

WHAT'S REAL ANYMORE: A COMPARISON OF WORLD OF WARCRAFT,
SECONDLIFE AND ONLINE EXPERIENCES

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The proliferation of the Internet and online-based social interactions has become an increasingly popular topic with communication scholars. The goal of this study was to explore how massively multi-player online role playing game (MMORPG) players make sense of and negotiate their online social interactions. This study ($N = 292$) examined how players of SecondLife and World of Warcraft evaluated their online relationships compared to their offline relationships and investigated how different levels of realism within different MMORPGs effected player's online experiences. The results indicated that players of SecondLife placed higher values of emotional closeness to their online relationships when compared to players of World of Warcraft and SecondLife was rated more real by its players than World of Warcraft. Results further indicated that players of SecondLife had higher levels of perceived online emotional closeness when compared to perceived offline emotional closeness. Implications of this study focus on developing a bottom up holistic profile of online game players as opposed to the current top down research model.

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CHAPTER 1

THE EMERGENCE OF THE VIDEO GAME

Over the past several decades the videogame industry has become a multi-billion dollar industry, pulling in revenues that challenge the television, film, and music industries. In October 2007, the iSuppli Corporation (2007), a marketing analysis group released revenue figures for the leading three console game makers. iSuppli's study indicated that that in the third quarter of 2007 the Nintendo of America, Inc. posted revenues of over \$1.2 billion in sales, with Sony posting \$1 billion, and Microsoft trailing at \$317 million. The U.S. based Entertainment Software Association (ESA) (2008), which provides business and public affairs services to its members, estimated that the videogame industry grossed over \$7.4 billion in 2006, which does not include international and foreign videogame sales. Estimates for 2007 puts videogame entertainment revenues at over \$9.5 billion. Although videogame revenues still trail their film, television, and music counterparts, these numbers show the videogame industry represents and plays a significant role in the entertainment market.

During this time, videogames have developed from a niche market product to a mainstream popular culture phenomenon. Originally, game players were typically teenage males, but today that is no longer the case. For 2007, the ESA reported that the average age of the game player is 33, with players ranging from 18-49 years of age comprising 47.6% of all videogame players. Specifically, regarding computer game players, the ESA reported that players over 35 years old comprise 44% of the market, gamers between 18-35 years old comprise 35% of the market, and 18 years old and under trailing at 30%. The average game player also engages in game play nearly 7.5 hours a week.

These numbers clearly show the proliferation of videogames in popular culture today.

Beyond sheer popularity, videogames have become increasingly realistic in depicting violent, aggressive, sexist, or even racist story lines. Recently, violence in videogames and their effects on game players have been widely studied (e.g., Anderson & Bushman, 2001; Anderson & Dill, 2000; Ballard & Wiest, 1996; Deselms & Altman, 2003; Krahé & Möller, 2004). Although Deselms and Altman (2003) did not directly look at the effects of more realistically violent videogames, they found that men and women both showed desensitization to violence after playing violent video games. Although men generally showed a higher level of desensitization to violence video games, perhaps due to socialization patterns of young boys, women also showed measurable levels of increased aggression.

In another study, Ballard and Wiest (1996) examined game players of both *Mortal Kombat* (MK) and *Mortal Kombat II* (MK2). The premises of the games were nearly identical where two players would each control a combatant with the end goal being the killing of the other player through hand-to-hand combat. The major difference between the two versions is that MK2 utilized higher quality graphics and sounds due to advances in computer and game technology. Ballard and Wiest (1996) found that the players of more graphically advanced violent videogame scored higher on aggression tests than those who played less graphically advanced video games.

It is not the violence that is of particular interest, but it is the realistic nature in which violence is depicted. It has been demonstrated that realistic portrayal of events in television and media do have an effect on the viewer (Green, 2004; Huesmann, et al., 2003; Potter, 1988; Shapiro & Barriga, 2006; Shapiro, Barriga, & Jhaveri, 2005). Since realism is an important factor in television, which is less interactive and immersive than videogames, it is reasonable to project that realism must play an important role in videogames as well. Recent games that typify

this debate are Grand Theft Auto IV (GTA4) by Rockstar Games and Rainbow Six Vegas 2 by UBISOFT. In both cases, game players are taken into worlds modeled after real world cities. In fact, the realness and authenticity of both games are some of their major selling points (The Laser, 2008; PSX Extreme, 2008).

GTA4 takes place in Liberty City, a city modeled after the boroughs of New York, with the player assuming the role Niko Bellic, who must negotiate a world of crime, theft, and murder. Throughout the storyline of the game, Bellic must complete missions for mobsters and drug dealers in order to gain street credibility in order to make a name for himself. Some of the violent actions inherent in the game include the murdering of drug dealers, police officers, and prostitutes, stealing cars, and running over innocent bystanders with the stolen car.

While GTA4 takes place in a fictional city, Rainbow Six Vegas 2 takes place in a virtual recreation of Las Vegas, NV. Although names of buildings and locations have been changed, namely because of licensing reasons, Rainbow Six Vegas 2 includes locations such as the Las Vegas Convention Center, Library, and the Las Vegas Strip Monorail Station. Rainbow Six Vegas 2 is a first person shooter in which the player commands a counterterrorist team sent to Las Vegas to hunt a terrorist mastermind. Throughout the storyline of the game, the player is able to equip his player a variety of real life Special Forces weapon systems. During game play gunfights routinely breakout in casinos and streets filled with civilians.

Reiterating the previous point, it is not just the violence in videogames that could have a detrimental effect to players, but the realistic portrayal of violence that should be questioned. While this paper does not seek to analyze the relationship between the effects of violence in videogames and videogame players, issues of realism and their derived experience are the main concerns. This study seeks to explore how computer game players construct notions of reality in

massively multiplayer online role-playing games, and compare the online experience with their real life offline.

While previous videogame studies have primarily focused on factors such as user motives and effects of videogames on the user (Anderson & Bushman, 2001; Anderson & Dill, 2000; Krahé & Möller, 2003; Eastin, Griffiths & Lerch, 2005; Williams & Skoric, 2005) this study seeks to explore derived videogame experiences from the users' perspective. Specifically, this study seeks to examine how different styles of game play (i.e. action, third person, first person, shooters) effect user experiences. Beyond different styles of game play, this study also aims to examine the value of these experiences to the user. Although previous studies have determined the different motives that encourage users to engage in videogame play, they failed to explore to what extent the users benefit from game play. To address this gap, the main question of interest for this study is to investigate how videogame players rate and compare their online experiences to their offline experiences.

Massively multiplayer online role-playing games (MMORPGs) differ from other genres of videogames mainly through the numbers of players participating at any given time. Other games which are played online through either the Internet or a videogame console (Microsoft Xbox, Sony Playstation 3, etc) typically involve somewhere between two to sixteen players. MMORPGs on the other hand typically involves anywhere from hundreds to thousands of players playing simultaneously in the same game environment.

Another difference between MMORPGs and other game genres are the game environments themselves. When players of other genre games stop playing, those worlds no longer exist. That is not the case with MMORPGs. MMORPG realities are online and available 24 hours a day for players to log on. When logged onto MMORPGs, players assume the role of a

fictional character, which the player often has full control in determining the appearance and style of the character. Although there are many different MMORPGs, most MMORPGs can be boiled down to fit into one of two categories. Certain MMORPGs emphasize a quest based narrative in which the player has to negotiate predetermined missions in order to strengthen their character, while other MMORPGs operate on an experiential system, encouraging users to interact with other game users on a more social level.

Since the advent of MMORPGs, popularity for MMORPGs has skyrocketed, enormous online communities have arisen online. MMORPGs such as SecondLife (created by Linden Labs) and World of Warcraft (created by Blizzard Entertainment) consist of tens of thousands of players interacting within a virtual environment. SecondLife and World of Warcraft are particularly important to this exploratory study because of their inherent designs. While both games require social interaction, cooperation and teamwork, they satisfy different motivations for the player. By analyzing what players document as valuable, important, and essential to their in-game experiences, hypotheses and research questions can be made about the value and worth of those experiences to the player.

CHAPTER 2

REVIEW OF LITERATURE

Video Game Violence

Studying the effects of video game violence on younger children, Anderson and Bushman (2001) concluded that exposure to violent video games does have a profound effect on the aggression level in children. They found that exposure to high levels of violent video game content directly correlates to higher levels of aggression in the children tested. Although their study did uncover a correlation between videogame violence and aggression levels in children, their study fails to determine if realistic violence depiction adds to aggression in children and fails to account for how children played these games.

In another study examining the link between videogame violence and real world aggression, Anderson and Dill (2000) again confirmed a positive correlation. Utilizing the general affective aggression model (GAAM), Anderson and Dill detected a positive correlation between videogame violence and aggression levels in the viewer. Their study concluded that videogame play enabled players to “practice” real world violence. They argued that since videogame violence enabled the player to practice acts of violence, players would be more desensitized and susceptible to violent impulses in the real world. Along those findings, Anderson and Dill (2000) also argued that the amount of time a person engages in videogame play is a predictor of real world delinquency. Like the previous study, Anderson and Dill failed to account for the different styles of videogames available to the user.

Addressing the gaps in the prior literature, Krahe and Moller (2003) found that exposure to media violence correlated to higher levels of aggression in young adults and children. Their study consisted of a sample of 25 different games, which were played by 124 13-14 year olds.

Although their study did find a correlation between higher levels of aggression and videogame violence, their results were very limited. Due to the age constraints of the participants, it is hard to make general claims about a larger game playing community. Unlike other researchers (Anderson & Bushman, 2001; Anderson & Dill, 2000), Krahe and Moller did manage to factor in the effects of different styles of videogames, however they did so on a very limited sample. Essentially, it is hard to draw general conclusions from a study with a sample consisting of only 13 and 14 year old children to the adult population.

Examining how particular game environments and game types can effect aggression in players, Eastin, Griffiths and Lerch (2005) determined that more graphically advanced immersive environments have a larger effect on game player aggression. They found that more immersive game environments are directly associated to higher levels of aggression in players. According to their research, virtual reality environments solicited the highest levels of aggressions in players. Moreover, aggression levels of players were found to be higher in the players who watched the violent acts in a virtual reality environment as opposed to those who merely watched violent acts via a television display. Although the researchers noted the importance in factoring game play environment types when looking at levels of aggression, they failed to examine the possible influences of avatar creation, commonly found in massively multi-player online role playing games (MMORPGs), may have in player aggression levels. Since newer videogames allow for the player to create their own avatars, studies need to examine the possible influences avatar creation may have in the player. Perhaps given the ability of decision making for coming up with their own avatar, the players may increase identification and realism to their avatar.

While most studies of videogame violence and their effects concluded that a positive

correlation does exist, Williams and Skoric (2005) rebutted those conclusions. They specifically examined MMORPGs and argued that their findings support the hypothesis that videogame violence causes no substantial increase in real world aggression levels. In their study, 213 participants were solicited. They were either given a violent version of a game to play or were put in a control group with no game to play. Utilizing Cohen's (1992) power analysis model, Williams and Skoric were not able to detect minute changes in aggression levels. They were confident in the validity their findings, although the small sample size was identified as a possible weakness to their study.

Another interesting aspect of their study focused on the duration of violent videogame play and the effects of prolonged exposure to violent acts. Williams and Skoric's study (2005) lasted over a period of one month, which was the longest conducted to date. It yields no significant duration effects of prolonged exposure to violent videogames. Although the researchers found little evidence of the prolonged effects of violence videogames over the course of one month, they projected that there may be effects over the course of several months or even years of prolonged exposure to violent videogames.

Cultivation Theory

Proponents of cultivation theory asserts that specifically regarding television, the more people see or experience a particular narrative, the more they are inclined to believe what they are observing as real (Potter, 1987). Potter noted previous studies have documented that television viewing does have the ability to influence how individuals view social reality, particularly in the area of violence (Cook, Kendzierski, & Thomas, 1983; Hawkins & Pingree, 1982).

Much of the previous cultivation research on television has focused on the effects and social impact of programs. Gerbner (1984; 2002; Gerbner et al., 1986) noted that not much research has been conducted to understand how television programs changes behavior. As Gerbner (2002) noted, because “television enters life in infancy; there is no ‘before exposure’ condition. Television plays a role in the formation of those very ‘predispositions’ that later intervene (and often resist) other influences and attempts at persuasion” (p. 209). Gerbner insists that “cultivation analysis [must] concentrate on the on the enduring and common consequences of growing up and living with television” (p. 209). Unlike any other generation, children today almost instantaneously are socialized with television. In some cases television is even used as a babysitter in place of parental involvement. Therefore it is important to understand the not only the effects that television as well as other media outlets, including the internet and online networks, have in individuals but to understand how they change and shape perception and beliefs.

According to Potter (1988), cultivation theory must be looked at in terms of first and second order measures. First order measures determine how the viewer perceives and interprets television messages, while second order measures gauge to what extent those television messages use the information they obtained during television viewing (Hawkins & Pingree, 1982). Examples of first order measures include asking research participants to estimate how many instances of violence they see on television during a particular time frame, while examples of second order measures would included asking research participants how they felt about real world violence in order to determine if their views and opinions correlated to their television viewing experiences (Potter, 1981). Utilizing Hawkins and Pingree’s model, Potter claimed that as an individual increased their television viewing, especially events such as violence, the more

inclined the viewer is to believe that the television events are representative of reality.

Cohen and Wiemann (2000) also deployed cultivation theory to explore how heavy viewers of television constructed realities compared to light viewers. Their research concluded with cumulative effects of television viewing. Cohen and Wiemann's research indicated younger children did not succumb to the cultivations effects as thought, but rather it was teenagers who showed the highest levels of cultivation. This supports the belief in the cumulative effects of cultivation theory.

Bilandzic (2006) used cultivation theory to determine how individuals process information gained from television viewing. Specifically, Bilandzic was interested in determining "which television content was processed, stored, and integrated into existing beliefs and attitudes" (p. 333). Since information is prioritized and processed differently by each viewer, it makes sense that each individual viewer has different motives for their viewing habits. In other words, Bilandzic argued that since different people process information differently, they seek out different information to satisfy their needs. This finding is consistent with the use and gratification dimension of transportation theory (Green, 2004), which claims certain individuals use television in order to remove themselves from physical reality by inserting themselves into an alternate immersive environment.

As previous research has noted, Green, Brock, and Kaufman (2004) argued that one of the main features of transportation theory is the viewers' ability to remove themselves from their everyday life and to enter an alternative narrative. According to the researchers, transportation "allows individuals to feel as if they are participating in the action of the narrative" (p. 322). Through transportation *presence* is created. With technology such as videogames and virtual reality, presence describes a state of being in which the viewers or users lose awareness of the

medium and they only perceive the represented experiences as reality.

Perceived Realism

Perceived realism (Potter, 1988) first emerged from film and television research.

Perceived realism was developed in order to analyze and understand developing relationships between realistic, fictional, events portrayed on television and their effects on a mass audience. Researchers have studied the effects of realistic violence on television and have determined that media violence can have a strong effect on human behavior (Huesmann et al., 2003). Namely, exposure to realistic violence on television correlates to higher real-life aggression levels in the viewer.

Based on transportation theory and perceived realism, Green (2004) proposed positive correlation between perceived realism and transportation. Specifically, individuals who experienced transportation claimed that narratives were more representative of real life. Transportation into a narrative world can result in real world belief change. In order to understand the circumstances of transportation creating belief change, Green explores whether prior familiarity with a narrative affected an individual's transportation and whether increased realism perception increased the rate of belief change. He found that while individuals who were previously exposed to a narrative had higher levels of belief change, individuals with no prior exposure also were transported, albeit not to the levels found in those who were familiar. Also, a positive correlation was found between transportation and perceived realism. Green concluded that the more immersed an individual was in a narrative, the more story-consistent beliefs they exhibited.

Other researchers (Shapiro et al., 2005) have examined the portrayal of the female body

on television to determine how perceived realism affects viewer beliefs. They concluded that in different contextual situations, audiences would rate the perceived attractiveness of the actresses differently. Thinner actresses were more highly correlated with professional world (work) situations while less thin women were perceived as more domestic. In another study, Shapiro and Barriga (2006) examined moods and emotions in television programs and how those portrayals affected audience perception. The researchers concluded that when emotion was depicted in a manner expected by the audience, the television programs were described as more realistic. Shapiro and Barriga also found that when programs left emotion up to the audience's imagination, audiences tended to rate those experiences as more real.

Many researchers have contributed to identify the different areas of perceived realism: such as closeness (Potter, 1988), typicality (Shapiro & Chock, 2003), and probability and identity (Buselle & Greenberg, 2000). Hall (2003) has attempted to consolidate all these aspects of perceived realism into an overarching theory. According to Hall, there are six overarching dimensions that can predict and explain perceived realism: plausibility, typicality, factuality, involvement, narrative consistency, and perceptual pervasiveness. The first dimension, plausibility refers to whether members of the audience believe that filmic narratives closely resemble what happens in real life. The second dimension, typicality, refers to whether the narratives resemble the audience members' personal life. The third dimension, factuality, refers to the fact that television was previously categorized as television's magic window effect, acting as a window where viewers may receive information. The fourth and fifth dimensions, involvement and narrative consistency negotiate the narrative's credibility, whether it is authentic or not, and whether it is emotionally moving. The sixth and final dimension, perceptual

pervasiveness, deals with the visual nature of television and film itself in created a realistic environment.

It is clear that the majority of research on perceived realism has taken place with media formats such as television and film. In the case of television and film, realism refers to the ability of the medium to mimic reality in a way that is authentic and plausible (Potter, 1988). Although it has not been studied as much, perceived realism is a perfect avenue to explore the effects of videogames on the player.

Bolter and Grusin (1999) noted that videogames provide two critical differences on reality between videogame and film/television: immediacy and hypermediacy. First, immediacy in videogames is defined as “in ideal circumstances, players of a gamer are able to actively manipulate objects in a computer generated world, and consequently, do not have the impression that they are moving around in a mediated environment” (Malliet, 2006, p. 379). Although players access these online worlds through a computer screen, the computer screen is able to function as a television screen would. At first thought, the smaller nature of most computer screens would make it seem like there would be a greater distinction between the real world and the online world, however, that is not the case (Malliet, 2006). The immersive nature of MMORPG worlds facilitates realistic experiences within the user. Secondly, Bolter and Grusin (1999) also noted that through programming, online environments have the ability to combine multiple information streams at once. Online worlds can contain several different media sources and effectively combine them for gamer usage. Examples of multiple media sources that are integrated into online worlds are music, still images, moving images, and spoken dialogue (Bolter & Grusin, 1999).

When audio and visual streams are combined, a sense of hypermediacy is created. Malliet (2006) describes hypermediacy as a consequence of the “computers ability to create a rich, multi-sensory experience” (p. 379). According to Malliet, because of factors such as immediacy and hypermediacy, videogames have the ability to create a stronger, more immersive sense of realism in the game player.

While online worlds are able to further facilitate perception of what is real, MMORPGs are able to take it one step further by developing a sense of hyperreality. To understand hyperreality, lets first look at virtual reality. Tiffen (2001) describes virtual reality “as a technology that provides computer-generated realities that are an alternative to physical realities” (p. 30). For players in early instances of virtual realities, they utilized head-mounted display units in order to access these virtual worlds. In these early incarnations, stimuli such as sound and images are presented to the user through the head-mounted display itself. Often, players are also able to utilize a specially developed glove, which enable the user navigate these virtual worlds. Through the tactile interface of the gloves, users are able to touch and move objects as they would in everyday life.

According to Tiffin, hyperreality is slightly different. Hyperrealities in the context of computer mediated online worlds always include the use of virtual reality. However hyperrealities include one important distinction- they are able to take virtual realities and further blur the line between what is real and what is computer generated. Tiffin describes hyperreality as a place where virtual reality and physical reality meet. Virtual reality and hyperreality can be discerned by examining the “realness” of a computer-generated world. In a virtual reality environment, users typically understand the virtual world as one mediated by a computer. The virtual world is accessed through the use of the computer. Hyperrealities on the other hand, are

able to remove the sensation of computer mediation in order to create a more real and immersive environment for the user. In a hyperreality, the player feels as if they were in the world itself, rather than accessing the world through technology (Tiffin, 2001).

Another important distinction between virtual worlds and hyperrealities, is the use of artificial intelligence (Tiffin, 2001). Virtual worlds are generally created as a sparse environment where users are only able to manipulate the environment of the virtual world. Although there may be interpersonal interactions with other users in the virtual world, those interactions can only occur if there are multiple head-mounted displays with which multiple users may access the same environment. Virtual realities generally can only be populated by between one and a few users. Hyperrealities on the other hand are completely different. Hyperrealities deploy the use of sophisticated artificial intelligence. Tiffin (2001) noted, “a hyperworld is not only where what is real and what is virtual interact, it is where human intelligence meets artificial intelligence” (p. 33). Through the use of sophisticated artificial intelligences, hyperrealities are able to further foster feelings of alternate realism in the game player.

Shimohara (2001) argued that one of the benefits of hyperreality is the ability to “enrich human communications by extending their coactions fields to virtual worlds with diverse chances and environments where they can interact with artificial life in virtual space or real space” (p. 80). Artificial life is an important component of hyperrealities because of their ability to further immerse users in the hyperrealities. Through interfacing with artificial intelligences and hyperrealities, individuals are able to share a common space and world at the same time (Shimohara, 2001). In essence, people who inhabit the same virtual world are have the ability to interact with each other regardless of their physical separation.

Five Dimensions of Videogame Realism

In order to measure the perceived realness of videogames, Malliet (2006) has modified Potter's (1988) perceived realism scale to account for the differences between traditional media and videogames. According to Malliet, there are five dimensions of perceived realism that effect videogame play: factuality, authenticity, character involvement, virtual experience, and perceptual pervasiveness.

Like perceived realism in television and film, factuality in videogames also pertains with the magic window effect. Although factuality in videogames can foster some resemblances of realism, Malliet noted, users report that videogames are generally less real than television and films. Authenticity, which is based on Hall's (2003) conception of plausibility and Shapiro and Chock's (2004) idea of typicality, measured how true to life the game play/narrative was. Users reported that even in games based upon realistic environments, the games were not very realistic. Perhaps this non-realness can be more directly attributed to lack of artificial intelligence technology rather than game play itself. As Chock noted users of these early video games gave reasons such as non-real artificial intelligences as general reasons why a game was not realistic but with numerous advancements in video game technology, early ideas of artificial intelligence will have to be revisited.

The third dimension, character involvement deals with the level of identification a user has with the characters in the game. Malliet (2006) discovered that due to the interactive nature and character control provided by videogames, users tended to develop connections with their online avatars. Players of strategic and tactical games often reported higher levels of identification with their character due to the amount of influence the player has in determining the strategies and directions for game play. In Malliet's study, games with fixed narratives were

not found virtually realistic while games that afforded the player with a sense of freedom in decision making were found more realistic. Games that promoted freedom in decision making in users are generally MMORPG style games. The last dimension, perceptual pervasiveness, measures the physical realism (graphics and physics of the game world) of videogames. Malliet reported that as computer power has increased, game makers are able to utilize techniques such as physics modeling and motion capture to create a more realistic environment for the player. Players generally reported a higher level of realism to games, which closely simulated the look, and physics of the everyday world.

Through Malliet's five dimensions of perceived realism in videogames, a study of perceived realism and effects from both SecondLife (SL) and World of Warcraft (WoW) is proposed. MMORPGs such as SL and WoW allows users to construct and populate a brand new world.

Upon registering, SL users are given the option to pay a monthly fee, which enables users to "own" virtual land to be used to "build" a house or "start" a business venture. SL players must also find jobs in order to support themselves within the SL community.

The SL community also boasts a daily newspaper the "Second Life Herald," (www.secondlifeherald.com) complete with "real" news stories everyday where users can be "employed" as journalists. Citizens of SL must also adhere to strict codes of morality and ethics, which are self-policed by other citizens. Essentially, SL is a recreation of offline society, only represented digitally. Within the framework of SL, users are able to construct a second life by first selecting a name and subsequently physical items (clothing) and appearances can be altered. After creating an avatar, which is used to negotiate the online world, the goal of SL is to experience and live life in the virtual world through the avatar. Sooner or later, the avatar will

have to get a job, make mortgage payments, and cultivate social relationships, just like in the real world. This study is concentrated on how users rate and compare their online experiences with their everyday offline experiences. Since both SL and WoW not only allow, but also encourage the player into constructing their own identities, higher levels of identification will surely exist. Because players are afforded much control over these games than with other games, a study must be conducted in order to determine what values and experiences players take from these games in order to understand why players in such vast amounts engage in MMORPG game play.

While SL offers players a digital representation of the offline world in which to populate and exist, WoW offers a different type of reality. In SL players construct identities in line with their offline or perceived ideal identities, but WoW players construct their identities based on fantastical species such as gnomes, night elves, undead, and the not-so fantastical humans. Also, unlike SL, users of WoW do not actively participate in the construction of their virtual world. Rather they interact within a developed narrative in order to build their character's skill levels in order to complete quests. The end goal of WoW players are to roam the realm of WoW in order to complete predesigned missions in order to accumulate items and learn skills to evolve their avatars.

First, the goal-oriented nature of WoW is inherently different than the experience-oriented nature of SL. Again, the WoW narrative is formulated around the notion that the player must accomplish small tasks in order to increase the power of their avatar and complete the larger mission of the storyline, whereas SL is constructed around a narrative that allows the player freedom to inhabit virtual world and build social connections just like people would offline. Secondly, SL is based on a recreation of everyday life, whereas WoW is based in a

completely fictional world. Therefore, the construction of experiences within SL and WoW will be examined to understand how the differences affect user experiences and perception.

Building upon previous research on perceived realism in television and videogames, MMORPGs add a unique perspective to perceived realism. Television, a one-way communication between the medium and audience and early videogames in which players engaged in solo game play both demonstrated levels of realism associated with them. MMORPGs on the other hand add a unique perspective, the possibility and necessity of two-way communication between either two players or a player and in-game artificial intelligence. In order to understand how players derive and value experiences from videogames, these social relationships must be first examined.

RQ1: How do players of SecondLife and World of Warcraft rate their closeness to their online only friends?

RQ2: How do the net differences in offline emotional closeness and online emotional closeness compare between players of SecondLife and World of Warcraft?

As previously discussed, although SL and WoW are both MMORPG, their game play is very different. SL utilizes a more experiential goal system, whereas WoW utilizes a goal-oriented narrative. Because of this both SL and WoW will need to be compared and examined in order to determine if their game styles influence how players perceive realism.

H1: Players of SL report higher levels of realism than players of WoW.

Besides realism another key factor that needs to be understood within MMORPG game play is how cultivation theory functions. Previous research has determined that individuals who engaged in intense television watching have reported higher levels of realism to the programs they watched when compared to light television watchers. Naturally extending cultivation theory from television towards MMORPG and videogame play, the following hypothesis is proposed:

H2: Users who engage in more intense game play assign higher values of realism to their online experiences than users who engage in more casual game play.

For the purposes of this study, SL and WoW players make ideal participants. Since both SL and WoW are inherently different in game design as well as with levels of realism, studying SL and WoW would provide a solid foundation in which to build further research. Essentially, studying two games at the opposite ends of the realism and design continuum would provide bookends in which to ground research on other games which may fall somewhere in between SL and WoW.

By studying users' in-game experiences and what users gain from them, we have gained insight into developing new methods of studying human behavior, specifically through computer-mediated communications. While previous studies have sought to understand the motives of why individuals engage in online game play, these studies have failed to examine how the players interpret and benefit from their online experiences. This study has address that gap by utilizing a top down study approach in order to build a holistic model of online game play and how gamers understand, interpret, negotiate their online relationships.

CHAPTER 3

METHOD

Participants

Participants for this study were recruited from various gamer website forums that cater to them. These sites were mmoabc, IGN Vault Networks, SecondLife (SL) forums, as well as Blizzard Entertainment forums. These forums sites typically list newest threads (postings) on the front page, with subsequent newer threads being added on top of the previous one¹. A detailed overview of the scope and goals of the study as well as the link to the survey were posted to the gaming forums. The time period in which the survey thread will display on any particular gaming Website forum was never guaranteed. Display length was determined by how often users posted to the topic thread and by how many new threads were created each day. Every time a new post was added to the thread, the thread posting would be moved to the top of the queue again.

Of the 292 participants that completed the survey, 74% were male and 26% were female. Forty-two percent of the population was 18-25 years old, 25% was over 35, 19% was 25-30, and 13% was between 30 and 35. Seventy-one percent of the participants identified themselves as Caucasian/White, 15% identified themselves as Asian-American/Pacific Islander, 2% as Hispanic, 1% as African-American, and 12% of the participants identified themselves as Other. Thirty-eight percent of respondents identified themselves as casual players, 48% identified themselves as moderate/average players and 30% of respondents identified themselves as

¹ Because of this, each forum posting needs to be checked/posted to on a regular to ensure that the survey will stay towards the top of the list. Threads that are not regularly posted fall towards the bottom of the list and subsequently get mixed together with various older threads and are never checked by users. Users who submit more than one survey will have all surveys except their original submission deleted.

hardcore/intense game players. Average amount of time spent playing videogames was 23.7 hours per week ($SD = 14.04$).

Procedures

Massively multiplayer online role-playing game (MMORPG) players who meet the minimum criteria was provided with an information notice which included a brief summary of the goals and scope of the survey as well as contact information. If the participants would like further information regarding the study they were encouraged to contact the principle investigator via email. Participants were provided with a survey link. After providing consent (by proceeding to the next survey page), participants were taken to the first page of the actual survey.

The survey consisted of 50 Likert-style scale questions using radio dial buttons to answer. For questions with continuous variables such as amount of time spent playing video games per week, a text field was utilized so that participants may estimate their own answer. Open text answer boxes were also utilized so that participants may document their in-game and offline experiences.

Each survey took about 10-15 minutes to complete and respondents were not paid or compensated for participation. Through the survey provider service (SurveyMonkey) an option was set to not allow the same IP address to complete the survey more than once, thus eliminating chances for a respondent to complete multiple surveys. During the course of the survey, the thread topics were continuously checked, up to several times a day, in order to gauge respondent interest as well as to answer any questions participants may have had. After data collection, the data collected from SurveyMonkey was downloaded in an Excel file format, organized, and imported into a Social Science Statistical program, SPSS, for analysis.

Measures

Emotional Closeness

In order to examine differences in reported emotional closeness, Berscheid, Snyder, & Omoto's (1989) scale of emotional closeness (SEC) was utilized. The SEC is a 7-item questionnaire that measures the perceived closeness an individual has towards another individual. Participants rated all items on a 5 point scale from 1 = *disagree* to 5 = *agree*. Two of the seven items were reverse coded ("I kept my distance emotionally from this person" and "It was difficult to talk to this person"). The higher the mean of the scale, the higher the perceived emotional closeness the respondent has with regards to whom they are answering the question about. In order to assess how respondents rate emotional closeness online as opposed to offline, respondents were given the scale to complete twice. First, respondents were asked to complete the scale while thinking of their best mainly online friend. Next, respondents were asked to complete the scale while thinking of their best offline friend.

Reliability analysis was conducted on both the online emotional closeness and the offline emotional closeness scales. Results showed that both scales were reliable. Cronbach alpha α was .82 for the online emotional closeness scale, and α was .87 for the offline emotional closeness scale. Overall, MMORPG players scored 4.00 on offline emotional closeness ($SD = 6.3$, $n = 283$), and scored 3.44 online emotional closeness ($SD = 6.0$, $n = 292$).

For the purposes of comparing different game playing populations, responses were further separated into those who played only SL, those who played only World of Warcraft (WoW), and those who played both games for assessing their online and offline emotional closeness. For online emotional closeness, SL ($M = 3.70$, $SD = .87$), WoW players reported ($M = 3.5$, $SD = .87$), and players of both games ($M = 3.14$, $SD = .83$). For offline emotional closeness,

SL ($M = 3.5$, $SD = .90$), WoW players reported ($M = 4.24$, $SD = .84$), and players of both games reported ($M = 3.3$, $SD = .95$).

Perceived Realism

The perceived realism scale (PR) (Potter, 1988) has been utilized to determine and analyze how viewers of television understood and managed their relationships with realistic and fictional events portrayed on television. Since online gaming shares many commonalities with television while adding other aspects, the PR scale provided great insight on how game players and users interpreted their online experiences. By utilizing a modified PR scale, it is possible to examine how users rate the realness of their online experiences. The PR scale is a 5-item questionnaire that asks users to rate how real their online experiences are on a 5 point scale with 1 = *disagree* to 5 = *agree*. Two of the five items on each scale were reverse coded (“Events in SL do not mimic everyday life,” “SL does not depict life as it really is,” “Events in WoW do not mimic everyday life,” and “WoW does not depict life as it really is”). First, respondents were asked whether they were players of WoW or SL. If the respondent answered yes to either question, they were taken to the survey page, which held PR questions for that specific game. While most respondents played either WoW or SL, a small handful played both. Respondents, who reported that they did not play any or either of the games, did not complete the PR scale for the game in question.

After data was collected, initial reliability test revealed that the scales were not reliable (for SL, $\alpha = .39$ and for WoW, $\alpha = .67$). After the two reverse coded items were removed from each measure, the scales achieved reliability ($\alpha = .85$ for SL and $\alpha = .74$ for WoW). Players of the reality based SL reported perceived realism score of 2.87 ($SD = 1.12$, $n = 91$) while players

of the fantastically based WoW reported perceived realism score of 2.07 ($SD = 0.87$, $n = 153$) and players of both games reported 2.67 ($SD = 1.18$, $n = 38$). Ten people did not report playing either game, therefore did not provide the perceived realism score.

CHAPTER 4

RESULTS

Research Question 1 (RQ1) and Research Question 2 (RQ2) examined the relationship between players of massively multiplayer online role-playing games (MMORPGs), their online friends and how the online relationships compare to players' offline relationships. Specifically, RQ1 sought to understand the extent in which MMORPG players' valued online relationships.

A paired sample *t*-test was run in order to assess whether there were significant difference between the ways MMORPG players rated their online and offline relationships. Results showed that online emotional closeness ($M = 3.44, SD = .85$) was rated lower than offline emotional closeness ($M = 4.00, SD = .90$), $t(232) = 7.6, p < 0.001$. That is, when players of both gaming styles are grouped together, overall players do rate higher levels of perceived emotional closeness to their offline friends than their online friends. This analysis directly answers RQ1.

While RQ1 specifically dealt with how players of all MMORPGs rated their online relationships, RQ2 argued that there were inherent differences in how players of different style games, such as SecondLife (SL) and World of Warcraft (WoW), valued their online relationships. In order to compare how different game populations compared to each other, the net difference (online emotional closeness mean subtracted from offline emotional closeness mean) was calculated for SL ($M = -.17, SD = 1.05$), WoW ($M = .75, SD = 1.20$), and for players of both games ($M = .17, SD = .11$).

Three separate independent sample *t*-tests were conducted. The first *t*-test compared SL players and WoW players. This *t*-test revealed significant differences between players of SL and WoW, $t(149) = -4.19, p < .001$. This indicated that players of SL viewed the difference between their online and offline emotional closeness much smaller than players of WoW. A second *t*-test

was conducted between the players of WoW and those who played both. This *t*-test also confirmed significant differences, $t(134) = 2.27, p = .02$. This showed that players of both games also viewed the difference between their online and offline emotional closeness much smaller than players of WoW. Finally, a third *t*-test was conducted between players of SL and those who played both. This *t*-test revealed no significant differences, $t(55) = -1.3, p = .19$. This indicated that players of SL viewed the difference between their online and offline emotional closeness similar to players who played both games.

Examining the actual value of the mean differences between online and offline emotional closeness of the groups revealed an important relationship in the difference of how game type players value relationships. The values of the mean differences for the three different game groups was $-.17$ for SL players ($M = -.17$), $.75$ for WoW players, and $.17$ for players of both games. In this case, the differences in the means of emotional closeness were derived by subtracting the mean of online emotional closeness from the mean of offline emotional closeness. For WoW players and players of both games, their mean differences remained positive, which indicated that both groups had higher levels of offline emotional closeness than online emotional closeness. For SL, the opposite was true. The mean difference for SL was negative, which indicated that for SL players, online emotional closeness was higher.

Although players of both games report higher levels off offline emotional closeness than online emotional closeness, it is important to note that the mean difference for individuals who played both games were closer to those who only played SL than those who only played WoW, $t(55) = -1.3, p = .19$, (see Table 1). This directly answers RQ2.

Furthermore, an additional general linear model analysis was conducted in order to determine whether game play level or different types of games played contributed to the

differences in players online offline mean differences. The GLM revealed significant effects for both game play level (casual, moderate, hardcore), $F(2,172) = 3.85, p = 0.02$, and types of games played (SL vs. WoW vs. both), $F(2,172) = 9.90, p < 0.001$.

While RQ1 and RQ2 were concerned with how MMORPG players rated their online friendships, Hypothesis 1 (H1) and Hypothesis 2 (H2) deal with how the MMORPG understands and negotiates perceived realism in videogames. The inherent differences in game play style in design in SL and WoW play a significant role in how its game players negotiate realism, so H1 predicts that the players of SL will report higher levels of perceived realism than the players of WoW.

ANOVA was run to test the perceived realism scores between players of SL, players of WoW, and players of both games. Results revealed that significant differences do exist between the three groups, $F(2,166) = 10.97, p < 0.001$. While the ANOVA did reveal a significant difference between all three groups, further analyses were needed to determine the relationship between any two of the gaming groups.

Additionally, three separate independent sample t -tests on the perceived realism scores between pairs of game types (SL vs. WoW, SL vs. both, WoW vs. both) revealed an important finding. The t -tests showed that there were in fact significant differences between players of SL vs. WoW, $t(146) = 4.46, p < 0.001$. There were no significant differences between players of WoW vs. players of both games, $t(132) = -2.75, p = .07$. When players of SL vs. players of both games were compared, significant differences did not exist $t(54) = .64, p = .87$. The results of these t -tests show that in fact players of SL assign higher values to perceived realism to their online experiences than players of WoW. H1 was confirmed.

While H1 asserted that differences in game styles attribute to different levels of perceived

realism, H2 postulated that users who engaged in more intense game play will assign higher values of realism to their online experiences when compared to those who engaged in more casual game play. Univariate general linear model was conducted to test this hypothesis. The model was run using different levels of game play (casual, moderate, and intense/hardcore) and different game played (SL vs. WoW vs. both), and the interaction between these two factors as independent variables. Results revealed that main effect of different levels of game play (casual, moderate and intense/hardcore) was significant for MMORPG players, $F(2,168) = 5.13, p = 0.01$, indicating that as players engaged in higher level of game player, they assigned higher perceived realism to their online experiences. The main effect of different games played (SL vs. WoW vs. both) was also significant, $F(2, 168) = 12.66, p < .001$, which re-confirm H1. Results also revealed that there were no significant interaction effects between game played and game play level, $F(168,4) = 1.68, p = .17$ (see Table 2).

After analysis was completed, another statistical model was built using GLM in order to test whether a players' level of game play, the games a player played and how a player rated their online emotional closeness was mediated by how realistic the player perceived the game to be. Results revealed that main effects between level of game play and online offline mean difference were significant, $F(2, 165) = 3.80, p = .02$, and between different games played and online offline mean difference, $F(2, 165) = 4.60, p = .01$. The GLM also revealed significant results between levels of perceived realism and online offline emotional difference, $F(2, 165) = 9.91, p < .02$.

CHAPTER 5

DISCUSSION

The main purpose of this study was to explore how users and game players online make sense of and interpret their online experiences. Previous research in cultivation theory and perceived realism has primarily been focused in television and media studies. While the previous research has been extensively studied and research in their respective fields, they have not been applied to any areas of computer-mediated communication (CMC), including online gaming. As such, it is important to extend these theories into the realm of CMC in order to understand what users gain from online play. The results of this study highlight the importance and need to understand how social dynamics function online. Implications of this study focus on two primary issues, social/online relationships and online realism.

Social and Online Relationships

This study delved into online gaming in order to explore what gamers take away from online gaming. Focusing on the social aspect of gaming and factors of realism that newer computer and video game technology brings, this study sought to understand how online gamers understood their online relationships. Specifically, this study explored how online gamers viewed their social relationships online, especially how online gamers compared their online relationships with their offline relationships.

The findings of this study directly answer this question. While it makes sense that players of online games have a closer emotional relationship with their offline friends, this is not true for all gamers. Players of SecondLife (SL) reported a higher level of perceived emotional closeness with their online friends. This finding directly contradicts common understand of offline and

online relationships. Traditionally, research suggests that since Internet users are physically removed from other users, less immediacy exists (Short, Williams & Christie, 1976; Swan, 2002; Tu, 2002). While the lack of physicality and face-to-face interaction may hinder immediacy and emotional closeness in certain contexts of the Internet, massively multiplayer online role-playing games (MMORPGs) and other forms of online social gaming are different.

MMORPGs and other forms of online social gaming must be researched from a fresh perspective because unlike other modes of communication that occur through the Internet, MMORPG game play requires cooperation with other individuals. In most facets of the Internet a single lone user may find all of the information he or she needs or complete a singly played game. MMORPGs on the other hand do not follow that formula. At the very minimum MMORPG players must work together and communicate in order to achieve their objectives.

First, let's view social relationships through the lens of World of Warcraft (WoW). As previously mentioned, WoW, although, is a social game designed for players to compete mission quests and objects. As far as the game is designed, it is nearly impossible to complete the missions and quests within the game without cooperating with other players. Since cooperation with other players is a must, players of WoW have three options. WoW players have the option of either forming informal groups that exist for just that day's play, forming groups with other random WoW players for repeated play, or form groups with offline friends who also play the game.

SL, on the other hand, requires completely different social objectives to fully engage in the game world. Linden Labs the developers of SL, pride the fact that their game places social experiences as the number one aspect of the game. Unlike WoW where players have missions and quests to complete, SL requires that players experience life, although in a mediated virtual

world. SL is built around close personal relationships with other SL players. In order to achieve the full goals of SL, players must communicate and experience life on an everyday level with other SL players. SL prides itself on the emotional connections it encourages, not the gathering of special and unique items like WoW does.

On the surface, these differences in game play may seem trivial, but as this study has shown, these differences in game play style and the goals associated with those styles have a vast influence on how gamers view online friendships. This study has shown that players of SL have a higher level of perceived emotional closeness to their online friends when compared to their offline friends. The opposite is true for WoW players. WoW players placed a higher value of perceived emotional closeness to their offline friends. Gamers who played both WoW and SL fall somewhere in between just SL and just WoW players, although the results also indicated that players of both games are more alike SL players than WoW players.

Given the difference in designs of SL and WoW, it was not too far fetched to hypothesize that players of SL would in fact place a higher value of perceived emotional closeness to their online relationships compared to players of WoW. Results showed that players of SL in fact assign a higher value of perceived emotional closeness to their online friends. This directly contradicts most of the previous research of cues-filtered-out, which claimed that even though the Internet and gaming can facilitate a certain level connectedness with other individuals, so online interactions would never replace face-to-face interactions (Sproull & Kiesler, 1991).

While this study contradicts the earlier findings of Sproull and Kiesler, it reaffirms ideas presented within social information processing (SIP) theory (Walther, 1992) and hyperpersonal model (Walther, 1996). According to Walther, online and CMC interactions have the ability to foster higher levels of closeness above those with face-to-face interaction, if certain conditions

are met. This study has shown, that in the case of SL, online social interactions can in deed replace face-to-face interactions; at least as emotional closeness is concerned. That is, SL does not have the ability to replace face-to-face interactions completely, but rather SL has the ability to replace certain aspects of face-to-face communications.

Perceived Realism

Another goal of this study was to determine to how the inherent differences in SL and WoW affect levels of perceived realism within the gamer. Again, just as with perceived online emotional closeness, how each game is design can influence the levels of perceived realism the gamer experiences. As the results of this study indicated, players of SL assign higher values of perceive realism than players of WoW.

In order to understand why differences in perceived realism levels exist, first, lets take another look at WoW. Beyond being cooperatively driven, the WoW story takes place in a fantastical world full of orcs, ogres, elves and humans. Not only are the characters fantastical, but the storyline itself it. WoW requires players to band together, cooperatively, in order to enter dungeons to battle with various monsters in order to level up and gain new items for their avatars.

SL, on the other hand, is completely different. SL is developed and modeled after the real world. Players who inhabit this world are required to get jobs in order to pay for the mortgage of their online home and cultivate social relationships with other players. The SL world is such a realistic representation of everyday life that there have been instances of players online, which have never met each other, having their avatars getting married.

The main goal of Linden Labs was to create as a realistic virtual world as they could for

players to navigate. With that said, there are facets of the fantastic embedded within the game. Players of SL have the ability to change the appearance of their avatar at their discretion. Changes to the look of the avatar go beyond changing the style of clothing they wear. Players have the ability to make themselves look like, what would be deemed outrageous by non-SL players, a normal everyday person to a standing, walking and talking kitten, fur and all.

Although this fantastical feature of Second Life may present itself to function like WoW, it is designed to give the user the freedom to choose their appearance. Although, like WoW, choosing to have the appearance of a walking kitten might remove aspects of realism, in the case of Second Life, it does not. The main difference between the fantastical avatars of SL and WoW is that in WoW, players must choose from a set of predetermined avatars. This set of avatars is presented to the player every single time a player creates a new character and the must choose one. Although the player does have the ability to modify the look of their avatar, to a certain extent, WoW does not allow for the level and detail of manipulation that SL encourages.

In the case of the SL these fanatical features are not forced unto to player, rather they are left open for the player, if they choose to utilize them. In the case of SL, these fantastical features let the player let the player further express himself or herself. According to many players of SL, these features that allow the player to customize their avatar also allow the player to truly express themselves (Susanka, 2008). Although their appearances may seem fantastical, some Second Life players' claim that these outward appearances reflect how they feel on the inside (Susanka, 2008).

Even though aspects of SL are fantastical, SL does what WoW does not. SL gives the player the option, the option to choose whatever outward appearance they choose to have, fantastical or ordinary. That choice SL gives its players is the power of SL. SL gives its players

the ability to choose exactly how the players' avatar will look and gives its players the freedom to explore themselves. By giving players so many options and choices, SL encourages its players to explore themselves. Ultimately, SL is not about the everyday details that a player must accomplish so that his or her avatar may survive, but it is about the player exploring different aspects about themselves while fostering social relationships with other Second Life players. SL is not more real to players merely because it looks more real; SL is more real to its players because it let its players be who they want to be.

This study was also concerned with how different levels of game play intensity influence levels of perceived realism. The results of this study confirm that the amount of game play a user self reports (casual, moderate or hardcore) does affect levels of perceived realism in the player. Players who engaged in higher levels of game play report higher levels of perceived realism. Players who engaged in casual levels of game play report the lowest levels of perceived realism while players who engaged moderate levels falling somewhere in between.

According to SIP and hyperpersonal model, these results are expected. It could be argued that players who have spent longer amounts of time playing MMORPGs online would have further developed social relationships than those who do not engage in game play as frequently. The depth of the online social interaction is what gives the MMORPG the ability to seem real. Adding the component of interacting with a live person to a realistic and vivid game environment is what makes the MMORPG real to players. No matter how advanced graphics or audio qualities become, issues of realism always dwell down to how realistic in game relationships are (Shimohara, 2001) and it does not get any more realistic than interacting with another live person.

In general, the findings of this study support all research questions and hypotheses.

Regarding emotional closeness, significant effects were found to be operating through the individuals that participated in online gaming. Other hypotheses were concerned with how different styles of games affected how a user would interpret and manage information. Those hypotheses were also correct. That is, the results show that individuals, who played different types of games showed significant differences on how players gathered, managed and interpreted their online gaming and social experiences.

Implications for Existing Theory

The results of this study propose a number of key theoretical implications worth noting. While exploring different avenues in which to conduct this study, it became apparent that many of the current popular CMC theories in gaming would not be able to answer these research questions and hypotheses. Current models gaming theories, such as Yee's (2006) motivation model, examine the user or player from a top down perspective. After data collection, Yee categorized players into one of five different player motivation categories that he predetermined. By forcing game players into predetermined categories, Yee has missed a prime opportunity to categorize player motivations holistically. Essentially, Yee has categorized players into different categories he determined was fit for analysis, rather than building a holistic model built from the ground up.

While many scholars have done an adequate job describing how and for what reasons individuals use the Internet or play different types of games, they fail to examine what exactly does a user gain from Internet usage and game play. The findings of this study contradict many theories of Internet usage and MMORPG game play. This study has determined that there are in

fact aspects of online gaming that have the ability to influence individuals and extend far beyond what online gaming was originally thought could do.

In the case of Second Life, its players reported higher levels of perceived emotional closeness with their online counterparts than their offline counterparts. Under previous theories (cues-filtered-out), it is unthinkable to claim that no matter how virtually realistic a game is, that it can in some aspect replace face-to-face interaction. Other studies argued that given the right conditions, CMC and online interactions have the ability to create higher levels of closeness within users (e.g., SIP and Hyperpersonal model). This study affirms the latter.

While this study does affirm general findings of SIP and hyperpersonal model, it also presents issues that neither SIP nor the Hyperpersonal model cannot take into account. Since SIP and the Hyperpersonal model was developed in order to understand text based communication, it cannot take into account the visual and auditory nature of modern MMORPG games. Visually, MMORPG's provide players with the ability to modify and customize their avatars, which other players utilize to formulate opinions about other players. Also, auditory wise, MMORPG players commonly utilize voice communications in addition to text based instant messages to communicate with other players. Combining these visual and auditory cues, MMORPG players are able to make judgments about other players just like they would have in the offline world.

As the results of this study indicate, there is a gap in current knowledge regarding CMC and video games. In order to address this gap, researchers must seek to understand new modes of communication such as the Internet and online as well as offline gaming from the ground up. Only by creating a holistic model, that does not include the biases of past theories, researchers truly understand the power of video games and what exactly does the power of the video game have on the individual player.

The main issue with current video game theory is not necessarily the researchers themselves, but the main issue is the researchers' ages. In general, the best video games are created by designers and directors who possess the ability to think outside of the box. They are able to develop stories and narratives, which have the ability to influence individuals on an emotional level. As video games have developed the first revolution were the audio qualities and graphical qualities of video games. Currently, game developers are planting the seeds of the second big gaming revolution, creating games with emotion, purpose, meaning, understanding and feeling (Perry, 2006). Ready or not, this video game revolution is coming, parts of it has already arrived, and only by casting off the biases of the previous research generation, can researchers understand the communicative powers of the next video game generation.

CHAPTER 6

LIMITATIONS AND FUTURE RESEARCH

Despite contributions to a bottom-up approach to videogame research, this study has three main limitations. First, a key limitation to this study was the lack of quality free response answers on the free response questions of the survey. Although a majority of the respondents answered the free response questions, their answers were superficial. Since free response questions are more powerful since they allow the respondent to express themselves in their own words, as researchers we must also remember that respondents will not always choose to express themselves. For example, when asked to address to document their daily offline workday and online daily workday participants often gave answers such as “socialize, work, socialize some more, then probably more work” and “talk to friends and get some work done.”

Given the opportunity to conduct this study again, instead of incorporating a small number of qualitative questions on the survey, it would be more prudent to separate the quantitative and qualitative portions of this study into two completely separate studies. The quantitative portion would still be administered online, but the qualitative portion would function better as interviews or focus groups. Switching to in person interviews or focus groups, would give the ability to further control the situation. By controlling the situation and with the ability to ask follow up questions researchers would have the ability to elicit more detailed answers out of the participants rather than trust the participants answer the online free response questions in detail on their own.

A second limitation to this study was the size of participant samples and how they were recruited. Although a main goal of this study was to recruit gamers who frequent specific gamer forum sites, this task was harder in practice because of the ingroup/outgroup nature of gamers.

These forum sites frequently display information on the post created (myself) such as date joined and how many times the user has posted within the forum. Even though I would regard myself as a frequent gamer and have played SecondLife (SL) and World of Warcraft (WoW) in the past, on the sites where I have been a member for sometime, ingroup and outgroup was not an issue, but on sites where I joined for the purposes of recruiting survey takers, the survey was met with skepticism and to a certain extent, online hostility. Upon seeing the lower post counts and a recent joined date, forum users were not very receptive of the survey, often discounting the survey immediately. Beyond future computer-mediated communication (CMC) studies, for any study that involves joining a forum site, it is imperative to join the site as early as possible to avoid being placed in the out-group in order to maximize participation.

It is also important to note the differences in responses from users who frequent different sites. Although the forum posts were written in gamer terms (i.e. not academically), younger gamers and older gamers had different reactions to the posts. In general, younger gamers who did not agree with the presented scope of the study, replied that they did not agree with the study and that they did not take the survey, while older gamers generally attacked the study with theories they thought were correct and attempted to prove the study wrong. With both of these examples, it is not the different opinions of the participants that are interesting; it is how each group goes about voicing their opinions and concerns.

In general, the population that played SL is older than those who play WoW. In trying to recruit survey takers from both game populations, inherent differences in communication styles began to emerge. For instance, if a WoW player did not agree with the goals and scope of the survey, messages such as “I don’t get what you’re doing, its been done a billion times. Didn’t take the survey” were posted to the forum. On the other hand, players of SL critiqued the study

in a completely different way. Responding to the exact same post as WoW players received, SL players were more aggressive in letting their opinions be known. Rather than posting that they did not agree with the goals and scope of the survey, individuals on the SL forums also took to attacking the scientific validity of this study. Exploring how and why these inherent differences exist in different age groups within the gaming community would shed light on understanding how older or younger individuals make sense of online experiences.

The third limitation to this study is the sample size. Although 292 respondents completed the survey, there were not nearly as many in the different games played demographics. In the end people who solely played WoW almost outnumbered people who solely played SL. To a certain extent, this was expected. In real world population, WoW players are estimated at about 15 million people whereas SL players are estimated at just over 5 million. Even if in the real world, such a disparity exists, on the scale of 300 people, more should have been done to seek out additional SL players to bridge the gap. Some possible ways of finding more SL players include but are not limited to seeking out more SL forums, although issues associated with the second limitation may arise, or a further push on snowball sampling, getting players of SL to forward the survey onto their friends who also play SL.

This study has demonstrated that key differences do exist in the populations of SL and WoW players. However, the cause of these differences remains unanswered. On the surface, game design plays a major factor in encouraging the development of close online social relationships, but what other factors exist? Does only game design play a major factor role in encouraging the development of close emotional relationships online? While this study has shown that differences exist, it cannot answer whether these differences in the way players view online relationships were preexisting or whether SL and WoW facilitated the differences. That is,

this study cannot answer whether SL and WoW attract different types of people, who have differing initial views of online relationships or whether SL and WoW create those differences in the players. These questions are open for investigation in the future research.

Table 1

Video Game Players' Friendship Continuum (by Mean Difference between Online and Offline Emotional Closeness)

<i>SL Players</i> (<i>M</i> = -0.17)	<i>Players of Both</i> (<i>M</i> = 0.17)	<i>World of Warcraft Players</i> (<i>M</i> = 0.75)
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Favors Online Relationships		Favors Offline Relationship

Table 2

Summary of UNIANOVA (Perceived Realism) By Game Type and Game Play Level

Game Played	Game Play Level	n(%)	Mean	Std. Deviation
<i>Second Life</i>	Casual	27(9)	2.39	.88
	Moderate	46(16)	2.92	1.02
	Hardcore	18(6)	3.52	1.45
	Total	91(31)	2.87	1.12
<i>World of Warcraft</i>	Casual	28(9)	1.78	.93
	Moderate	76(26)	1.96	.79
	Hardcore	49(16)	2.43	.86
	Total	153(53)	2.07	.87
<i>Both</i>	Casual	11(3)	3.11	1.38
	Moderate	12(4)	2.29	.81
	Hardcore	14(5)	2.69	1.32
	Total	38(13)	2.67	1.18
<i>All Players</i>	Casual	64(22)	2.15	1.08
	Moderate	140(48)	2.19	.92
	Hardcore	88(30)	2.63	1.08
	Total	292(100)	2.31	1.02

Table 3

Summary of UNIANOVA (Offline/Online Mean Difference) By Game Type and Game Play Level

Game Played	Game Play Level	<i>n</i> (%)	Mean Difference	Std. Deviation
<i>Second Life</i>	Casual	27(9)	-.56	1.05
	Moderate	46(16)	.10	1.06
	Hardcore	18(6)	-.22	.98
	Total	91(31)	-.17	1.05
<i>World of Warcraft</i>	Casual	28(9)	.30	1.53
	Moderate	76(26)	.96	1.00
	Hardcore	49(16)	.67	1.15
	Total	153(53)	.75	1.17
<i>Both</i>	Casual	11(3)	.24	.58
	Moderate	12(4)	.27	.70
	Hardcore	14(5)	.17	.68
	Total	38(13)	.16	.50
<i>All Players</i>	Casual	64(22)	.05	1.33
	Moderate	140(48)	.71	1.05
	Hardcore	88(30)	.45	1.09
	Total	292(100)	.49	1.15

APPENDIX A
QUESTIONNAIRE

Please select or provide the most appropriate answer.

1. On average how many hours do you spend a week playing MMORPGs?
Please enter the appropriate number of hours.
2. Do you generally engage in online videogame play with members of your family?
 - a. Almost always
 - b. Sometimes
 - c. I never engage in online game play with family
3. Do you generally engage in online videogame play with friends?
 - a. Almost always
 - b. Sometimes
 - c. I never engage in online game play with friends
4. How would you rate your level of game play?
 - a. Casual
 - b. Moderate
 - c. Hardcore
5. What type of games do you generally play? Select all that apply.
 - a. Tactical Operations
 - b. First-person Shooter
 - c. Strategy
 - d. Simulations
 - e. Role-playing
 - f. Adventure
 - g. Racing
 - h. Sports
 - i. Action

Please answer the following questions based on the provided scale.

Likert scale (1-5) with 5-agree, 4-somewhat agree, 3-neutral, 2- somewhat disagree, 1- disagree

6. I feel more at ease interacting with people in game than with people in face-to-face interactions.
7. I would rather communicate with people through email, IM, or text, as opposed to phone calls.
8. I would rather communicate with people through email, IM, or text, as opposed to face-to-face.
9. I only really feel like myself when I am online.
10. The friendships I have through online videogames mean just as much to me as my everyday face-to-face friendships.
11. The experiences I gain from online gaming mean just as much to me as my everyday experiences.

12. I find myself having more meaningful conversations online than with face-to-face friends/family.
13. I have met some of my best friends through online games.
14. I feel more powerful online.
15. I feel more powerful offline.

16. I understand real-life group dynamics much more after playing online games.
17. The way I am in the game is the way I am in real life.
18. I am better able to express who I am online.
19. I am better able to express who I am offline.
20. It is just a game.

Please answer the following questions about your best online only friend (friend you only know through online)

21. I felt I could share my most intimate feelings with this person.
22. I kept my distance emotionally from this person.
23. It was very easy to talk to this person.
24. I felt close to this person.
25. It was difficult to talk to this person.
26. This person understood me.
27. This person shared his/her most personal thoughts with me.

Please answer the following questions about your best offline only friend (friend you predominantly have face to face interactions with)

28. I felt I could share my most intimate feelings with this person.
29. I kept my distance emotionally from this person.
30. It was very easy to talk to this person.
31. I felt close to this person.
32. It was difficult to talk to this person.
33. This person understood me.
34. This person shared his/her most personal thoughts with me.

Second Life

35. Do you play Second Life? If, Yes questions 36-40 will be presented, if No, survey will move to question 44.

36. SL presents things as they really are in life.
37. Events in SL do not mimic everyday life.
38. SL lets me explore/see how other people live.
39. SL does not depict life as it really is.
40. SL lets me experience events as if I was really there.

WoW Questions

41. Do you play Second Life? If, Yes questions 42-46 will be presented, if No, survey will move to question 53.

- 42. WoW presents things as they really are in life.
- 43. Events in WoW do not mimic everyday life.
- 44. WoW lets me explore/see how other people live.
- 45. WoW does not depict life as it really is.
- 46. WoW lets me experience events as if I was really there.

Demographic Data

Please select the most appropriate answer.

- 47. What is your gender?
 - a. Male
 - b. Female

- 48. What is your ethnicity?
 - a. Caucasian/White
 - b. African-American
 - c. Hispanic
 - d. Asian-American/Pacific Islander
 - e. Native American
 - f. Other

- 49. What is your age bracket?
 - a. 18-25
 - b. 25-30
 - c. 30-35
 - d. over 35

- 50. Occupational status
 - a. Employed full-time (32 hours or more per week)
 - b. Employed part-time (under 32 per week)
 - c. Not currently employed
 - d. College/University student

APPENDIX B

SCALES

Player Motivations Scale

1. I feel more at ease interacting with people in game than with people in face-to-face interactions.
2. I would rather communicate with people through email, IM, or text, as opposed to phone calls.
3. I would rather communicate with people through email, IM, or text, as opposed to face-to-face.
4. I only really feel like myself when I am online.
5. The friendships I have through online videogames mean just as much to me as my everyday face-to-face friendships.
6. The experiences I gain from online gaming mean just as much to me as my everyday experiences.
7. I find myself having more meaningful conversations online than with face-to-face friends/family.
8. I have met some of my best friends through online games.
9. I feel more powerful online.
10. I feel more powerful offline.

Emotional Closeness Scale

Online Emotional Closeness

1. I felt I could share my most intimate feelings with this person.
2. I kept my distance emotionally from this person.
3. It was very easy to talk to this person.
4. I felt close to this person.
5. It was difficult to talk to this person.
6. This person understood me.
7. This person shared his/her most personal thoughts with me.

Offline Emotional Closeness

- 1 I felt I could share my most intimate feelings with this person.
2. I kept my distance emotionally from this person.
3. It was very easy to talk to this person.
4. I felt close to this person.
5. It was difficult to talk to this person.
6. This person understood me.
7. This person shared his/her most personal thoughts with me.

Percieved Realism Scale

Second Life

1. SL presents things as they really are in life.
2. Events in SL do not mimic everyday life.
3. SL lets me explore/see how other people live.

4. SL does not depict life as it really is.
5. SL lets me experience events as if I was really there.

World of Warcraft

1. WoW presents things as they really are in life.
2. Events in WoW do not mimic everyday life.
3. WoW lets me explore/see how other people live.
4. WoW does not depict life as it really is.
5. WoW lets me experience events as if I was really there

REFERENCES

- Anderson, C., & Bushman, B. J. (2001). Effects of violent video games on aggressive behavior, aggressive cognition, aggressive affect, physiological arousal, and prosocial behavior: A meta-analytic review of the scientific literature. *Psychological Science, 12*, 353-359.
- Anderson, C., & Dill, K. E. (2000). Video games and aggressive thoughts, feelings, and behavior in the laboratory and in life. *Journal of Personality and Social Psychology, 78*, 772-790.
- Ball-Rokeach, S. J. (1998). A theory of media power and a theory of media use: Different stories, questions, and ways of thinking. *Mass Communication & Society, 1*(1/2), 5-40.
- Ballard, M.E., & Wiest, J.R. (1996). Mortal Kombat: The effects of violent videogame play on males' hostility and cardiovascular responding. *Journal of Applied Social Psychology, 26*(8), 717-730.
- Bargh, J., McKenna, K., & Fitzsimons, G. (2002). Can you see the real me? Activation and expression of the "true self" on the Internet. *Journal of Social Issues, 58*(1), 33-48.
- Bilandzic, H. (2006). The perception of distance in the cultivation process: A theoretical consideration of the relationship between television content, processing experience, and perceived distance. *Communication Theory, 16*, 333-355.
- Berscheid, E., Snyder, M., & Omoto, A. M. (1989). The relationship closeness inventory: Assessing the closeness of interpersonal relationships. *Journal of Personality and Social Psychology, 57*, 792-807.
- Bolter, J., & Grusin, R. (1999). *Remediation: Understanding new media*. Cambridge, MA: MIT Press.
- Buselle, R. W. & Greenberg, B. S. (2000) The nature of television realism judgments: a re-evaluation of their conceptualization and measurement, *Mass Communication and Society, 3*, 249-258.
- Busselle, R. W., Ryabovolova, A. & Wilson, B. (2004). Ruining a good story: Cultivation, perceived realism and narrative. *European Journal of Communication 29*, 365-378.
- Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*(1), 155-159.
- Cohen, J. (2001). Defining identification: A theoretical look at the identification of audiences with media characters. *Mass Communication & Society, 4*(3), 245-264.
- Cohen, J., & Weimann, G. (2000). Cultivation revisited: Some genres have some effects on some viewers. *Communication Reports, 13*(2), 99-114.
- Cook, T. D., Kendzierski, D.A., & Thomas, S.V. (1983). The implicit assumptions of television research: An analysis of the 1982 NIMH report on television and behavior. *Public Opinion Quarterly, 47*, 161-201.

- Deselms, J. L. & Altman, J. (2003). Immediate and prolonged effects of videogame violence. *Journal of Applied Social Psychology, 33*, 1553-1563.
- Entertainment Software Association. Industry facts. Retrieved April 14, 2008, from <http://www.theesa.com/facts/index.asp>
- Eastin, M.S., Griffiths, R., & Lerch, J. (2005). *Beyond shooter games: How game environment, game type and competitor influence presence, arousal and aggression*. Paper presented to the Communication & Technology Division of the annual International Communication Association, New York.
- Gerbner, G. (2002). *Against the mainstream: The selected works of George Gerbner*. Michael Morgan (Eds.). NY: Peter Lang Publishing.
- Gerbner, G. (1984). Television as religion. *Media & Values, 17*, 1-3.
- Gerbner, G., Gross, L., Morgan, M., & Signorielli, N. (1986). Living with television: The dynamics of the cultivation process. In Jennings Bryant & Dolf Zillmann (Eds.) *Perspectives on media effects*. Hillsdale, NJ: Lawrence Erlbaum Associates.
- Green, M. C. (2004). Transportation into narrative worlds: The role of prior knowledge and perceived realism. *Discourse Processes, 38*(2), 247-266.
- Green, M. C., Brock, T. C., & Kaufman, G. F. (2004). Understanding media enjoyment: the role of transportation into narrative worlds. *Communication Theory, 14*(4), 311-327.
- Hall, A. (2003). Reading realism: Audiences' evaluations of the reality of media texts, *Journal of Communication, 53*, 624-641.
- Hawkins, R., & Pingree, S. (1982). Television's influence on social reality. In D. Pearl, L. Bouthilet, & J. Lazar (Eds.), *Television and behavior: Ten years of scientific progress and implications for the eighties*. Washington, DC: United States Printing Office.
- Huesmann, L. R., Moise-Titus, J., Podolski, C. & Eron, L. D. (2003). Longitudinal relations between children's exposure to TV violence and their aggressive and violent behavior in young adulthood: 1977-1992, *Developmental Psychology, 39*(2), 201-221.
- iSuppli Home entertainment multimedia content market tracker- Q3 2007. Retrieved April 14, 2008, from <http://www.isuppli.com/catalog/detail.asp?id=8973>
- Krahé, B. & Möller, I. (2004). Playing violent electronic games, hostile attribution bias, and aggression-related norms in German adolescents. *Journal of Adolescence, 27*, 53-59.
- Laser, The: Tom Clancy's Rainbow Six Vegas review. Retrieved November 30, 2008, from <http://www.the-laser.com/rainbowsixvegas.htm>
- Lee, K. M. (2004). Presence, explicated. *Communication Theory, 14*(1), 27-50.

- Malliet, S. (2006). An exploration of adolescents' perceptions of videogame realism. *Learning, Media, and Technology*, 31, 377-394.
- Potter, W.J. (1987). Perceived reality and cultivation hypothesis. *Journal of Broadcasting and Electronic Media*, 32, 159-174.
- Potter, W. J. (1988). *Developing an instrument to measure perception of reality in television content*. *Journal of Broadcasting & Electronic Media*, 32, 23-41.
- Potter, W.J. (1988). Perceived reality in televisions effects research. *Journal of Broadcasting and Electronic Media*, 32, 23-41.
- Pena, J. & Hancock, J. (2006). An analysis of socioemotional and task communication in online multiplayer videogames. *Communication Research*, 33, 92-109
- Perloff, R. M. (1999). The third-person effect: A critical review and synthesis. *Media Psychology*, 1(4), 353-378.
- PSX Extreme: GAT4 caused Midway to add more realism to the wheelman. Retrieved November 30, 2008, from <http://www.psxextreme.com/ps3-news/4204.html>
- Ramirez, A., & Zhang, S. (in press). When on-line meets off-line: The effect of modality switching on relational communication. *Communication Monographs*.
- Shapiro, M., Barriga, C. (2006). *Emotional congruency, media dependency, and the realism of media stories*. International Communication Association, 2006 Annual Meeting, 1-29.
- Shapiro, M., Barriga, C., Jhaveri, R. (2005). *Media context, female body size and perceived realism*. International Communication Association, 2005 Annual Meeting, 1-33.
- Shapiro, M.A., & Chock, T.M. (2003). Psychological processes in perceiving media reality. *Media Psychology*, 5(2), 163-198.
- Shapiro, M. A. & Chock, T. M. (2004). Media dependency and perceived reality of fiction and news. *Journal of Broadcasting and Electronic Media*, 48(4), 675-695.
- Shimohara. (2001) Artificial life in hyperreality. In John Tiffen & Nobuyoshi Terashima (Eds.) *HyperReality: Paradigm for the third millennium*. London: Routledge.
- Short, J.A., Williams, E., & Christie, B. (1976). *The social psychology of telecommunications*. London: John Wiley & Sons.
- Sproull, L., & Kiesler, S. (1991). *Connections: New ways of working in the networked organization*. Cambridge, MA: MIT Press.
- Susanka, S. (2008). *The waking dream: Second Life as a metaphor for our true self*. Presentation at the Athena Isle Summer Series, Online.

- Swan, K. (2002). Building communities in online courses: The importance of interaction. *Education Communication and Information, 2*(1), 23-49.
- Tiffen, J. (2001). The hyperreality paradigm. In John Tiffen & Nobuyoshi Terashima (Eds.) *HyperReality: Paradigm for the third millennium*. London: Routledge.
- Tu, C.H. (2002). The impacts of text-based CMC on online social presence. *Journal of Interactive Online Learning, 1*(2), 1-24.
- Walther, J. (1992). Interpersonal effects in computer-mediated interaction: A relational perspective. *Communication Research, 19*, 52-90.
- Walther, J. (1996). Computer-mediated communication: Impersonal, interpersonal and hyperpersonal interaction. *Communication Research, 23*, 3-43.
- Williams, D. (2006). Virtual cultivation: Online worlds, offline perceptions. *Journal of Communications, 56*, 69-87.
- Williams, D., & Skoric, M. (2005). Internet fantasy violence: A test of aggression in an online game. *Communication Monographs, 22*, 217-233.
- Yee, N. (2006). The demographics, motivations, and derived experiences of users of massively multi-user online graphical environments [electronic version]. *Presence: Teleoperators & Virtual Environments, 15*, 309-329.