philip K. Dick’s (1956) short story, *Minority Report*. The beginnings of simulated surveillance and predictive/preventative tools can be found in the methods used to police player behavior in virtual worlds. MUVEs (especially those built for minors) often employ systems to warn administrators of illegal activity, with games such as *Club Penguin* using real-time chat filters to monitor language and predatory behaviour:

**Standard Safe Chat** allows players to type their own messages to other users. Every message that is typed first goes through a sophisticated filter which blocks inappropriate words and phrases. Club Penguin’s filter also breaks up words and phrases phonetically in order to decipher and catch codes or other methods players might use in an attempt to get past the system. This added component allows the filter to block attempts to communicate a phone number or other personal information.44

*Club Penguin* publishes information on the sophistication of their surveillance techniques to reassure parents and ward-off potential abusers. The company has responded to this fear by assigning 80% of *Club Penguin* staff (more than 100 people) as Community Support Representatives used to monitor chat – both live and through the of sifting of log files. As with Bentham’s *Panopticon*, the inhabitants of this world are made aware of their constant and unverifiable observation. It is a world made safe, in part, through the suggestion of surveillance.

*WoW* players are subject to another level of observation via ‘The Warden’ – installed client-side software designed to monitor and weed out cheating. *WoW*’s terms of service state:

> When running, the program may monitor your computer's random access memory (RAM) and/or CPU processes for unauthorized third party programs running concurrently with World of Warcraft.45
The observation of a user’s actual machine and not just their in-game activities caused protest throughout the *WoW* community. Greg Hoglund and Gary McBraw (both software security experts) believe this type of monitoring is excessive⁴⁶, with The Warden capable of displaying title-bar text on all open PC windows, and reporting visited URLs back to Blizzard (the publisher of *WoW*).

*Second Life* residents are also subject to a high level of surveillance when engaged in in-world activities. The intent is clearly outlined in the Linden Lab’s Terms of Service:

> You acknowledge and agree that Linden Lab, in its sole discretion, may track, record, observe or follow any and all of your interactions within the Service.⁴⁷

I was contacted by a number of MMO game administrators via the research questionnaire who confirmed the existence of monitoring procedures and their abuse. None were willing to go on record to back-up their observations. Although not verified by the research, some administrators said they often looked in on live conversations, and interacted with people undercover (i.e. not in the form as an official employee of the game).
CHAPTER 2: Classifying virtual surveillance

In an attempt to clarify the various forms of surveillance found in virtual worlds, I have highlighted four distinct forms associated with computer gaming and applied a simple method of classification. This system of classification assists in understanding the nature of virtual surveillance, where it stands now, and where it may be heading. The system was developed in conjunction with the accompanying artworks, which in turn underpin arguments into the intrusive nature this form of surveillance takes on.

The classification of each form is reliant on the combination of internal and external points of view. ‘Internal’ encompasses all virtual environments (such as MMOs) and ‘external’ encompasses real-world locations inhabited by gaming computers and their users. These two forms were combined to create four distinct surveillance categories:

1. Player to player surveillance (internal-to-internal)

In its most prolific form, internal-to-internal surveillance involves observation during multiplayer first-person shooters. Games such as Counter Strike and World of Warcraft rely on the formulation of teams to compete and win. Teams who conduct rapid surveillance of the unfolding mêlée adapt strategies to gain advantage over their adversaries. Surveillance plays an important role in collaborative war-based games, although a more appropriate term may be ‘reconnaissance’. Nevertheless, surveillance, or the continual observation of a person of group, does take place.

In worlds such as Second Life, where social networking is prevalent, surveillance takes on a more intrusive form. Residents can remotely record conversations and track other player’s movements using readily purchasable objects, or hire professional detectives to conduct surveillance on a chosen target. Linden Lab prohibits the use of intrusive surveillance-based technologies. In-world research has confirmed their existence, although players risking bans by purchasing and using surveillance objects to spy on others.

Counter-surveillance technologies have also been developed to protect residents’ privacy and warn when entering an unsecured environment. Tools include sophisticated scripted devices that scan an avatar’s surrounds for objects deployed to record chat and locational data. The level of risk is indicated via a heads-up display worn by the avatar. The image below shows an activated surveillance detector worn by the avatar (three black circles on the left) and a surveillance device used for monitoring visitors to a region (red box on right).
Audio bugs, motion sensors, cameras and the use of professional spies are common, real-world techniques replicated in virtual worlds. The model of societal self-policing, as found in modern industrialised societies, is also filtering into Second Life with residents encouraged to undertake policing and reporting. Abuse from other players can be reported via an embedded menu request in the client software (see images below).
As discussed earlier, Linden Lab hasn’t banned the manufacture of surveillance devices – only their use. This follows their policy of an open environment for research and development, with application limited to an end-user license agreement. Second Life’s creator and Linden Lab CEO Rosedale, believes transparency and minimal governance encourages residents to take on the responsibility of self-policing:

If people, reasonably, can see what everybody else is doing, if there's lots of transparency, if the lights are on, as I like to say, people are basically good, and we see that in ‘Second Life’. And I think that means that we want to govern as little as we can, and it also means that in the long term, we won't need to.50

Rosedale’s expectations are most likely influenced by the commercial cost of policing so many residents, but his philosophy is in tune with the trend of citizens expected to surveille each other. This trend toward reliance on citizen policing is discussed further on. It is an important leap in technique, and will have subtle but significant effects on the structure of virtual worlds.

Within the virtual realm, systems of surveillance take on a more powerful form. Given the data is the world and all information can be recorded and mined, levels of surveillance are somewhat limitless (Agre, 2001, Bogard, 1996). Agre explores this scenario in his discussion of David Gelernter’s fictional book, Mirror World (1991). The book’s subject revolves around a digital representation of the ‘real-world’, faultless in construction and conducted in real-time. By entering the simulation, individuals are free to explore any moment or situation as it unfolds. The simulation is so detailed no part of its real-world source is left unrepresented. By handing citizens access to hyper-surveillance technologies, organisations and governments become transparent and accountable. Agre (2001) believes Gelernter:

…seeks a democracy of liberal individuals, and he thinks of the Mirror World as a collective undertaking through which the conditions of liberal democracy might be established. (p.45)

Situations utilised to inhibit observation varied according to the world. According to the questionnaire responses, World of Warcraft players were more concerned with combat strategies (hiding behind objects or following other players stealthily) and Second Life players with personal privacy. Given the density of Second Life’s land, and that content is user-manufactured, many residents feel it’s necessary to construct walls to block out offensive material, or to construct closed buildings where the outside world is unable to penetrate (visually or by uninvited guests). Skyboxes are particularly prevalent. These constructs exist high above the overly developed streets of Second Life’s grid, often closed to those without flight enhancers51 or entry permissions. Of course the types of protection offered (or
developed) are dependent on the underlying structure and design of a world. WoW players are rarely able to ‘leave a mark’ on their surroundings whereas Second Life players depend on this ability to define their role as a resident.

In many networked children’s games, administrators go to great lengths to combat subversive or inappropriate behaviour. Club Penguin allows chat to be limited by parents via a selection of pre-set statements. Chat logs are filtered for content that could be deemed dangerous. Moderators are also logged in and interact with players without disclosing their identities. Additional security measures include gaining a seal of approval from the Better Business Bureau’s BBBOnline Privacy Program\(^\text{52}\) (an independent compliance service) and allowing long-time Club Penguin players to become in-game spies. After answering a series of questions pertaining to the child’s level of understanding, a player can gain access to a secret control room where other spies reside and undertake special missions. Spies are encouraged to monitor other players for inappropriate behaviour and report them to the official administrators.

By encouraging other players to assume the role of surveyors, the game’s publisher relies on the community to self-police. This has a two-fold effect. Spies become more observant of their surrounds and the actions of other players, and non-spies become conscious of their actions being monitored by others. There is an economic benefit for the developer as well, with spies volunteering their services for free. Club Penguin has sold this world as a safe place for children to make friends, customise their environment and interact over the Internet.
Their success in extending this message can be judged by the fact of the purchase itself: Disney being very aware of their image as a child-friendly organisation. It is, however, possible for adults to enter the space in the guise of a child and interact with children. Their behaviour is modified, not their intention or experience as a surveyor.

2. Administrator to player surveillance (external-to-internal)

The ability of MUVE game administrators to monitor and record player interactions out-strips any type of surveillance occurring within the real-world. All movements, actions and conversations can be permanently recorded and archived for later retrieval. Some MUVEs use this data to help suspend player accounts when end-user license agreements (EULAs) are broken. For example, if one player continually harasses another, administrators would probably sift through chat and proximity data to prove an offence has taken place. Game companies also mine user data to help review and enhance the game’s structure and playability. Will Wright, designer of The Sims has stated:

You look at what a million people have done the day before in a game, have all that information sent up to your server, do some heavy data analysis, and then every day send back to all these games each with its own new tuning set.

The possibility of all-pervasive virtual surveillance being conducted within MUVEs is real. Administrators use detailed data logging to resolve disputes, prove cases of harassment, and verify adherence to EULAs, and questionnaire respondents confirmed the presence of ‘on the ground’ administrators interacting with players and viewing them from afar. It is reasonable to presume that surveillance occurs by observing the posting of prosecutions to SL’s ‘Police Blotter’. This reference page lists dates, violations, regions, descriptions and actions taken by Linden Lab to prosecute offenders. Proving a case such as sexual harassment (see image below) would require access to past chat and location logs to confirm the offence had taken place.

![Image 9: Second Life Police Blotter – a public record of violations and actions taken to prosecute the perpetrator](image-url)
Data from my questionnaire shows:

- 49% of MMO players were aware of game administrators tracking the movements of players within games.
- 30% of MMO players had reported bad behaviour to administrators, and it helped resolve the situation.
- 90% of MMO players thought it acceptable for game administrators to monitor player behaviour.

Players are aware of surveillance being conducted by administrators, and that the vast majority believe this is integral to their existence within the space. Questionnaire respondents supported their acceptance through an understanding of the space as a privately owned venture (they had no rights beyond an EULA), and with a need to feel safe when threatened.

A powerful example of administrators applying surveillance techniques within MMOs can be found during an in-game protest that occurred in *WoW*. Players, in the guise of naked gnome, were upset over lag (a delay in server and game speed) and staged a protest at the Argent Dawn Server (one of the many computers used to run WoW). By assembling so many players in the one location, they hoped to put massive strain on the local server and cause it to crash. The game’s administrators, who had been watching forums and monitoring chat, were ready for the protest. Players were warned via in-game messaging that their accounts would be suspended if they attended the protest, and administrators appeared (in avatar form) to clear the crowds and save the server. This was one of the first major protests in a virtual world, with administrators asserting their power as an authority and in real-time. Witnesses spoke of messages appearing from remote administrators, and of seeing protestors vanish as their accounts were disabled. The following images (overleaf) show the protest unfolding.

Monitoring by administrators, (both human and algorithmic), has become a critical component in maintaining the social and economic stability of virtual worlds. The owners of these worlds depend on it for their ongoing success, and residents support it as a method to ensure a stable space to play and create. The future of administrator to player surveillance may rely on more sophisticated monitoring capable of picking up patterns in speech and behaviour. As Agre (2001) suggests, it may become a predictive system where offences are caught before they occur. The success of these worlds—especially those designed for children—will rely on the sophistication of these systems.
Images 10 and 11: World of Warcraft Gnomes assemble in protest
3. Parent to child surveillance (external-to-external)

As gaming environments become more complex, parents play an important role in choosing appropriate game genres for their children, and monitoring play that could be seen as unsafe (social networking games) or controversial (overtly aggressive or sexual games).

While the average age of a typical gamer is 33, 31% of players in America (the largest Western consumer of computer games) are under the age of 18 and play computer games regularly. As networked games become increasingly widespread, governments and security firms are offering advice on how to protect children when entering these environments. The Australian Governments’ NetAlert information site recommends placing computers in communal areas, and the installation of monitoring software to “record and report on online activities and behaviour”. Having originally hoped to block ‘offensive’ material at the ISP level, they have instead released a free content filter available to all Australian citizens. The onus now lies with parents to selectively block Internet-based traffic, although ISPs are being encouraged to filter content via an opt-in system. The software was recently cracked by a 16-year-old student who took 30 minutes to disable the filter, and 40 minutes to disable a replacement filter. This highlights the direct observation of children’s computer use as a more reliable policing method.

4. Machine to player surveillance (internal-to-external)

In many ways, the technologies that run virtual worlds have become Bentham’s panoptical guard whereby residents understand the implicit nature of the environment they inhabit and behave accordingly. Bogard (1996) believes “contemporary workers, in general, are the most surveilled – watched, recorded, scanned, screened – in history.” (p.116). The same could be said of networked gamers. Games are a business, and the companies that run these businesses require extensive monitoring of the worlds they have created. Linden Lab’s justification is two-fold: data is used to enhance game play and assist in resolving disputes. The complexity of networked virtual worlds dictates the need for aspects of its surveillance to be conducted automatically. Automated key-word monitoring is an obvious application, as are content filters and client-based software monitors (as with WoW).

If a child swears in Club Penguin they are issued a warning. Residents of Second Life are offered tools to report ‘bumping’ from other players. These warnings come via the software and are pre-programmed, automated responses to offensive behavior. As discussed earlier, when the resources required to conduct monitoring of a population become stretched with the growth in virtual worlds, their administrators will have to become more reliant on the software to monitor and report offences. As with the real world – where governments are
investing in facial recognition\textsuperscript{63} and pre-crime software surveillance\textsuperscript{64} – virtual worlds will become increasingly dependent on automated systems to predict and prevent crime.

Summary

The digital era allows unprecedented levels of surveillance. This is especially so in MUVEs and this research project’s questionnaire has confirmed the vast majority of players accepting it – or at least forgetting it exists and instead understanding on some base level that their actions are observed and accountable. Coupled with rapid growth in the virtualisation of social interactions and corporate practice, the technologies surveillance relies on have become increasingly intrusive. Virtual worlds are becoming serious environments: political debates, legal status, the rights of avatars and copyright ownership are all hotly debated topics in academic circles and user forums alike. But unlike their real-word counterpart, virtual worlds are all data all the time, with data tracking and interrogation now commonplace.

As people invest greater time and emotional energy into their digital personas, so too will the machines that surveys them. And as more and more corporate and intuitional interactions are conducted in virtual environments, the interface between individuals and those surveiling their behaviour becomes ever more acute, raising vital questions of privacy, liberty, identity and personal freedom.
CHAPTER 3: Surveillance as an artistic proposition

Why does art matter and what might the benefits be when looking at virtual worlds through an artistic prism? Having set forth an argument into why virtual worlds are socially, economically and creatively important, I will now look at their meaning and impact through a series of artworks.

As discussed in my Research Methodology, the process of creating art was drawn on as a technique to highlight the subject of surveillance within virtual worlds, and its impact on their ongoing development. As such, these artworks provide an experiential demonstration of surveillance in action. But as artworks, their propositional nature allows viewers the opportunity to experience their own feelings, and re-interpret meaning on a personal level. I will highlight two overall outcomes of the creative process. Firstly, research into surveillance as an imprecise phenomenon has been assisted when studying artists who have used it as a theme. For example, when Sophie Calle (2003) asked her mother to engage a private detective to “provide photographic evidence of my existence”, she was testing the accuracy of surveillance’s ability to judge emotions. While precise dates, locations, habits and dress were recorded, the detective’s notes could not correlate fluctuations in her emotional or psychological state – they were cold and removed glimpses into a somewhat anonymous life. David Rokeby’s Sorting Demon (2003) gave me additional insights into technology’s highly regimented system of classification, and of its inability to make complex moral assessments. As Rokeby points out:

This sort of problem becomes very clear in contexts where computers are asked to begin making ‘judgments’ on people. Computers have no grasp of the social and moral realms. A computer program is a manifestation of the will of the programmer, but it is a will divorced from social, emotional, moral and philosophical constraint.

In Watched and Measured (2000) he points out the complex nature of being an observer and of being observed:

It explores some of the ethical questions surrounding surveillance systems: do they invade our privacy, act as guardian angels, or, perhaps make us sanctioned voyeurs?... The audience’s feelings may alternate between sympathy and suspicion as they realise that they are not only witnesses to, but also subjects of, the system’s activities.
Secondly, my own artworks stand as a visual trace through the project and its various research stages. They offer the viewer an emotional-sensory interface to the research, and exist as outcomes in their own right. The viewer participates in the research and is free to formulate their own opinion. In entrance(1 and 2) and Surveillance of the Self, I have purposely positioned the viewer as the surveyor. Their reactions are their own, but they assist in understanding the body of research, and that of being under a constant state of gaze. They make surveillance the subject, hopefully leading to an uncensored, unconscious awareness of it.

I conducted an initial experiment in Second Life to help understand digital content and the entangled nature of real and virtual space. The experiment uses Fuller’s (2005) media interaction methodology, whereby the medium is submitted to a number of ‘physical’ tests. By interacting with the medium’s content I was able to better comprehend it’s impact on the process of creative discovery. The final outcome is the artwork Regan Death Shakes Nation and it was the begging point for much of my research into virtual worlds.
1. Regan Death Shakes Nation

Regan Death Shakes Nation investigates the changes in meaning an object takes when undertaking a journey through simulated states. The newspaper’s original cover began its journey on June 6, 2004 at a New York printing press. The front page was laid-out in the production team’s pagination software and represented in digital form via a desktop screen. Upon approval from the editors it was sent to an image-setter and transferred to plastic before being exposed onto metal printing plates. These plates were then bolted to a colour offset printing press and the content transferred to newsprint with four colour inks (cyan, magenta, yellow and black). Within its short lifetime (a matter of hours) the content had taken on three distinct forms – digital to plastic, plastic to metal, and metal to paper. When adding the original photographic image to these levels (real to digital) we iterate the layers of abstraction.

The front page was then digitised by a Second Life resident and placed into a mock psychiatric ward to help “normalise” the virtual environment (layer five). A screen capture was taken of the table it lay on and then opened in Photoshop (layer six). Its skew was corrected, and then the whole image was scaled back to the original printed size. The page was then printed via a seven-colour inkjet printer to archival quality paper (layer 7). In all,
the paper’s front page has now passed through seven levels of transformation: real to digital, digital to digital, digital to plastic, plastic to metal, metal to paper, paper to digital, and digital to paper. The object’s total journey from its original form through to final reproduction was 313 days:

**Start point:** New York Printing Press. Date: June 6, 2004  
**End point:** Icon.Inc, 351 Elizabeth Street Melbourne. Date: April 15, 2005  
**Length of Journey:** 313 days

Of course, viewing the finished work via a placed representation in a text editor, or on-screen, adds another representational level, as does printing the document on a laser printer to read on the train home. The work continues its journey with every re-contextualisation.

This simple experiment bore a number of questions, the most important being *“is there a natural state for information and how does its context change the message?”*

As discussed earlier, McLuhan (1964) argued context (the medium) affected content (the message) in the 1960’s, and we can observe this occurring when *Regan Death Shakes Nation* changes purpose. In its initial form it was a newsworthy front page intended to inform readers of Regan’s death and sell papers. As a representation of a paper in *Second Life* it served as an object to legitimise the environment, and evoke a sense of foreboding. “I am in a waiting room. Waiting rooms have newspapers. Newspapers are full of bad news.” In its (so far) final form, the newspaper stands as an experiment in simulation and transformation. Context has become critical in the artwork’s journey.

Duchamp was one of the first champions of contextually aware and re-purposed art, with his ‘ready made’ works altering the meaning of everyday objects – such as placing a urinal in an art gallery (Calvin Tomkins, 1996). By shifting context, he forever changed the viewer’s perception and encouraged them to look beyond the banality of the everyday. The concept of appropriation was expanded during the Dada, Surrealist, Fluxus and Pop Art periods. More recently, the videogame art movement has produced artists such as Cory Arcangel, Rebecca Cannon, Brody Condon, Julian Oliver, Anne-Marie Schleiner, and Eddo Stern – all of whom appropriate computer games (in some form) as an artistic platform.

When handling *Regan Death Shakes Nation* as a printed object the viewer is immediately aware of multiple levels of abstraction. The image and text are highly pixelated and the pixels unnaturally skewed. The paper is also thicker than expected with a blank reverse side. All these triggers provide the viewer with hints that they are not looking at a newspaper reporting
on Regan’s death, but a distant, deconstructed representation of it. The object is a culmination of intertwined ghost states that trace their stories back to an original.

While *Regan Death Shakes Nation* doesn’t relate to surveillance per-se, it was one of many entanglement experiments conducted to better understand the nature of context inside virtual environments. A later work, *Enemies of Art*, was conducted to apply these notions of simulation into a live situation where surveillance does play a role – first person shooter (FPS) games.
2. Enemies of Art

Image 13: Stills from Enemies of Art
My second work, *Enemies of Art*, was produced to gain insights into the way multi-user environments affect research outcomes. The complexity of these spaces makes participation a critical act in the development of understanding.

Virtual environments offer artists new creative platforms. However, it has been interesting to witness older artworks being restaged under the guise of shifting context. New media tend to consume their predecessor’s content before settling on a new form, and this can be seen occurring in much of *Second Life’s* art scene.

Eva and Franco Mattes took the ethos of appropriation to heart in their ongoing *Synthetic Performance* series. Seminal performance works from the 1960’s–80’s are re-staged in *Second Life* and exhibited in-world and on their website. “Re-performances” to date include Joseph Beuys’ *7000 Oaks*, Valie Export’s *Tapp und Tastkino*, Vito Acconci’s *Seedbed*, and Chris Burden’s *Shoot*.

Notions of appropriation, simulation and surveillance were defining factors for *Enemies of Art*. The performance was produced while reading William Bogard’s *The Simulation of Surveillance* – a seminal work on the history, current state and possible future of a surveillance society. I had originally planned a re-staging of Sophie Calle’s (1981) *The Shadow in Second Life*, but issues surrounding the legality of in-world surveillance made it difficult to achieve. In *The Shadow*, Calle asks her mother to hire a private detective to follow and document her everyday life. She also takes detailed notes and then compares the two points of view. While recontextualising the artwork in a virtual landscape would have tested Calle’s premise of surveillance’s emotional distance, and that of the observer being observed, I was unable to convince professional detectives working in *Second Life* to take on the job. The collection and distribution of data beyond the in-world environment (such as personal details) is forbidden under *Second Life’s* Terms, and the agencies believed it would compromise their practices.

Instead, the artwork was performed without the direct involvement of third parties, and in the multiplayer first-person shooter (FPS) game *Half-Life 2*. *HL2* is one of the more realistic games available on PCs with sophisticated physics, an advanced graphics engine, and well-crafted audio assisting in the creation of a dramatic and believable simulation. Players join mélées by slotting into one of two teams and competing for the most kills. Upon entering a ‘theatre’, players team up and strategise rolls and tactics. Weapons are realistic and readily available. It is an intense, violent and engaging environment – perfect for the pacifist artist.
Enemies of Art is a performative intervention piece (see Introduction) based on six rules:

- The artist must try to debunk the simulation by writing a message in the game
- The message must relate to the object it is being applied to
- The artist must never attack unless being attacked
- The artist can only carry a claw hook (the most basic of weapons)
- The claw hook will serve as a writing implement and weapon
- The work is complete when the message is finished and the simulation debunked.

In Enemies of Art, the protagonist chooses an external wall to inscribe the message “Not a wall”. He moves to the location and begins to carve the message using a claw hook. His back is now facing the ensuing mêlée. He is an easy and quick kill. After each death he respawns and makes his way quickly back to the wall. When engaged by the enemy he defends his position. Four attempts are made before the inscription is complete. During the last attempt the software’s image cache (an imaging technique used to speed up the game) begins to disintegrate the message. He quickly repairs these glitches, and on the last strike is shot in the back, falling to the ground dead. The ‘camera’ is left running and captures the artist’s killer assuming his role. This unknown player, having witnessed an ongoing urge to pull away from the battle and debunk the simulation, is inspired to create rather than kill. His attempt at a beginning is captured – as is his own murder.
The performance is an extension of Magritté’s *The Treachery of Images* painting – one of the earliest to question the reliability of representation as artworks – into a virtual environment. (Robert Hughes, 1995, p.244).

The creation of *Enemies of Art* left me with two questions: “*what was the extent of surveillance in virtual worlds, and how did it effect a player’s perception of the environment*”. It also provoked an interest in defining the types of surveillance occurring. As discussed earlier, I broke these types into four distinct instances: internal-to-internal, external-to-internal, external-to-external, and internal-to-external. This system of classification was in part responsible for the artwork *enTrance*. 
3. enTrance

Image 15: Stills from enTrance 1

Of all the artworks produced, enTrance was the most problematic – not from a conceptual or procedural point of view, but because the subject matter involved capturing video footage of children.

The video artwork was inspired by principles of game-related, external-to-external surveillance. In enTrance, parental surveillance of children’s computer game play was to be investigated as a video portrait and used to provoke further questions. I had conducted some preliminary studies using my own children’s play and was intrigued by the bubble of suspended disbelief that surrounded their play. These detached trance-states are reminiscent of those surrounding Foucault’s concept of the institutional “gaze” and its use as a form of power and control. The child had become the surveyor and the surveilled – both actively involved in the surveillance and control of a virtual environment, and themselves a subject of intense observation.
Computer gaming is a popular medium of choice for many children. The medium has become networked into a vast community of live players. Parents are increasingly aware of the need to monitor their children’s playing habits and oversee access to these social environments. The most obvious solution is to place networked gaming devices in public household spaces like a kitchen tables and living rooms, where busy parents can keep an eye on their children and the content they consume. While simple un-networked games usually pose no threat of exposure to unwanted themes, the MMO space (and its inherent social layer) has extended into children’s games. My daughter was frequently in Club Penguin when I was observing states of play. When asked whom she was chatting with I was informed it was a school friend on holiday in San Francisco. Their conversation had picked up from where they had left off in the schoolyard, and a lengthy discussion was taking place regarding international time zones and bed times. For them, this was a natural and by no means disruptive interaction, innocently played-out under both parental and administrative gaze.

With enTrance I wanted to capture the states children enter when engaged in computer game play, and create the viewer as surveyor. My submission to RMIT’s Ethics Committee for clearance was met with a mixture of confusion and concern. Why were children to be filmed?
What were networked games? How could art be used as a research method? Was I not concerned with images being misused? These were valid questions, but the Committee’s concern was arguably based on a lack of understanding. It took several months of clarifications, four rounds of submissions and then a face-to-face presentation to the full committee before they fully understood the rationale behind the request. This was a clear indication of societal concern regarding privacy, exposure and surveillance – especially when the subject was a child. The path to gaining permission was at times frustrating, but it did reinforce my belief that this was a critical area of research.

The final *enTrance* piece evokes many feelings, some uncomfortable for the viewer. With context stripped away (most of the footage shows only the child’s face), the viewer becomes a silent and unknown participant in the surveillance of play. They are asked to observe an innocent, lost in the act of make believe.

This theme of hidden observation was applied to my next work, *Surveillance of the Self*. 
4. Surveillance of the Self

Image 18: Stills from Surveillance of the Self
While researching real-world surveillance technologies I came across a patent application by Apple Computer on a two-way screen technology. The patent outlined a screen manufacturing process where light emitting pixels were inter-dispersed with light receiving receptors. The proposed screen became a two-way device capable of transmitting and collecting visual information – an object to observe and be observed by. I had also begun experimenting with miniature, high-resolution surveillance cameras to capture game-play footage.

Expanding on themes investigated with *enTrance*, I attached a camera to the centre of a computer monitor to experience the condition of machine surveillance. Digital societies rely on the surveillance of data for security, governance and systems optimisation. As my research was related to the surveillance conducted in and around computer game-play, I began investigating the types of data gaming companies collect. Gaining first-hand knowledge was difficult given private companies are reluctant to part with information on the systems deployed to monitor games and players. The actions can however be however ascertained via published terms and conditions. Linden Lab state:

6.2 Linden Lab may observe and record your interaction within the Service, and may share aggregated and other general information (not including your personal information) with third parties. You acknowledge and agree that Linden Lab, in its sole discretion, may track, record, observe or follow any and all of your interactions within the Service. Linden Lab may share general, demographic, or aggregated information with third parties about our user base and Service usage, but that information will not include or be linked to any personal information without your consent.

According to Linden Lab’s disclaimer, although your first life will remain anonymous, information and actions pertaining to your second will not. As virtual worlds become more prevalent, and integral to online interaction and business, the amount of information streamed through these worlds is likely to become more sensitive. Businesses such as IBM are conducting research into *Second Life* and establishing a permanent presence. The security of company IP in virtual worlds will play a critical role in their success as a commercial medium. IBM’s “metaverse evangelist”, Roo Reynolds, has stated:

We’re never comfortable talking about things like patents because we recognize they’re on Linden’s servers. We can’t talk about anything confidential.

It is easy to forget these are ultimately private systems, owned and operated by corporations. Because of this, others own the data that flows through and resides in the system. One way around this security impasse is to create an open-source version and release it for public consumption. This way, individuals and institutions can create a plethora of mini-worlds and
offer them as private interfaces to their own content. The producers of *Multiverse* and *Active Worlds* are thinking along these lines. While their MMO platform isn’t open-source, it is free to download and all ‘multiverses’ are viewable via a single client. Whether their foray into the MMO landscape is successful remains to be seen, but their model does offer users the ability to create private worlds where ideas and information can be shared in an environment where an individual or company can dictate the terms, not the one publisher.

Image 19: Still from Surveillance of the Self

The video setup used for *Surveillance of the Self* consisted of a computer, a monitor, and a mini surveillance camera connected to a video camera. The surveillance camera was placed over weapon crosshairs of the *Half-Life 2* interface so my line of sight could become the camera’s outward point of reference. I would sit and play for up to one hour, framing and recording my head and shoulder movements. Available light was restricted to that of the computer monitor, allowing the game to dictate when the scene was lit.

There were two immediate physical outcomes: playing for any more than 15 minutes would create a sense of motion sickness. This was in all likelihood due to a static reference point (the camera) in the middle of the screen, causing external and internal worlds to struggle for conscious attention. *Half-Life 2* is fast-paced with rapid environmental interaction required to
survive. The combination of a static foreground and moving background appeared to produce the motion sickness, although it would abate after playing for more than an hour.

The second outcome was forgetting the camera actually existed. I was initially acutely aware of being monitored while playing, but as the game progressed and the interaction intensified, I began to look through the camera and see only the game. Successful computer games rely on a combination of engaging interaction and a sense of place (Taylor, 2002, p.42), and as an escapist medium, designers strive for the most engaging experience possible. The level of engagement experienced while creating *Surveillance of the Self* blocked out most of the external stimuli – an effect observable in *enTrance*. A single shot is used for the artwork – long into the embodiment cycle.

*Surveillance of the Self* provided me with many research insights. My initial intention was to experience machine surveillance first-hand, and contemplate its effect on my behaviour. I also captured a video portrait of myself engaged in the act of creation – now both a subject and a viewer of the artwork. The level of surveillance-based intrusion experienced in our private lives, and how subtle this surveillance can be. Many computer monitors have embedded video conferencing cameras, raising the possibility of hackers gaining access to personal video streams.

Video conferencing also suffers from one major flaw – with cameras sitting on top of monitors, the participants see each other looking down (at the other’s face) rather than eye-to-eye. This detached conversational style is presumably what Apple hopes to address with their patented two-way screen.

As the planet’s electronic skin grows – spurned on by a societal need for information and interconnectedness – a new generation is adapting its sense of self and belonging via the network (Mitchell, 2003). The network now encourages and facilitates our need to be known, to connect and to consume information from the everyday – entertaining and engaging to be sure, but the volume of personal information now published can have disastrous consequences. For example, networked information comes with an archive, and the archive is being accessed by commercial entities researching potential job candidates, and inadvertently published by meta-collectors like AOL. In July 2006, America Online (AOL) released search log data from 658,000 subscribers. Names were replaced by numbers, but search histories containing terms such as “how to tell your family you are a victim of incest” and “how to kill your wife” could be found. Many histories also included ego searches where users were looking for instances of their own name on the web, alongside questionable search strings. All this data is archived and available to the public.
Our quest for interconnectedness has been overshadowed by an über-omniscient presence – that of the machine and its archive. *Surveillance of the Self* was conducted to experience this sense of detached observation, and better understanding its impact on the player.
CHAPTER 4 – Questionnaire and responses

As discussed earlier, it was important to involve the participants of virtual worlds in this research as their insights and opinions have enabled greater understanding, and provided momentum to further appreciate the impact surveillance is having on their interactions and shaping of the space as a whole. This involvement took the form of an anonymous questionnaire, published online, with responses submitted via a web-based interface. Respondents were asked to submit limited personal details (age and gender), and select from a number of Yes or No questions. They were also offered the opportunity to discuss their opinions in detail.

The questionnaire contained the following fields:

- Age (under 18, 19-25, 26-35, 36-45, over 45)
- Gender (Female, Male)
- What MMO games do you play?
- On average, how many hours do you play per week?
- Have you ever been playing while an official game administrator or guide was obviously present?
- Has a game administrator or guide ever made themselves known to you within a game?
- Are you aware of game administrators tracking the movements of players within games?
- Have you ever created a situation or object to inhibit observation by other players?
- Have you seen other players using objects or techniques to protect their privacy?
- Have you ever experienced an instance where another player was surveying, or following you for no discernable reason?
- Have you ever experienced behaviour from another player that made you feel uncomfortable?
- Did you report this behaviour to a game administrator, and if so, did it help resolve the situation.
- Have you ever been reported or banned for bad behaviour?
- Do you think it’s acceptable for game administrators to monitor player's behaviour?

Over 500 usable responses were collated over a one-month period. The findings are summarised below. The extended results contain both statistical information and anecdotal opinions and observations from those who participated.
• 81.2% of respondents were male
• 40.4% of respondents had played while an administrator was online
• 51% of respondents said an administrator had made themselves known
• 48.7% of respondents were aware of administrators tracking movements
• 25.8% of respondents had inhibited in-game observation
• 33% of respondents had seen other players inhibiting observation
• 41.2% of respondents had been followed in-game
• 58.8% of respondents had been made uncomfortable while playing
• 29.6% of respondents had reported behaviour to administrators
• 12.3% of respondents had been banned for bad behaviour
• 90% of respondents believe in-game administrators are acceptable

Table 1 – MMO age groups

<table>
<thead>
<tr>
<th>AGE</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>18 or under</td>
<td>6%</td>
</tr>
<tr>
<td>19–25</td>
<td>24%</td>
</tr>
<tr>
<td>26–35</td>
<td>53%</td>
</tr>
<tr>
<td>36–45</td>
<td>14%</td>
</tr>
<tr>
<td>Over 45</td>
<td>3%</td>
</tr>
</tbody>
</table>

Figures match existing research into the average age of MMO game players (33).

Table 2 – Gender of MMO players

<table>
<thead>
<tr>
<th>GENDER</th>
<th>PERCENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>Female</td>
<td>19%</td>
</tr>
<tr>
<td>Male</td>
<td>81%</td>
</tr>
</tbody>
</table>

Female players are generally under represented in gaming circles, although MMOs and social games such as Second Life and The SIMS tend to attract greater numbers.
Administrators were generally present to help resolve a question or problem with game-play. In many cases, administrators had an obvious presence, either by naming protocols or form.

“Linden Lab employees are pretty obvious in Second Life, because they all have the last name Linden. It's tough *not* to know they're on the staff.” Male, 26-35.

Players who were violating a game’s Terms of Service often referred to administrators contacting them through a private chat channel (known as “whispering”). Contact was generally made to register a warning or outline an offence and punishment. This type of contact is made in real-time, but without the administrator being obviously present.

“There were a few players being difficult. I saw an individual suddenly appear with a very unusual name that a normal player could not have. Then the individual disappeared. This person did not show up on a who list.” Male, 36-45.

Players who were aware of administrators tracking movements had generally made contact or been contacted by an administrator.

“In WWIOL they have a ‘buzzard cam’. They monitor battles and player movements. However, they are usually (or are they) visible while they do this, high in the sky.” Male, 26-35.
Counter-surveillance is common in MMOs. Combat-based players often conduct themselves in stealth mode – hiding behind objects, or meeting in private spaces to discuss tactics. In Second Life, where surveillance can be more intrusive, players can purchase ‘bug detectors’ or deny access to land and buildings via permission-based boundaries.

“For a guild meeting, we even put up guards to raise an alarm if anyone came near.” Male, over 45.

“I have set access lists on my home, to frustrate entry by all but a select group. I have experimented with automated defense systems to “pus” interlopers away from my home. I have tintable windows in my home. I have lived in skyboxes, set at altitudes that are not easily reached by players without special equipment. I have a friend who plays two characters... we have avoided linking one of her characters as “friend” to mine, in some effort to maintain privacy between these identities.” Male, 36-45.

A large number of players had observed some form of personal privacy techniques being deployed. The majority, though, had little experience or awareness of it taking place. This could indicate the success of the process.

“A lot of people also use alternate accounts when they want some peace and quiet and just be with friends or work on something.” Male, 26-35.
Following other players for no reason (apart from harassment) was common, with many players getting confused or upset by others. The networked anonymity supplied by the environment seems to provoke this type behaviour – “I can do because there’s no recourse”. This type of behaviour is classified as “griefing” and occurs in all MMOs.

“I’ve had people choose to follow me around for no reason, I’ve even confronted about it and they have told me that they are aware that is annoying and pissing me off, and that this is the only reason they are doing it.” Male, 26-35.

Many players feel they are untouchable when projecting their personas through a virtual character. The opportunity for anonymous interaction has led to a majority of respondents experiencing some for of inappropriate behavior.

“Yes, but that comes with being part of the female minority in such a male dominated sphere.” Female, 19-25.

“I'm not a social person in general. Meeting female characters in WoW makes me giddy :-)).” Male, 36-45.

“I've been on the receiving end of many racist or anti-semetic threats in the course of gameplay, especially during and following PvP combat. Being from a diverse community and background, myself, I find that kind of behavior to be particularly abhorrent.” Male, 26-35.

“There are a lot of different communities in Second Life, that stretch what we usually find socially acceptable, like slavery. Which made me feel uncomfortable when i first met a master and her slave. But there are also people who enjoy annoying and angering people, and go around doing so, until stopped or bored.” Male, 26-35.
Most players seemed intent on either ignoring or putting up with abusive or inappropriate behaviour. The data shows less than half of the reports filed resulted in an outcome (see below). Whether this is indicative of overwhelmed administration staff or flippant reporting is unknown.

I swore in frustration at a tank who obviously didn’t know how to hold aggro even though I explained to him how to. I was reported for swearing even though the game has a profanity filter. Which in my opinion is pretty damned retarded.” Male, 26-35.

Second Life prosecutions are reported on publicly and made available through a Police Blotter. 12% of the population having reports acted on shows a dynamic environment where abuses, and their punishment are high.

“I was once banned for a 72-hour period due to my use of a botting program that intercepted the client/server communications and effectively played the game automatically.” Male, 19-25.
Table 12

Think its acceptable for game administrators to monitor player's behaviour

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The vast majority of players accepted surveillance as integral to their enjoyment of the space. Players were divided though on whether this intrusion on their privacy was a good thing. Most considered it a corporate space, but many questioned the integrity of the administrators conducting the surveillance.

“This is, unfortunately, a slippery slope. I do believe that people in general (and players in particular) should be held accountable for their actions. However, I also prefer to believe that discussions I have with other players will remain solely between us; I have had many conversations that I would hope no one else ever reads. On the other hand, I do _not_ have faith that people will "do the right thing" without any potential punishment for improper behavior. The difficulty is, I don't know how to have privacy and accountability at the same time in a virtual world - any level of monitoring and logging that could be used to enable accountability would by definition also infringe deeply on privacy.”. Male, 19-25.

“It's their game, they can do what they want. If players don't like it, they can discontinue playing and paying for the game. Simple as that. Players can disagree with MMOs' admin but can't disagree with their ownership. This is not parallel with government behavior for a variety of reasons, not the least of which is that federal and state constitutions generally don't apply to private action. Besides, I'm glad they monitor behavior. Few things hurt MMOs more than puerile punks or cheating rubes. But again, I draw a tremendous distinction between a private company and the government. MMOs won't listen to my phone calls, take my money without my consent or shove me into a jail cell next to Bubba.” Male, 26-35.

Comments

As virtual worlds evolve into sophisticated social, economic and creative structures their impact on human interaction and the very nature of privacy and self-expression is under threat. In these worlds surveillance manifests itself as an accelerated version of its real-world counterpart, applying itself internally (from player to player) and externally (from administrators). While the questionnaire pointed to an acceptance of surveillance as a ‘necessary evil’, this by no means underplays the ongoing impact its existence will have on their development.
Conclusion

There were a number of observations uncovered that I will highlight before answering the core research questions and undertaking a general discussion. They are:

- Bentham and Foucault’s observations of unverifiable surveillance as a method to control populations can be successfully applied to virtual environments, although its effect may be limited due to a perceived anonymity when entering these environments under the guise of an avatar.

- Residents of virtual worlds are overwhelmingly accepting of surveillance, and encourage it as a method to police the population. Although many confessed to sharing intimate personal and commercial information, 90% believe the benefits of administrative surveillance outweighed its intrusion on privacy.

- Real-world citizens—being the subjects of surveillance—are also becoming the partners in its deployment (Agre and Rotenburg, 2001, p.157). This phenomenon has manifested itself in virtual worlds and was confirmed by the research project. Many people protect their own privacy through counter-surveillance techniques, and are actively encouraged to report suspicious or disruptive behaviour to the game’s administrators.

- I conclude that a class of privately run virtual worlds will emerge with individuals and companies producing closed spaces to socialise and conduct business in. This will occur due to the inherent threat of privacy breaches when discussing or producing sensitive information in virtual environments owned and operated by a third party.

- The use of art as a participatory interface to the research has provided insights unattainable using a traditional, science-based method, and has offered viewers the opportunity to experience surveillance as an artistic proposition.

I have attempted to answer many of the questions through general discussion and interpretation of the accompanying artworks. I will however address them in brief here.

Q1. How are MMO players observed and what type of information is recorded? The vast majority of players are observed in one form or another. In its most general kind, surveillance is conducted through the recording of data related to location and interaction. To prove an offence has taken place, administrators require post-action access to player log files, chat and locational data. They can then address a complaint based on the archive of this
information. 40% of players questioned had witnessed the presence of game administrators, and 90% believed it was reasonable to surveil players when in-game.

Q2. How are these players protecting themselves from surveillance?
Techniques used to protect players differ from world to world. **WoW** players are more concerned with strategy so techniques are often based around stealth and location. **Second Life** residents were more concerned with personal privacy, and the use of access rights to create private spaces is common, as are entire Islands closed to those without membership. Tools to scan environments for surveillance devices are also available, as are security firms trained in the art of bug-tracking and protection.

Q3. Does surveillance enhance or distract game-play immersion?
Overall, the general consensus seemed to mirror the real-world. Players were accepting of surveillance as necessary to protect their own rights and maintain stability within the game. Many encouraged its use by administrators to stop cheaters and hackers spoiling the experience and fairness of play. It could also be said that the existence of surveillance creates a more believable experience – it mimics the player’s understanding of the real-word and makes the game a more exciting, complex and unpredictable space.

Q4. How can the theme of virtual surveillance be represented through art?
The process of discovery was led by the creation of artworks, and this process will continue when others view the work. This project allowed me to better understand action research as a method of discovery, and appreciate its ability to offer an experiential layer to the research. Its application was difficult at first but became integral to my understanding the subject matter and underlying theories. I was frequently surprised by the insights certain artworks brought about – often months after they were created.

The final artistic outcomes were based on a simple **system of classification**: that of internal and external relationships and their combinations. The four possible combinations were born of early artworks, and made apparent by the formulation of later works. I also conducted numerous in-world experiments and research into virtual surveillance technologies found in **Second Life**, and contemplated their effect on my behaviour while creating the artworks. This was especially so with **Surveillance of the Self** – an experiment in establishing a system of gaze directed by and toward myself.

In making the artworks I found absorption of information without immediate critical appraisal benefited the outcome. Additional research insights were gained after the point of creation by letting the final work ‘settle’. The unconscious mind was allowed opportunity to formulate a visual, metaphorical conclusion before its counterpart pre-supposed a theory or outcome.
While the final works were used to investigate virtual surveillance as a subject, the process of making the works and engaging with the research space was integral in the development of theory. The ongoing interaction of the viewer, by way of attached systems of meaning, will continue to affect the research outcomes as individual interpretations are made. The final series of artworks are offered as a series of proposition, and provide a framework for the viewer to develop their own insights.

**Q4. Are residents becoming responsible for the surveillance and policing of virtual worlds, and what are the real-world correlations?**

In some worlds, the answer is ‘yes’. Linden Lab has made it clear they expect to grow their hands-off approach to policing. The reasons for this are twofold; the democratisation of the space, and the cost of policing so many residents. The crimes committed in Second Life are by no means as serious of those in the real world, although players are punished for bumping (repeatedly running into another player), harassment, obscenities, public disturbance and hacking. Players who feel they are being targeted can report the offence via a simple Report button located within the game’s interface. This system of citizen-based reporting mimics the real-world trend of relying on the general public to observe and report crimes and suspicious activities occurring in their vicinity. The acceptance of virtual surveillance as a necessary byproduct of the environment’s structure is by no means surprising. In general, most people in modernised western societies accept greater levels of surveillance as a necessary evil, especially given the current socio-religious landscape. Governments tell us that only people who have something to hide need be concerned, and we are encouraged to act as police-citizens responsible for observing and reporting on a collaboratively massive scale. Some of the more obvious community-based policing initiatives have included Neighborhood Watch programs established in the 1980’s, Crime Stoppers in the 1990’s and the Federal Government’s recent Keep Australia Safe campaign that was enacted after the 9/11terrorism attacks in America. The ethos of participatory surveillance has worked its way into virtual worlds, where residents are able to easily report on others using built-in ‘crime’ reporting systems.

**Q5. Is virtual surveillance an inhibitor for commercial enterprises entering Second Life, and what measures can they put in place to ensure security?**

To date, no instances of surveillance-related corporate crime have been reported. Businesses, however, should treat surveillance and its corollary, industrial espionage, seriously. As argued above, bugging players and recording chat is easy. As virtual worlds become more sophisticated and business utilise them as commercial interfaces and research platforms, the value of their private information will grow. Of course, the value of this information will
attract espionage, and businesses will react by installing anti-surveillance systems and procedures to protect their intellectual property. IBM has reacted to this threat by establishing a set of guidelines for all employees conducting research in Second Life. The future of virtual world businesses and the safety of their intellectual property may rely on the establishment of private worlds, where the terms of engagement can be dictated by the business and not the owner of a singular virtual platform (such as Second Life). Of critical importance will be the inter-world capabilities of these private environments. As of now, our digital personas, capabilities and belongings cannot be transported through multiple worlds without disruption to the continuity of our experience (we need multiple avatars for multiple worlds). In the real world, these types of freedoms are taken for granted when boarding trains, walking streets, entering offices and relaxing at home. People are free (to a point) to move in and out of public/private spaces with no disruption, save a swipe card or door key. How businesses manifest these protocols when applying them to virtual space, and how they deal with policing their own employees remain to be seen, although the beginnings can be seen with IBM’s efforts to educate staff through interaction guidelines.

Discussion

The prevalence of virtual surveillance shows us that virtual worlds are not immune to the same forces that shape real-world societies. Research conducted during this project found that virtual communities engage with these environments with the expectation – indeed encouragement – that they will be surveilled. The findings of this study show the majority of participants were unaware, unconcerned or supportive of surveillance taking place, and many were actively involved in the use and manufacture of surveillance-based technologies.

It’s possible that our acceptance of surveillance in all its forms can also be linked to this generation’s growing interest in celebrity. Networked individuals post their exploits and opinions to portals based on a premise of self-exposure. Blogging and Twittering, YouTubing and Flickring are hugely successful tools enabling projection of the self into the network. Warhol’s “In the future everyone will be famous for 15 minutes” rings true, with consumer audiences now only 15 clicks from fame. We expect to play witness to the most intimate moments of our idolised celebrities, and consume their lives as windows into our own. Maybe surveillance societies, or at least their outcomes, have become glamorous. When the network knows so much about you already, why not take advantage of the system by flooding your digital persona with information? The volume of personal information now being self-published may raise the social status of the young socialite, but the repercussions are dangerous when their potential employer does a Google-search. As Nietzsche pointed out, if you gaze long into the abyss, the abyss gazes also into you78.
The topic of surveillance is a popular one. Ethicists, privacy pundits and artists have tracked its existence as a manipulative socio-political tool for centuries, and the rise of digital, networked technologies has prompted a flood of critical commentary. To date, very little has been written about surveillance taking place in virtual worlds. Many still consider them mere playgrounds, of little use beyond entertainment. Some see the corporatisation of virtual worlds as indicative of their shallow nature. However, I believe the extension of commerce signifies maturity on a socio-economic level – one of many prerequisites for virtual world’s ongoing development as sustainable structures. I also believe the creativity that artists, architects, musicians and designers are bringing will assist in maintaining virtual spaces as a truly engaging medium.

Virtual worlds are not the realm of socially inept gamer geeks, perverts and property moguls. Popular media would have us think so, but in some ways they have the most to lose. These worlds are becoming the new interface for entertainment, interaction and commerce, and those expert in its use will be coveted by industry and the arts. MUVEs in all their forms are beginning to be taken more seriously by media and academic institutions as sustainable, social structures capable of changing the way we interact, learn and create. Artists and commercial entities are also exploring notions of entanglement, where ‘real’ and ‘unreal’ worlds cross over and produce unexpected outcomes. Their combined insights bring understanding and acceptance of these worlds as having a profound impact on our collective sense of self, space, place and belonging.

The digital persona’s future lies with software agents capable of managing the volume of data now available – both un-encountered, and of the self. Perhaps advancements in content constructs will deliver ‘e-familiars’ – intelligent, personalised agents scouring the network for content appropriate to their owners, and releasing information back to the network on a customised basis. With luck they will mimic Bentham’s own watch guards: unverifiable and powerful keepers of both gaze and power.

The growth of virtual worlds will influence our lives in profound ways as the upcoming generation of networked consumers, business leaders, artists and academics rely on an intimate, real-time 3D social layer to interact, form communities, conduct business and express themselves creatively. The complexity of virtual communities and the technology that drives them makes it difficult to predict when they will, if at all, become a truly dominant paradigm. The 1990’s promise of revolution through mainstream virtual reality (VR) interfaces failed spectacularly when the industry discovered many users suffered intense nausea (VR-sickness) when “goggled-in”.

Exegesis
The impact surveillance has on the development of virtual worlds should not be under-played. Their inherent digital nature makes them a target of the most extreme surveillance – and has in some ways influenced their evolution already. For the first time, systems used to police, report and make safe a new social platform have been hard-wired from the beginning, and their omniscient nature will continue to influence the techno-sociological leaps the medium undertakes.

As people travel through the streets and buildings of real and virtual space, their each and every movement, interaction and intimacy is plotted, recorded and archived for future reference, so much so that the surveillance of public and private activity is typically anticipated and largely accepted. Bentham’s “diversified application of this single application”, that of the panoptic unseen yet all seeing eye, has indeed spread itself over the face of civilized society. His four pillars of revival: morals, health, industry and instruction, have been revolutionised by this simple application of observation, and as the algorithm marches forward into the virtual world, Bentham’s dream of ongoing adoption will continue.

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This research project has facilitated many personal insights, and hopefully developed a framework for future researchers to extend upon. My expansion of surveillance theory into virtual worlds, classification of virtual surveillance types, the questionnaire and its outcomes, and the creation of a series of artworks have provided personal analytical and experiential insights. The creative process – presented as a series of propositions, means the end of this project is the beginning of many others, with ideas and friendships formed having lead to numerous opportunities beyond the original scope. Future projects are not related to surveillance, but the exploration of art in virtual environments.
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Gelemter, David. 1991. Mirror Worlds, or the Day Software Puts the Universe in a Shoebox, Oxford University Press


Jones, Lyndal. 2006. On the use of Propositions, Australia: RMIT University


Notes


2 Linden Lab describes residents as “a uniquely named avatar with the right to log into SL, trade Linden Dollars and visit the Community pages.” The term ‘resident’ is used here to describe a registered user of any MMO. As many MMOs grow, so do feelings of belonging and community. Many people feel they are residents of these communities, not just players of computer games.

3 http://www.ige.com/

4 See www.selectparks.net for an archive of serious- and art-games.

5 See http://homepage.mac.com/davidrokeby/home.html

6 The questionnaire can be found via: http://www.iconinc.com.au/christo/surveillance/ 

7 See http://mmogdata.voig.com/ for a comprehensive list of MMOs and their market share.

8 See Rosiland Kruass’ The Optical Unconscious


11 http://www.selectparks.net/~julian/

12 http://www.beigerecords.com/cory/

13 http://www.eddostern.com/

14 http://www.tmpspace.com

15 http://yamanakanash.net/secondlife/unsung_songs.html

16 http://yamanakanash.net/secondlife/rose_heard_at_dusk.html


18 May 2007, Our cotton-wool kids, The Times [Online]. Available at: http://women.timesonline.co.uk/tol/life_and_style/women/families/article1830538.ece


22 Rybicki, J. April 2006, The Real and the Semi-Real, Available at: http://www.1up.com/do/blogEntry?bId=6883235&publicUserId=4553267


25 Available at: http://www.virtualstatravel.com/


33 http://www.multiverse.net/

34 http://www.activeworlds.com/

35 Jeremy Kemp of Stanford University has established SimTeach – an information portal for “educators using M.U.V.E.’s”, and many institutions have created locations in Second Life for student research. These include RMIT University, The Australian Film Television and Radio School, Columbia University, Harvard University, and New York University to name a few.


41 Ibid
SL’s scripted flight enhancers, or boosts, enable the wearer to fly beyond the set limit of 200 metres. SL in fact has no theoretical maximum altitude, with Beatox Xevious holding the current record of 40 trillion metres in 15 minutes.


59 SafeEyes parental control software can be downloaded via http://www.safeeyes.com.au/


Jeremy Bentham’s 1787 concept of the Panopticon was proposed as a system of surveillance appropriate for institutions requiring an all-seeing yet unseen instrument of authority. Bentham’s “visible and unverifiable” algorithm has been applied as a means to control and monitor prisons, hospitals, schools, and more recently city streets and electronic spaces such as the Internet.


Hogan, J. July 2003, Smart software linked to CCTV can spot dubious behaviour, New Scientist [Online] Available at: http://www.newscientist.com/article.ns?id=dn3918


Mattes, E & F, collected works [Online] Available at: http://0100101110101101.org/

Many viewers of enTrance have expressed discomfort in the vulnerability of the subject. This discomfort was often linked to the beauty of the child and of her detached and unaware state.


Multiverse software can be downloaded via: http://www.multiverse.net/

Active Worlds software can be downloaded via: http://www.activeworlds.com/


AOL search queries can be downloaded via: http://www.gregsadetsky.com/aol-data/

The questionnaire can be found via: http://www.iconinc.com.au/christo/surveillance/


The translation of this quote changes between sources. One version can be found in Friedrich Nietzsche’s Beyond Good and Evil, Part Four, Aphorisms and Interludes, p.146.

The rise of new mediums and networks has always provoked concern: The bicycle was to be the downfall of society by offering women unfettered access to transportation; the vibrations caused by train travel would cause madness in passengers; movies would endanger lives and cause mass fainting; and television is still derided as the destroyer of free choice and activism. Debate over the effect digital networks are having on culture will be ongoing. Whether virtual worlds are a negative cultural disturbance or a doorway to the true global village remains to be seen.