

VIRTUAL REALITY AND MASKING

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ABSTRACT

This research connects masking in the real world with internet chat rooms, online gaming and virtual 3D worlds. With the release from real-world constraints participants explore far reaches of the psyche, enabling the expression of a variety of behaviours, the collective unconscious and archetypes.

The research is part of a PhD in Fine Arts entitled *Visualising Real- and Virtual-World Masking with Art Glass and Abstract Animation*. It seeks to answer the questions “Does the transformation of identity in virtual reality represent a basic human need to use masking and how can this be visually represented?”

A medium chosen to visually express these experiences is warm fused glass, itself an ancient art. Kiln fired glass can reveal and conceal, be spectacular or subtle – consistent with the masking process. As well, multimedia will be used to visually explore the dynamic aspects of masking.

For creative research to thrive it needs to stretch the boundaries of disciplines, extend across them and then push into unknown territory. This study encompasses ethnography, anthropology, sociology, psychology and the visual arts. It extends well beyond current practice and knowledge and provides an excellent environment for collaboration. It has, for example, implications for further research in virtual environments on addictive, obsessive and deviant behaviours and the psychology of mass participation, transformation, transcendence, immersion and disembodiment. As well, psychological tenets about identity and self are challenged by participants occupying different and multiple identities.

The practical outcomes of this research will assist in a better understanding of human and community needs and how they can be met in the real world. It is likely to assist in understanding and dealing with obsessive and aggressive on-line behaviour. Just as importantly it could lead to an enriched on-line experience, with obvious commercial implications.

KEYWORDS: Study and Collaboration, Environments, Concealment

INTRODUCTION

A PhD project investigating masking in on-line environments has identified some significant issues for further study and collaboration. The project relates masking as it is traditionally used with the transformations that occur in virtual worlds, chat rooms and gaming sites. The aim of the project is to put in visual form the process of masking in those environments, drawing on literature in anthropology, sociology and psychology. Unexpected outcomes of the project have been the identification of internet addiction, aberrant behaviour and antisocial behaviour as issues requiring further study. Another outcome is the potential to use Jungian psychology to enhance the player environment. This essay reviews masking as it has been traditionally used, examines the masking process in on-line environments and discusses the significance of the outcomes mentioned above.

Humans have used masks for at least 20,000 years, to hide meaning or identity, to transform identity, to reveal other worlds and meanings, to seek protection from outside forces or even to have fun. Concealment, revelation and transformation of identity are key attributes of the masking process (Edson 2005: 9-13).

In many communities masks were, and still are, a spiritual connection with beliefs, rituals and ceremonies that are used to link their ancestral spirit world with everyday life. The mask hides individual identity and enables spiritual transformation or supernatural communication. The wearer, the mask and myth become a paradigm necessary to maintain a belief system on which the community relies. Masks merge real and imaginary worlds. The mask enables connection with demons or spirits and the wearer becomes possessed by spirits, and further, actually becomes the spirit (Mack 1996: 110, 147-148).

Masks do not have to be worn on the face, or conceal the face, or be worn at all. For example, a masked performer in a Nigerian community enters a dwelling with men (not women), removes his mask but is still referred to by the mask name (Picton 1990: 183). Tattooing, scarifying and other forms of body modification along with costumes and ornaments can be masking (Edson 2005: 13-16). Masking also occurs through song, speech and sounds (Pollock 1995: 591). Traditionally masking also had another purpose for viewers in that the mask, with its costume and adornments, could be the face of a power or a metaphysical presence otherwise too dangerous to see (Picton 1990: 192).

Masks were also used for dramatic purposes in many Western cultures and their purpose was to enable the wearer to be transformed to the being that the mask represented (i.e. to become another persona) and for viewers to quickly recognise who and what was being portrayed. Besides supernatural entities, the masks could also allow representation of those with power or control, and reveal situations not permissible in normal circumstances.

In mediaeval Europe masks were used in communities for teaching, cultural or propaganda purposes, especially in parades celebrating religious and historical events as in the Mummers' Plays in Britain and the mediaeval mystery plays (Burnham et al 2005). However, masking and its attendant rituals were actively discouraged and persecuted by the Church, or incorporated into its own religious events (Laurent 2003). Mack (1996: 193) however, refers to the persistence in some parts of Europe of what are considered to be:

“implicit beliefs, expressed in practices incompatible with the dominant religious tenets and related ultimately to pre-Christian ideas the connection between masking, the celebration of the dead and hazy, complex notions of witches and spirits creeps through the tightest mesh of official cultural politics attesting to the presence of the “Other” within modern European culture.”

Examples persist today in the form of Halloween, the Mardi Gras, Carnivale, folk festivals, the masked ball and in characters such as the Harlequin and the Fool. In addition, colonial, post-colonial and contemporary uses of masks in South America in public ceremonies combine Catholic and traditional beliefs and imagery.

There are examples of implicit beliefs persisting from pre-Christian times including witchcraft, persecution of minorities, spirit possession, shamanism, the dead and the undead. The mask character gives form to vague but real identities and allows an ongoing narrative to unfold - with contrasts of good and evil, extremes of human types, humans and animals, ugly and beautiful and the paradoxical Fool who encompasses both extremes “without going mad” (Mack 1996: 191-215).

There are parallels between these persistent beliefs and events and what happens in on-line virtual web sites. An example is Rebecca, a caucasian housewife in the United States of America who spends most days in a virtual reality site called the City of Heroes. Stygian Phisic is her avatar and he is big, black and male. Rebecca as Stygian is accepted for “his” skills and leadership. “He” is treated differently to “her” if she had a female avatar and “he” can develop friendships with other guys, that is, male avatars (Cooper et al 2007). What happens in this transformation is the topic of study in this PhD.

Each day tens of millions of people change their identity online and create digital alter egos. The virtual environments the subject of this study are those where identity is changed, these being multi-user games, virtual worlds and chat rooms. These virtual environments are very popular. Keeping track of current statistics is difficult but Voig (2010) reports a rise in the number of active subscriptions to on-line multi-user games from zero in June 1998 to almost 50 million in 2009. Total virtual world registered accounts is reported to have reached 803 million in 2009 (Kzero 2009).

What do people do? They construct a virtual life and environment, conduct virtual businesses, communicate and play games. In virtual worlds they buy land, build on it and develop rules and regulations to control activity and may construct a replica of the real world, but in the way they wish it to be. Second Life has a virtual economy that interacts with the real economy and legal systems.

Players change gender. The transformation that occurs with gender swapping (as with Rebecca) has been likened to Jung’s concepts of Animus and Anima (Taylor 2003: 8; Turkle 1995: 190, 212-226; Guest 2008: 220-241). Female avatars, especially if they flaunt their sexuality, receive a lot of attention from male avatars which they otherwise do not get, one example being unsolicited offers of technical assistance (Turkle 1995: 214). Off-line females are also much more successful in power and leadership positions if they become male avatars in gaming sites and in which they can more freely explore the gaming site environment (Suler 2008). Communication is common to all virtual environments. But the forms of communication are limited, including text, text captions above avatars and primitive non-verbal communication. As mentioned earlier, verbal communication can be a mask in itself, just as in off-line environments, and can take on altered and sometimes violent forms (Webb 2001: 560-594, Bailenson & Beall 2006: 1-16). By way of example, a transcript from a chat room is shown below (Webb 2001: 570):

IAMALYOURS	(You’re my honey bunch, sugar plum, pumpkin) gtomn (smoke a big spliff of some good sensamilia blot)
STU 68	(Slacker Bitch Fag Hag WHORE[tiggypop])
Lea25	HBAD BABY SMOOCHHESSSSS ((If ya wanna get with BAD ya gotta be GOOD)<BADG>) kasai hey escape, i dont have that gest
Handyman36	(~~~~~.C’EST LA VIE!!~~~~~)
Lea25	KASAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA GF
Lea25	HEY YA SAYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYYY (~~~~~.C’EST LA VIE!!~~~~~)
Lea25	YEY YA FANTSSSSSSSSSSSSSS GF HEHEE
SayLLaVee	Hey escape, I need your gesture
Badgir31	(LEA SAYS IM A BITCH IM A TEASE IM A GODDESS ON MY KNEES<boss>)

There are multi-user games of every type: fantasy, strategy, sports, science fiction, action, adventure, sprites, text-based, historical and social networking. Combat and war are very popular and include military battles, terrorism and counter-terrorism. Some online games take players into real time virtual battle fields and some games have very sophisticated animation. They have been described as “interactive narratives” because it is like being in and part of a movie and people become totally immersed in the game and in their role in it (Meadows 2008:15).

People describe their online experiences in various ways. Some examples are:

“A spiritual experience”, “transcendence of the physical limitations of the body while retaining its pleasures”, “cyber-immortality”, “suppressed aspects of a real self revealed so that I feel more like myself”, “immersion in an online identity can become very deep and completely accepted”, “off & on-line identities merge and there is free movement between the two”, “the created virtual identity is just as ‘real’ as ‘my’ off-line identity”, “when we step through the screen into virtual communities, we reconstruct our identities on the other side of the looking glass”, “to merge with the product of one’s imagination is the essence of creativity. It’s God-like”, “..... nine real people become one online persona” (Guest, 2008: 8, 21-22, 68; Meadows 2008: 82; Suler 2005a; Turkle 1995: 177).

In explaining how people play in massive multiplayer online role-playing environments (MMORPGs), Bartle (1996: 131) devised a Player Interest Graph, comprising Killers, Achievers, Socialisers and Explorers whose activity is at the two levels of acting or interacting. Hamilton (2009: 11) described the concept of perceptual transfer, with a merging of the physical tools (the mouse), the body image, the concept of self, the avatar and immersion in screen space.

Immersion is also a term commonly used to describe the level of engagement of the player in the game. Immersion includes a response to the game’s aesthetics, the interface and the game’s stories and the extent to which the player becomes separated from the outside world and located in another - this is called ‘presence’. Other aspects of the game that are important for immersion are the visual, auditory and mental stimuli, and social interaction with other players Calka (2006: 24-41, Ryan 2001:103). Thon (2008: 35-40) proposes a multi-dimensional model to explain immersion, some of which overlap with those of Calka.

The first dimension is spatial, which can be from the avatar’s perspective or from behind and above it, and it is the environment and space that the avatar is located in. The second is the challenges that are presented to the player and the attention they then have to apply to direct their avatar - otherwise know as the flow. The third is the way in which a story unfolds and suspense is held, including the events, the characters and world as a whole. The final dimension is the social context - the interaction of one’s avatar with others and any resultant empathy.

It is this writer’s argument that these concepts (perceptual transfer, immersion) appear to be the same process as masking in the real world, where the wearer is transported to, or immersed in, another ‘place’, the place being another person, being, power or spirit, depending on the cultural context and the purpose of masking. This has been commented on (but not extensively explored) by various writers including Meadows (2008: 36-37), Galanxhi and Fui-Hoon Naha (2007: 779-780) and Wertheim (1999: 236-237).

Returning to Rebecca - she conceals her physical appearance and her gender and is transformed to reveal Stygian Physic in the online game called City of Heroes. She goes from housewife to hero in a comic book construct called Paragon City, where heroes battle villains, criminals and monsters. Jungian psychology helps to understand this process. The persona is a Jungian archetype which mediates between the external world and the inner psychic self. It is a person’s public image - the mask put on before a person shows themselves to the outside world. It is also the impression that is used to manipulate opinions and behaviours. It can be mistaken, even by ourselves, for our true nature and sometimes we believe we really are what we pretend to be.

Beneath the persona are some Jungian concepts which propose that our need to connect to the spiritual and irrational world has existed through the ages and continues now, similar to the persistence of the need for masking. One concept is that of the collective unconscious - the placing of an individual’s psyche within the collective psychic evolution of humans. Its existence is not dependent on experience and is not conscious to the individual. It is a reservoir of

primordial images inherited from a person's ancestral past which become active with present experiences. This may explain, for example, the popularity of games with medieval and mythological environments and creatures.

People may have many identities in virtual reality sites and even on the one site. They can change all aspects of their identity including gender. In MMORPGs players explore the creation of new identities and use them to participate in the games (Taylor 2003: 3) and their online characters can take on a life of their own (Taylor 1999: 439, Lister et al 2009: 212). The question then is what is the true self, or is there one at all? The multiplicity of selves is often referred to by users of online virtual spaces in interviews and in particular they speak of their avatar acting in an independent manner. There are threads through psychology literature pointing to the decentering of self (Turkle 1996: 4), of there being no central unified self, the "self" being fragmented or "multiple but integrated", or even of the notion of self being an invention (Turkle 1995: 178-180, 190, 258-259). A contemporary view is that identity is "polycentric fragmented - as patchwork-identity" (Roesler 2008:442). Carl Jung recognised this possibility and related an individual's personae to universal archetypes (Turkle 1995: 259). The relationship between the avatars in MMORPGs and Jungian archetypes has been speculated on and is considered a way of exploring why these games are so popular and why online game addiction occurs (Chee 2005: 3). Lai compared the archetypes and quests in MMORPGs from Taiwan and the United States with their respective cultures. Four Jungian archetypes were included in his study; Chief, Hunter, Shaman, and Fool. He concludes that the studied archetypes are universally represented but their expression is culturally determined (2003: 103).

Four archetypes were chosen for further study in the writer's PhD; Shadow, Trickster, Rebirth and Spirit. Shadow - the dark, inferior and undesirable aspect of everyone's personality. It has personal and collective components, and symbols associated with it are demons, devils and evil and the undead (Sollod & Monte 2009: 163-164). On-line sites offer ample opportunity for projection of this side of the player's personality. An example is *World of Warcraft*, a MMORPG where a player adopts an avatar in an imaginary world. They chose one of two opposing factions, a race and a class. So, they could be in the Horde faction, a troll and a fighter. The avatar can just explore the world, or fight other avatars and monsters, and/or complete quests. As they develop skills they acquire additional abilities and become more powerful. For women this can be a powerful experience where they can shed their gender and explore a wide range of experiences and roles, especially powerful ones, in an unhindered way (Taylor 2003: 40-41). The site is enormously popular, with 11.5 million subscribers in December 2008 - the latest figures available (Blizzard Entertainment 2008).

Nasara is an artist in Shanghai who plays 30 hours a week in *World of Warcraft* and who is an example of a woman seeking a powerful figure projecting the Shadow archetype. Originally her avatar was a beautiful female but she became frustrated with males wanting to chat and help her. In *World of Warcraft* she is an Undead Rogue - very ugly. The Undead were once alive but have been given enough life functions to play their roles in the game. They are "mindless, bloodthirsty fiends hostile toward any living thing that comes across their path". They look like dead people and their skin is gray and rotting. Their pupil-less eyes glow with dim, white ghost light (Cooper et al 2007). There are many types of Undead, they are part of many cultures and are in many forms (Thompson 2008: 10-12). They are dead but have lifelike activity. The difference between the real and the virtual world is that in the former the undead are feared and avoided but in the latter a player "becomes" one of these creatures.

Another example of the Shadow is the extent of social disorder and aberrant and criminal behaviour in virtual worlds. These behaviours can include (not in any particular order!): fraud, anti-social behaviour, prostitution, underage sex, assassination, theft, corporate destruction, intimidation; virtual violence such as assault, rape, murder; mafia-style crime operations and terrorism (Guest, 2008: 98-156, 189-191; Conger, 2008: 105-115). The only sanctions against these

behaviours are a warning, ostracism or being kicked out of the site - often only to return in another form at another time. The relationship between the Shadow archetype and social disorder in various forms in the real world was described by Gandhi (n. d.). Aggression, a sense and defence of territory, xenophobia (revealed through the concept of the 'enemy'), interpersonal conflicts, wars, pogroms, the need for security - these are expressions and projections of the Shadow in his view. In virtual worlds the use of Jungian archetypes in role playing and as a way for players to explore the Shadow aspects of their own personality was described by Adams (n. d.: 8, 12).

The Trickster has been extensively documented in the real world (Jung 1969: 159-179, Hyde 1998, Lock 2002) and is expressed in a great variety of ways throughout history, some attributes being malicious, disruptive, clever, a wise fool, deceptive, god and human, shape shifter, boundary crosser, boundary dweller, super human, ambiguous; swapping gender; finding ways to get around the system; thinking outside the square; rebelling against authority; a destroyer and saviour; a being for whom boundaries do not exist; able to move between spirit and reality; and connecting between gods and humans. These descriptions fit some of the behaviours observed in on-line sites, as described earlier, but there is little reference to this in the literature about virtual worlds. Adams is an exception (n.d.: 9) and he refers to the Trickster archetype (amongst others) being used in MMORGPs as a model for role-playing, and that some characters have the characteristics of the archetype built in.

The Spirit archetype was documented by Jung (2003: 99-100, 104-113) and characteristics described by him are 'an invisible, breath-like "presence" an active, winged, swift moving being (a) dynamic principle'. He described the spirit as having the "principle of spontaneous movement and activity the spontaneous capacity to to produce images independently of sense perception and the autonomous and sovereign manipulation of these images". In his view spirits come to primitive man externally but as humanity develops, spirit became part of human consciousness. However, he considers the psychic manifestations of spirit to be archetypal (i.e. an autonomous primordial image) or in other words the "autonomous content of the unconscious".

Wertheim (1999: 253-282) has likened experiences in cyberspace as religious or spiritual, cyberspace being an "immaterial space", not just for the individual but also collectively (ibid. 233). Life is dualistic and the immaterial "cyber-selves" are just as real as the "real" world. This dualism is compared to the Middle Ages view of the afterlife including Dante's spiritual ascendancy (ibid. 245-246). The experience of some in cyberspace is dream-like with the conventional views of space, physics and time being no longer relevant (Suler, 2005b). One term used to describe this state is hyper-corporeal (Wertheim 1999: 241). Despite the documented experiences of players in virtual worlds no references to the expression of the Spirit archetype has been found in the literature.

The third archetype is Rebirth. Of the five types of rebirth archetypes described by Jung the one chosen for the PhD project is rebirth itself in the form of transformation and transmutation (Jung 2003: 54-55). Transformation in traditional masking has been well documented (for example Edson, 2005: 6) as has transformation in cyberspace. Bailenson and Beall (2006:2) describe what they call transformed social interaction where the participants in an on-line environment can manipulate the appearance, verbal and non-verbal behaviour of their avatars. Yee (2007: 97-99) showed that behaviour and appearance of a person can be substantially changed on-line to achieve a social or other purpose. But further, the user can have their on-line behaviour influenced by their avatar, which harks back to the viewer-viewed interaction in traditional masking. In the latter the viewed needs a cultural context in which to effectively display masking, the viewer needs to suspend disbelief in order to appropriately respond to the masking and both then enter a new paradigm of the environment symbolised by the mask. The masking process is not complete or effective unless the viewer suspends belief about the identity of the viewed.

This leads to a consideration of the notion of 'self'. The transformation that occurs challenges the unitary nature of the Jungian "self" in a virtual environment. An online entity can assume a life of its own where the person has temporarily surrendered their normal identity to the imaginary persona - so where is "self"? A "disinhibition" effect has also been reported where people say and do things online that they would never do in real life, by using anonymity (i.e. concealing identity) and dissociation (separating real life from online life) and as a result people say they feel more like their "true self" (Suler 2004). An explanation of this may be that the "self" has many aspects and components - some of which are active in certain environments, the form of which can be different depending on the particular online environment.

Another effect is the shifting and destabilising of the "self-boundary" - the sense of what is me and what is not me - and this can lead to uncertainty and anxiety - the blending of "self" with "other". This boundary is referred to as "liminality" and liminal moments are "times of tension, extreme reactions, and great opportunity" (McCorduck 2008: 3).

Virtual reality enables the self to be not only decentred but multiplied without limit (Turkle 1995: 190). The adoption of a number of online identities or virtual personae has been called the protean effect (Yee & Bailenson 2007: 271), Proteus being a Greek sea-god who took on different forms. Psychologically the notion of a unitary self can be replaced with two explanations; fragmentation of the self, or alternatively, "sense of self without being one self multiple but integrated" echoing Jung's view that our personae reflect our connection with universal archetypes (Lifton 1993).

The writer's art practice is concerned with putting the masking process in virtual reality into a visual form. The first phase is in the medium of warm fused glass. The second phase is using abstract animation and motion graphics, and the two are to be integrated in an installation. That is the point of departure in the studies. In relation to the themes of this conference there are however, some questions that arise from these studies about what underlies the observed behaviours in virtual reality.

The first question is how internet addiction can be dealt with. It especially involves the virtual worlds being studied. Brian and Wiemer-Hastings (2005: 112) formed the view, in a study carried out by them, that users of MMORPGs spend more time playing these games than non-MMORPG players because the social environment on-line is more enjoyable than off-line and it is the on-line social life that attracts them. Further, the users studied did not show signs of addiction. However, the American Psychiatric Association (2008: 306) considers internet addiction to be a common problem with a wide range of symptoms: overuse of the computer, social withdrawal; anger, tension, and depression when not on-line, and outcomes such as arguments, lying, poor achievement, social isolation, and fatigue in real life. This can have an impact on off-line social life, relationships and the workplace (Byun et al, 2009: 203).

The problem is particularly acute in South Korea where the Government arranged installation of a national broadband network, but it also is known to be an important problem in China and the USA (American Psychiatric Association (2008: 306).

Yellowlees, P. and Marks, S. (2007) reviewed the literature on internet addiction and reported that "impulse control" disorders appear to be the most common aetiology, however, the causes are not well studied (1449-1450). This was supported by Byun et al, (2009: 205-206) who reported that while use of the Internet was associated with loneliness, no linkage was found between personality and Internet use. Tyrer (2008: 11) was of the view that this addiction, along with others, is a 'subjective loss of control' caused by motivational factors in the person's external environment. Parsons (2005: 108-109, in a survey of 513 MMORPG players, found that loneliness and on-line confidence were the factors best at identifying players likely to become addicted. Addictive behaviour appears to meet social needs not met in

the real world, such as companionship and acknowledgement. The cost is high, with the average player spending 35 hours a week to the detriment of off-line activities. Further, very few addicted players sought treatment.

It can be seen from the above that the issue of internet addiction is significant, confusing and contradictory. As the speed of communication networks increases, the quality of virtual environments is enhanced and alienation in off-line environments continues this problem will increase.

The second issue is how aggressive, deviant and antisocial on-line behaviours can be better managed and should they be? Becker (2004) reported on the activities of 'griefers', on-line players in MMORPGs who, for example, gang up on new players, lure them to a location where they torture them, or kill them and strip the avatar corpses of valuable in-game items. In *Second Life* they 'scam, cheat and abuse, often victimising the weakest and newest players' (Alemi 2007: 20). Some virtual worlds (like *Second Life*) have their own currency and economy which can be converted into real world currency, providing another opportunity for criminal activity (ibid. 14-16). The reported crimes and behaviours are many including; theft, robbery, embezzlement, extortion, fraud, defamation, property damage, assault; sexual, verbal and other physical harassment, rape, terrorism and disturbing the peace. The sanctions may be no action; being shamed, banned or terminated, and even crucifixion (ibid: 22-32). In most cases there is no further recourse by victims either inside or outside the virtual world, because the property or the actions are virtual. The view is that this situation is a product of the freedoms inherent in virtual worlds (which players find so attractive), the complexities of effective global legislation are insurmountable and in any event governments cannot regulate what happens in virtual worlds (ibid: 36-40). In order to provide relief to victimised avatars Alemi (ibid. 44-50) proposes an in-house, in-world judicial process managed by the game developers, with emphasis on shaming and in-world damages. Nowhere in these discussions have the writers considered the underlying causes of these behaviours. Further, generally there is no effective response to these behaviours. Returning to Jungian psychology, the likeness to the Jungian Shadow and the Trickster archetypes mentioned earlier is striking. There is a paradox here as well. Players in MMORPGs, depending on the character they chose, are not successful unless they plan to kill, and/or they can motivate others to kill and/or they kill themselves.

The third issue to arise out of this PhD project is would an understanding of the psychology of online behaviour provide a market advantage to developers and designers of virtual reality sites? Recent published research indicates that there have been very few studies on this topic generally and very few have actually engaged with players in a systematic way to identify what players want. None have identified if a relationship exists between Jungian archetypes and player behaviour, let alone how this may be incorporated into game design. Ducheneaut et al (2006: 282) observed that there had been little longitudinal research about the 'how and why' of players participating in the gaming environment. To remedy this they conducted a quantitative study and concluded that the most important factors for players were a steady flow of challenges and rewards and an action orientation with the options of being solo or with groups, and against other 'humans' or monsters. The drop out rate from group activities was high and the postulated reason was the significant time commitment required to play in groups. They also found that 'good', physically attractive characters were preferred (ibid. 314-316). There was no investigation into psychological factors. This is also the case with Bartle (1996) who developed an 'interest graph' of killers, achievers, socialisers and explorers to explain the way players interacted with a game. However, there is no acknowledgement that there may be important underlying psychological issues that may need to be taken into account when seeking to achieve immersion in a game.

Taylor (2003: 24-25) examined the factors important to women and found that socialising and developing social and leadership skills are highly valued. However, in MMORPGs women also seek out social power, the opportunity for advancement through the levels, adoption of socially-ambiguous identities, exploration of the virtual environment,

and participation in combat activities, often in a group. Some women describe wanting to have a powerful avatar and to participate in violent combat activities (ibid. 26-34), something that game designers do not well cater for (ibid. 38-40). Women do find ways to overcome this (such as Nasara, discussed earlier in this essay) despite the conflicts imposed by the game design.

A key journal in this field is *Game Studies* (2001-2009). A word search of its archives for 'archetypes' yielded no relevant hits. Given that many MMORPGs are based on mediaeval, monster and other fantasy characters and accoutrements, which themselves draw on the 'Other' (Mack 1996: 193), it seems obvious that game designers have a rich source of material in Jungian archetypes and the collective unconscious. Bringsjord (2001) put the view that the following elements are needed to make "compelling interactive digital entertainment"; immemorial themes, story mastery, robust characters and personalised characters. The first is relevant to this essay but unfortunately this was not further developed in this article.

Eladhari and Lindley (2003) from the Zero Game Studio in Sweden describes how a player, when entering a MMORPG, leaves their body behind and it is up to the game designer to provide player entities that meet the needs of the player. Character design derives from a system developed in 1974 which has been progressively enhanced but which, in the view of the authors, has not developed deep emotional engagement in the game. To that end they are adapting and researching another model called Live Action Role Playing (LARP), one part of which is the Mind System - the design of the virtual mind, a representation of the player's projected self, a 'prosthetic consciousness'. They base the psychodynamics of character development on the Freudian model of id, ego and super ego, and the phenomenological/psychological model on Maslow's hierarchy of needs. It is the view of this writer that Jung's world of archetypes and the collective unconscious would add another significant dimension to their proposed model. This has been little explored. Exceptions are Chee, (2005) who found many recognisable Jungian archetypes in MMORPGs, such as Warrior, magician and Holy figure and Lai (2003: 100) who used Jung's archetypes to investigate the cultural differences in the development of game characters in games developed in Taiwan versus America. He concluded that the archetypal systems were similar but their expression was socially determined.

CONCLUSIONS

What was intended to be a PhD in visual art has uncovered significant issues in game design and development, and in behaviours in virtual worlds, chat rooms and gaming sites. The problems in the former are formidable and the possibilities in the latter are considerable.

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