

ABSTRACT

CASHMAN, SHAUN LEE. *The Rhetoric of Immersion in Video Game Technologies*.
(Under the direction of Dr. Victoria Gallagher.)

Immersion is a crucial concept for understanding how people engage, interact, and understand mediated messages. This work examines the concept of immersion within video game technologies. It argues that immersion is a rhetorical function and that we can understand how a media text induces immersion using rhetorical theory. Immersion itself is defined as a unique, multifaceted relationship that forms between a person and a media message that acts on the body, mind, and emotions of a person and is intrinsically tied to the unique experience of a medium. To that end, video games are distinct in that they are comprised of a game, screen, computer, and interface. These four components allow us to understand the medium as a communicative act that can be studied through rhetoric. Justified in existing game and media theory, this work constructs a rhetorical model of immersion that highlights seven rhetorical means through which video game technologies can immerse. The rhetorical model of immersion is then compared to two existing immersion models through and analysis of five distinct video. Through this analysis the rhetorical model shows its viability by comparison and its contributions to our understanding of immersion in video game technologies.

The Rhetoric of Immersion in
Video Game Technologies

by
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DEDICATION

To my wife Sarah for all of her support and encouragement.

BIOGRAPHY

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CHAPTER 1. DISSERTATION OVERVIEW

"If you watch young children play, you will notice that they create games, characters, situations, whole worlds in which they immerse themselves with intense concentration."
- Daniel Greenberg

Introduction

For as long as language has existed, there has been an overwhelming desire to bridge thought with image. Artists, poets, writers, and speakers have long sought to bring their dreams and ideas to the mind's eye, to the imagination, to the body and heart of other people. This goal of language forms the foundation of vividness in classical rhetoric. When ancient oral speakers told stories, they utilized a variety of linguistic tactics in order to conjure images in their listeners' minds. These speakers didn't just tell about the fall of Troy, they described the smell of blood, the overwhelming size of the armies, and the sound of clanging weapons so that the audience not only heard about the event but rather "saw" it in their minds and "felt" like they were there. The ability of language to excite the imagination brings the audience into a close relationship with a mediated message. This interaction in which a person engages a communication message or text and loses themselves in it, creates a unique experience that has been called by many names but one of particular interest in the contemporary moment is immersion.

When a person becomes immersed in a mediated text whether it is a painting, book, film, or speech, that person is thought to be deeply engaged in the message to the exclusion of things outside of it. They lose track of time, space, and ignore events that are not directly part of the media. This experience is both psychological and physical and is typically

associated with feelings of pleasure and enjoyment. As such, immersion is often considered an important element of entertainment media. Scholars across a variety of different disciplines from the classics of literature (Ryan, 1994; Murray, 1997) and art (Grau, 2003) to new digital technologies of virtual reality (Steuer, 1992; Slater, 2003) and video games (McMahan, 2003; Brown & Cairns, 2004; Calleja, 2007; Ermi & Mäyrä, 2007) consider immersion key to understanding how people interact with mediated representations. However, the meaning of immersion and how it works remains ambiguous.

There have been very few attempts to study the experience of immersion. Most of the literature regarding this topic has been situated within the study of specific media. Scholars in virtual reality (Steuer, 1992; Slater, 2003) define immersion as a state of being resulting from perceptual manipulation. Narrative scholars (Ryan, 1994; Murray, 1997) define immersion as an emotional experience resulting from desire manipulation. Attention theorists (Crary, 1999; Lanham, 2006) define immersion as a cognitive act resulting from focused attention. These different approaches towards the concept of immersion seem to reflect a general confusion over what the experience means and how to best cultivate it. And yet immersion remains an important topic of study particularly in recent years with the development of digital media.

The intent of this work is to understand immersion within the specific mediated experience that results through video game technologies. Although immersion has a long history in older media, video games offer a unique context in which to examine this experience. First of all, video games are arguably one of the most influential digital media

currently in existence today. Video games provide a testing ground for technical developments in HCI (Human-Computer Interactions), interface design, entertainment presentation, and applications of interactive media. One of the first uses of the computer outside of the military was to create and play a game called *SpaceWar* (1962) (Poole, 2004) and the military has since adopted video games to serve their purposes as can be seen in *America's Army* (2002), a 1st-person shooter, which the military uses for training and recruitment. In addition, this medium has permeated the very fabric of our society. Video games are played in almost 70% of all households in the United States (ESA, 2009). This medium is influential and widespread. Understanding immersion in video games will help explore how this medium is understood and experienced.

This chapter provides a brief overview of the topic and purpose of this study, the theoretical background, relevance of the study for scholarship and commercial application, the methodology that will be used, and a brief chapter outline. It is intended to introduce the reader to the concept of immersion in video games and why it is important to examine. Video games are so popular that they are translated into movies, books, toys, and even board games. They are the subject of heavy social debate regarding violence, addiction, and free speech. The visual design aspects from video games are influencing the way film and television broadcast their messages. Because they are the testing ground for new computer interfaces and presentational methods, video games have shaped much of the way that we understand and use digital technology.

The Rhetoric of Immersion

The study of immersion as a mediated experience has been explored by a number of scholars, critics, and designers. This has led to conflicting conceptualizations of immersion in regard to how it functions and how to cultivate it. However, it is an important concept for understanding how people experience mediated texts. Art theorist Oliver Grau (2003) writes, "Immersion is undoubtedly key to understanding the development of media, even though the concept appears somewhat opaque and contradictory" (p. 13). In fact, there seems to be very little consensus as to how to describe it. Mediated experiences are complicated and often the focus is more on what the message says and how it says it rather than what the message does.

In order to understand the immersive experience of video games, this study takes the perspective that immersion is a rhetorical function of the medium. Although rhetoric has not been applied to the study of immersion, this isn't actually a difficult position to take. Many other scholars across a variety of disciplines (Murray, 1997; Calleja, 2007; Slater, 2003) have attempted to describe immersion and to explain how media texts can either enhance or hinder the experience using terms such as presence, style, and metaphor, all of which have rhetorical roots. Game scholar Gonzalo Frasca (2004) contends that the concept of immersion in the video game industry is currently based on Aristotelian logic.

Recent scholarship of immersion in video games has focused on the technological characteristics and the content of a media text. How good are the graphics? Do the representational images closely match their physical counterparts? Does the game present an emotionally engaging story? How much agency, or control, does the participant have within

the game? While these questions are important, they do not adequately explain why people find these texts immersive or what it means to become immersed. I propose that we can more fully explain how and why a video game induces immersion through rhetorical theory.

As such, this study presents a rhetorical model for describing and assessing how immersion functions in video game technologies and compares this approach to the existing frameworks currently informing the study of video game immersion. A rhetorical approach allows for us to understand immersion as a communicative goal of a video game message that recognizes the importance of the player and the game in the construction of the experience, and provides a useful theoretical tool for the development and study of the experience. Through careful analysis of video game communities and of specific games, this study reveals how to use rhetoric to examine, illuminate, and assess the immersive experience of digital media. I identify the means of immersion through classical rhetorical theory and justify them through existing theories of games and play.

This work addresses several key questions. First of all, how do scholars currently understand the concept of immersion through older media and how has this impacted the understanding of immersion in video games? Scholars across multiple disciplines study immersion, or related concepts, and it is helpful to see how these perspectives are shaping video game research and development. Next, do the communities who create and use videogames value immersion and if so how is their understanding of it shaping the development of the technology? Video game communities are surprisingly vocal online and are quite capable of and eager to critique and discuss video game concepts. The value and

meaning they associate with immersion has a profound impact on the design of video game technology and games. This dissertation will then suggest how we can understand immersion in video games through rhetorical theory. I offer a model, which incorporates seven possible rhetorical means that may be used to critique the immersive potential of video games. This dissertation will then compare this model to two others through an analysis of five games in order to test the viability and flexibility of this model and to explicate what it adds to our understand of immersion of video game technologies.

Study Relevance

It should come as no surprise that immersion has been an important concept in video game literature and among video game communities. Game designers (Laramee, 2002; Rouse, 2005) hold up immersion as the ideal entertainment experience, synonymous with pleasure, that all video games should seek to cultivate. Game scholars (Brown & Cairns, 2004; Salen & Zimmerman, 2004) debate the value of immersion while at the same time offering models of immersion for analysis and evaluation. Even game developers (Gamershell, 2006; Fahey, 2008; Immersion Games, 2009) use immersion as a marketing tool to attract new players. Current scholarship on immersion in video games has either tried to refine a definition of it (McMahan, 2003), describe how it works (Douglas & Hargadon, 2004), or conceptualize how it fits into play and games (Ermi, & Mäyrä, 2007) There is a general attitude that immersion exists, it's a good thing, and that it is important for a pleasurable gameplay experience.

The investigation of immersion doesn't just appear in game research but it also appears in other studies of digital media. Literature scholar Janet Murray (1997) identifies four essential properties of new digital environments, which she boils down into two categories: interactive and immersive. Marie-Laure Ryan, (1994) calls these two traits the "cornerstone of a general theory of representation and communication" (p. 4). Undergirding the arguments behind both of these scholars' work are examples taken from video games. If we want to understand how people interact with digital representation, what it means to communicate through interactive media, and the desired experiences of digital text, we must first uncover the mystery of immersion. It describes the relationship that forms when a human interacts within a digital environment and incorporates that environment into their sense of being and acting.

Interestingly, very few scholars (Calleja, 2007) have applied rhetorical theory to this kind of study before. It is generally recognized that rhetoric can be used to understand communication particularly that of public speech (Aristotle, 1991) but it can also be used to study the meaning behind media texts (McGee, 1999). Scholars have used rhetoric to determine the communication function not just of spoken text but also images (Kress & Van Leeuwen, 1996; Prelli, 2006) and even multi-faceted media of popular culture like television and film (Brummett, 1991). There has been more of an effort in recent years to apply rhetorical approaches to digital spaces (Zappan, 2005), although such efforts are transforming traditional rhetoric in ways that have not yet been formalized. This work contributes to scholarship on games and new media by offering a direct application of

rhetorical theory to understand mediated experiences and digital communication. It does this by finding intersections of agreement between these disparate fields and using them to construct a rhetorical model of the immersive experience.

Video games provide an interesting site to locate this study. As a medium, they have only been around for about forty years. However, games are one of the primary uses of digital technology (Poole, 2004). We are playful creatures and video games are invading our culture and society on numerous levels particularly massively multiplayer online games that are encouraging millions of players to gather together to form communities, explore digital worlds, and play. Because these games construct digital spaces that players may explore, they are a particularly appropriate medium to examine in an effort to gain a clearer understanding of the characteristics of immersion. It is a technology that invites interactivity and is strongly associated with immersion.

Methodology

Prior studies have attempted to list the traits or elements of digital technologies that generate immersive gameplay in order to capture what this experience feels like. These lists are often built on either the technical features of simulation (McMahan, 2003) or on more complex theoretical social frameworks (Calleja, 2007), all of which tend to have trouble explaining why some elements are immersive while others are not and why some texts are immersive to some people only some of the time. If immersion occurs merely through player engagement with the video game narrative (Schmidt, 2007) as some contend, then how can people become immersed in games with minimal narrative structures like *Tetris* (1985) or

Microsoft Solitaire (1989)? If player agency is all that matters (Herz, 1997), then how can games with very limited controls like *Myst* (1991) or the *Final Fantasy Series* (1985-2009) be immersive? If graphic realism is necessary for immersion (Slater, 2003) then why even play older video games especially when films at the time offered a much more simulated experience of reality? Does that mean that older games are less immersive than more recent versions? Current models do not adequately answer these questions.

A rhetorical approach would be able to examine each video game as a separate text as opposed to making blanket statements about the video game medium. Because of its communicative focus, a rhetorical approach would enable critics, scholars, developers, and gamers to focus on the participation of both the player and the game to the immersive experience. Rhetoric is the study of symbol use in action. Because immersion is a temporal experience with a clear beginning and end, rhetoric is well-suited for the study of immersion as a historically situated event with identifiable formal aspects . For these reasons, rhetoric could potentially add to our understanding of immersion in video games by providing clear direction on how it happens across different game structures and game players. However, we need to lay clear theoretical groundwork to be able to make these assertions and to apply rhetoric for this purpose.

A rhetorical approach must assume that video games are in fact a form of communication. Unlike other media that convey a linear message from author to speaker, the video game establishes meaning through player interaction. Each player experiences a game differently. One could argue that because the message emerges through engagement, that the

player constructs the message and the game does not communicate anything except constraints on activity. Some scholars (Eskelinen, 2004) have used this quality of games to argue against the value of narrative theory in games and some lawyers and judges (Gentile, 2009) have used it to argue against first amendment rights for video games because if games do not convey meaning, then they can not tell stories and they are not acts of expression. This argument assumes that games are merely tools for a self-created experience that serves no communicative function. Immersion, under this logic, would become a natural response to the action of play and not a communication goal of the game. There is no text, so to speak, except perhaps in the rules of the game for what is really communicated through a chess board?

While it is true that video games are dependent on interaction with a player, they also construct play spaces, assign roles, and constrain action (Wolf, 1997). They are still communication texts. We recognize the communication in older media such as literature and television because of the established relationship of the speaker/author and the listener/reader. The media presents a message to a passive audience who tend to interpret the message in generally the same manner. Interactivity changes that dynamic by making the listener or receiver a more active participant. And yet, challenges to this older media relationship model (de Certeau, 1982; Jenkins, 1992) argue that audiences even in older media are active and do not always interpret a message the same way. In addition, the speaker, the creator of the game, does not merely vanish. Because video games present both visual and audio representations, they convey meaning even if they do not follow the

communication structure of narrative found in older texts. They have more in common with visual communication than perhaps oral or written forms but video games are media texts.

Rhetoric can be used to explain the strategies of persuasion in these game spaces, identify their characteristics, explore community construction, and examine its means of expression (Zappan, 2005). The idea that video games do not convey meaning fails to account for the fact that these texts borrow heavily from meaning-laden media such as art, film and literature. Although video games allow interactivity, they still fulfill the speaker and listener model of communication (Jenkins, 2006) and are therefore an acceptable site for rhetorical study

But is immersion an intended communication objective? Given that game designers like Rouse (2005) specifically argue that video games should seek to cultivate immersive experiences, immersion is indeed an aesthetic and communication goal of video game authors. Since rhetoric is inherently tied to the study of communication (Foss, 2004), it is therefore possible to use rhetoric to study the persuasive strategies employed in video games to elicit immersive experiences. However, since rhetoric is a diverse field with numerous definitions, it would be helpful to explain here how this dissertation employs rhetoric to study immersion.

Aristotle (1991) describes rhetoric as the "ability, in each case, to discover the available means of persuasion" (p. 36). In the classical tradition, rhetoric is the study of how language, particularly oral speech, evokes emotion, encourages action, and changes public opinion. The ancient sophists called it an art while Plato called it the art of trickery

(Poulakos, 1999). However, rhetoric understood here, is not just a method of criticism designed to uncover hidden truths, nor is it merely the art of manipulation. This study builds on Sonya Foss' (2004) definition that rhetoric is the study of human communication and its functions. Rhetoric examines how we use language to create and sustain shared meaning, establish identity, and build relationships. As Kenneth Burke (1969) writes, "Rhetoric is concerned with the state of Babel after the fall" (p. 23). Although rhetoric to Burke centered on language as a symbolic means to induce cooperation, Burke's theoretical work helped push rhetoric into the study of communication beyond verbal or written language (Covino & Jolliffe, 1995).

The model of immersion described in this dissertation builds on the rhetorical schema proposed by Sonya Foss (1994) regarding the analysis of visual texts. The schema has three steps of which the first two are the most relevant for this study. It begins by determining a text's function. In this case the text is a video game including both the content and the form. The function is immersion. The second step assesses the communication of that function through style and substance. This requires determining the specific attributes or game aesthetics within the video game's formal structure that contribute to the immersive experience.

This study proposes a model of seven means through which a video game can enhance or hinder immersion that emerged through a careful examination of the literature in game studies and rhetorical theory. These seven means are *spatial, temporal, narrative, social, interface, memory, and exigence*. I identify and describe each of these means using

rhetorical theory and concepts in game studies. The first two, *spatial* and *temporal*, are the most readily associated with immersion, which is often characterized as a sense of spatial and temporal distortion. Players become only vaguely aware of time passage and spatial events outside of the game space. *Spatial* means of immersion are created through careful design of physical space, game space, play space, and digital space. Qualities such as arrangement, emphasis, and exploration are important aspects of spatiality in the immersive quality of a game. *Temporal* means of immersion include game time, play time, player control over time, temporal sensation, and time spent/required to play the game. In temporality, the rhetorical concepts of time including *kairos*, *stasis*, and *chronos* are the most relevant to this study.

Narrative immersion builds on Kenneth Burke's (1968) concept of form in that the video game story, when there is one, has form when it arouses and fulfills desires and by doing so invites the player into an immersive experience. This is perhaps the most contentious mean of the seven since there is some question over the narrative value of video games (Eskelinen, 2001) and yet, this study contends, that not all means are necessary for immersive experiences. The *interface* means of immersion refer to the presentation method, usually a screen, audio, the controls, player representations, and player representations in the form of avatars. The immersive quality of the interface can be studied using principles of visual rhetoric such as contact, social distance, and attitude (Kress & van Leeuwen, 1996). The *social* means of immersion refer to the game's single-player or multiplayer functionality, whether the social play encourages cooperative or competitive action, the communication channels available and their ease of use, and the communities that emerge in the game and

the meta-communities outside of it. Kenneth Burke's (1969) concept of identification helps to explain the social action and goals that encourage immersive experiences.

The five means covered have appeared in other models in various forms although not from a rhetorical perspective. The last two means of *exigence* and *memory* are unique to this model. *Memory* means are developed through individual, popular, and cultural memory, which is shaped by how the game builds on intertextuality and the game's use of conventions and genre. And finally, *exigence* means emerge through the game's conflict and includes goals, game rules, and the reward/punishments within the game. All games involve some form of conflict or task that must be accomplished in order to succeed or fail in the game. The exigence, a concept that builds off the work of Lloyd Bitzer (1999), emerges from this goal and the perceived value of it can increase or decrease the immersive quality of the experience.

Using these seven means to examine video games as texts may improve our understanding of how and to what extent games construct and cultivate immersive experience. In addition, such examination will enable us to better understand the role of the player and gameplay in experiences of immersion as well as how certain game features may serve to enhance or hinder the immersive potential of a game.

Chapter Overview

In order to describe and assess the immersive qualities of video games, it is necessary to first provide a solid ground from which to build. Chapter 2 defines the video game medium in order to identify those qualities of the medium necessary to understand how it can

immerse. Through the literature, I identify game, video, computer, and interface as components that define the medium. I also identify how people use the medium in order to understand the kind of immersive relationship it seeks. This means explicating the differences between play and game and how these two concepts intersect with digital technology to construct a very distinct mediated experience. Not all electronic games are video games and not all games involve play. These distinctions are important to understand and define the medium and how it induces immersion.

Chapter 3 provides a review of the literature of immersion tracing its historical relevance in rhetoric, art, literature, film and television, virtual reality and how the perception of immersion in different media have impacted the current study of immersion in video games. Highlighted are related media concepts that help construct a theoretical model of immersion. A survey of the literature on immersion in art, virtual reality, literature, and videogames reveals three basic intellectual trends. Scholars conceptualize immersion either as a physical state of being, a psychological experience, or a cognitive act of attention. Each perspective forms a different definition with its own assumptions as to what causes immersion, what enhances or hinders it, and how to describe it. I call these definitions *physical*, *psychological*, and *attention* and all three have been applied to the study of video games in some form. This chapter explicates these three definitions and how they are influencing the development of videogame technologies. Also included are the results of a discourse analysis study of the communities surrounding video game technologies regarding

the value and meaning of the concept of immersion among the groups that design, promote, and consume this medium.

Chapter 4 lays out the rhetorical model of immersion. It describes in detail the seven means through which a video game can encourage immersive experiences justified through existing rhetorical and game theory. Also discussed in this chapter are two other immersive models. First, is Alison McMahan's (2003) model that utilizes a physical immersion approach based on the virtual reality theories of presence. I call this the *presence model*. Second, is Gordon Calleja's (2007) phenomenological model that I will call the *incorporation model*. Both of these models are designed to study the immersive quality of video games and the experience of players.

Chapter 5 uses the three models of immersion to examine five different video games. The games under analysis were chosen because they were all considered commercial successes, represent different game genres, use different game technology, and were released over a twenty year period. Such diversity tests the ability of the immersion models to examine a multiplicity of games and game technologies. The games studied were *Tetris* (1989), *Final Fantasy VII* (1997), *Halo: Combat Evolved* (2001), *World of Warcraft* (2004), and *Wii Sports* (2006). The purpose of this chapter is to explicate the similarities and differences of the three models to see if the rhetorical model is viable by comparison and what it offers to the study of immersion.

Chapter 6 concludes this dissertation with a summary of its key points and offers suggestions where future research in immersion could go from here. This chapter highlights

the value of understanding immersion from a rhetorical standpoint and how this conceptualization will benefit video game designers, developers, and researchers as well as expand rhetorical theory in the domain of new media to help us further understand digital media texts and how we interact with them.

Conclusions

This dissertation introduces rhetoric as a theoretical tool for the study of how video game technologies induce immersive experiences. The seven means identified in this work represent seven ways that video game technologies may encourage or discourage an immersive interaction. A video game does not need to possess the qualities of all of them in order to induce immersion. There are potentially other means that will emerge as video game technologies develop and change. However, this work shows that a rhetorical approach is both viable to our understanding of immersion in video games and comprehensive enough to account for the unique qualities and variety of the medium.

CHAPTER 2. THE VIDEO GAME AS A MEDIUM

"The mind game is a relationship between the child and the computer. Together they create stories. The stories are true in the sense that they reflect the reality of the child's life." - *Ender's Game* by Orson Scott Card

Introduction

In order to conceptualize the experience of immersion in video games, we must first define the video game as a medium. This chapter outlines the characteristics of video games and how people use them to better understand how they immerse. The medium of the video game is really a hybrid of multiple technologies coming together under the broad framework of game. However, all video games share the four defining characteristics of game, video, computer, and interface. This chapter defines each of these qualities in order to distinguish the video game medium from other types of media like film and literature as well to explain their communicative nature. The description of these formal characteristics will be used in later chapters to examine and evaluate how a video game can rhetorically evoke or hinder the experience of immersion.

This chapter attempts to address a challenge regarding video game technology. The video game has struggled to receive recognition as a medium because of its status as a game, its digital nature, and the large category of technology and content that are often subsumed under the heading of video game. As such, it is useful to explore what really defines this medium, the technology that has shaped its history, the different type of games and game systems, and the people who play these games. This will help to clarify the focus of this

study and, also, enable a greater level of precision in terms of the types of technology that are of interest and how that technology does or does not shape the experience of immersion.

However, it is not enough to merely describe the technical features of the medium to fully understand how it is experienced. We must also examine how people interact with the medium because this interaction creates audience expectations and shapes their understanding of the experience. That interaction is called play. This is unique to the medium for while people may enjoy reading a good book or watching a good movie, these other media do not require a playful state. Thus, play is the foundational activity through which people understand and interact with games. The experience of immersion is deeply connected to the action of play.

This chapter begins with the four components that comprise the video game medium. It then details several key theories of play, which will be important for understanding both the medium of the video game and the unique experience of immersion that occurs through it. The chapter concludes with a communication model of the interaction that occurs in video games to explain how they are experienced and to justify the need for a rhetorical approach to the study of immersion. The immersive experience of video games emerges through the interaction between a player and a computer through the activity of gameplay.

Game

But what is a game? It is a label applied to so many activities from poker to dress-up that coming up with a single, stable definition is almost a Herculean task. Numerous scholars have tried. Caillois (2001) defined game through a taxonomy of activities. Historian David

Parlett (1999) boiled a game down two elements: ends (a contest with a goal) and means (rules and procedures). While simple, these two definitions have their faults. Caillois' taxonomy assumes play and game are synonymous and Parlett's definition is so broad that we could apply it to court proceedings or car repair. I believe a much more refined definition comes from game designers Katie Salen and Eric Zimmerman (2004). They write, "A game is a system in which players engage in artificial conflict defined by rules that result in a quantifiable outcome" (p. 80). This definition identifies several foundational qualities of game and the video game medium.

According to Salen and Zimmerman, a system is composed of *objects, relationships, rules, and environments*. The *objects* include the physical game pieces such as the dog and the dice in *Monopoly* (1935) or abstract elements like the subject to guess in the game *Twenty Questions*. *Relationships* refer to how the objects interact and connect to one another in the game. In Chess, the pieces of the game can capture one another and remove them from the game field. *Rules* are crucial in games because they determine the ends and the means as well as define the dimensions of the game space and who can play. Game rules, like play, can differ from the normal rules of behavior outside of the game space. It would probably seem strange for a person to hop down the street on one foot rather than just walking but such behavior is normal in the game Hopscotch.

Rules govern the game world and are, according to some scholars (Eskelinen, 2004), the true heart of the game experience. Salen and Zimmerman (2004) identify three types of game rules: *operational, constitutive, and implicit*. *Operational* rules are those explicit

directions usually found in game manuals that define the recognized guidelines of how to play a game. For example, in Chess the rules governing how the pieces move are operational. *Constitutive* rules are the underlying formal logic behind a game. In Chess, there are 64 squares in the game board and the idea that no two pieces can share a single square is a constitutive rule.

The *implicit* rules are the unwritten rules of a game usually concerned with etiquette and proper behavior. For example, in Chess it is generally considered impolite to verbally insult your opponent while they are thinking about their turn. Implicit rules are perhaps the most important rules in social play and can even take precedence or become operational rules. As Linda Hughes (2006) remarks, "Games aren't much 'fun' when rules, rather than relationships, dominate the activity " (p. 514). Given the social goals of a game, rules can change and a focus on the rules to the exclusion of outside social forces can be detrimental to the gameplay. However, rules are an important component of the game because they are necessary for the game system.

The last element of the system is the environment, which is the game space and context. In Chess, the game takes place on a square board divided into red and black square spaces. It usually sits horizontal on a table or some other flat surface. Chess champions may use the game board to compete for money while a pair of siblings might use the game to pass time on a beach vacation. All elements of the system are necessary for the game structure. Removal of even one element such as the game pieces either changes the game or destroys it.

But a game without players is like a tree falling in the forest without an audience, it is not achieving its full potential. A game must involve active players. Although it is possible to find pleasure observing a game (the popularity of spectator sports attest to this) games require interactivity in order to experience them. The term player implies that the game participant is also engaged in play but this should not always be assumed. Players are defined as individuals who are actively involved in the game system and whose actions affect the outcome of the game regardless of whether the players consider their actions as play or not.

The players of video games are as varied as the games themselves. The cultural stereotype of video game players, sometimes called gamers, is that they are primarily young, affluent but jobless, single, males. Studies (Griffiths et. all, 2004; Yee, 2006, ESA, 2008) on video game players reveals that the average age of players is actually in the mid to late twenties and that the majority are employed and in relationships. Older studies placed the gender difference of 75-80% men and 15-20% women playing games (Griffiths et. all, 2004) but ongoing studies (Taylor, 2006) suggest that more women are playing games as time progresses. More recent studies (ESA, 2008) confirm this assumption with 57% male and 43% female playing games indicating that the gender gap is disappearing. Of course, these studies are limited in the fact that they cannot survey anyone younger than 18 without parental permission which may have skewed the data slightly. Regardless, video game players come from many walks of life, ages, and cultural backgrounds. Relevant to this particular study is the reason why these people play games. What exactly draws a person to a game? What do they seek?

Sociologist Richard Bartle (2006) offers one suggestion in his examination of people who play on MUDs, or Multi-User Dungeons. MUDs are text-based social games that connected players via the Internet to a game world and were early ancestors of the massively multi-player online social games that appeared in the late 1990s and 2000s. Bartle identified four player types determined by what the player sought or desired through gameplay: the *explorer*, the *achiever*, the *socializer*, and the *killer*. The *explorer* enjoys discovering aspects of the virtual world. The *achiever* likes game goals and acquiring game wealth. The *socializer* enjoys building relationships and communicating with others. The *killer* likes to cause other players grief and takes pleasure in harming others. Game scholar Nick Yee (2006) expanded these roles into five motivations: relationship, manipulation, immersion, escapism, and achievement. It is possible for players to have multiple motivations for playing games thus suggesting that game play is not a uniform experience. Regardless of their reasons, it is important players recognize that they are playing a game otherwise it ceases to be a game. They must recognize the artificial quality of their interaction.

The artificial part of the game definition harkens back to the understanding of play as being separated from "normal" or "real life" activity. The game of War is very different from a real war. In this card game, players put down cards to represent skirmishes and the player with the highest card wins the battle. As opposed to a real war in which soldiers physically kill and maim one another, the game of War is an artificial representation. It is safe. No one really gets hurt as part of the game. The activity and outcome of the cards have no serious consequences outside of the game. If it did, the activity's status as a game would come into

question. For instance, it is very hard to call Russian Roulette a game because it involves taking a real gun, putting a deadly bullet in it, and then taking turns holding the gun to one's head while pulling the trigger. When the gun kills someone, the game ends. Such a deadly game pushes the limits of artificiality because it is not representative and has serious repercussions. The participants would have trouble calling it a game.

Artificiality is perhaps the most contentious part of Salen and Zimmerman's definition of game because it excludes activities that have no non-game referent and implies that games have no lasting affects. One could argue that any activity could be called a game provided the participants subjectively consider it one. While this is potentially true, the artificiality of a game enables social recognition and agreement among players and non-players that a particular activity is indeed a game.

However, all games involve conflict even if it is artificial. Within games, there is a goal and a challenge, an action the player must perform to achieve the goal. That challenge can be competition with other players, chance, skill, or even personal knowledge. The challenge can be built into the game system or added to it by the player. For instance, flying a kite could be viewed as a form of play. It can become a game by adding conflict such as who can keep the kite up the longest or make it do the most flips. Conflict, as such, centers around the goal, a world-state condition that the player is trying to reach. The goal is an important component of the next part in the game definition in that it can be described as a quantifiable outcome.

Actions within a game are always quantifiable meaning that they can be boiled down into numbers. Some games like Spades use point systems and others like *Monopoly* use fake money. Whoever has the most points or money wins the game. The goal may even just be a simple yes or no condition of accomplishment. Achieving the goal usually determines whether a player has won or lost a game. But are there games that don't have winners and losers? Indeed, for example ongoing games like *Dungeons and Dragons* (1974) or *The Sims* (2000) have no final objective or winning condition but these games can be broken down into smaller goals. Players in these games are trying to change the game state. In *The Sims*, a player may want their Sim to live happily in a palace and this involves a myriad of steps to achieve. The player must keep the Sim happy, get them a job, have them save money, and then buy the palace. In *Dungeons and Dragons*, players have numerous potential goals from making their characters more powerful to accomplishing game missions like saving a princess from an evil dragon. All of these goals are quantifiable. How much money does the Sim need to buy a palace? Is the dragon dead?

Games are an ancient form of entertainment. Like play, games are most-often designed for pleasure and enjoyment. Serious games may have ulterior motives such as education and marketing but their appeal still falls under a broader condition of whether or not the game is pleasurable or interesting. That pleasure arises through the performance of the game, although some games such as professional sports have voyeuristic qualities as well. The five components of games: system, players, conflict, rules, and outcomes are necessary to establish in order to categorize a textual object as being a game. They are the

ingredients. A deck of cards is not a game in and of itself but it becomes one when combined with the components of a game system.

This definition of games may include a number of activities. It is fairly common to distinguish games into different types based on the goals, player action, and rules. Roger Caillois (2001) suggested four-part rubrics for games based on the type of actions needed to overcome the game challenge. 1) *Agôn* are competitive, skill-based games like Chess and boxing. 2) *Alea* are chance-based games like Blackjack. 3) *Mimicry* are role-play games that involve simulating some other activity like House. 4) *Ilinx* are thrill-seeking games centered on perception-manipulation like spinning around dizzily or rock climbing. Again, as reflected in the category of *ilinx*, Caillois combines the concepts of play and game to mean the same thing. Game theorist Jesper Juul (2005) offers a model of game types that he calls the "classic game model" that details what activities are considered gameplay like gambling, simulation, and role-play and what are not such as free-form play and storytelling. Juul's model fits well with the definition of games detailed above and distinguishes different types of games by their system and outcome.

Regardless, games can be played with a variety of different materials from cards and baseballs to words and numbers. They are not limited by any one medium but rather they need only meet the requirements of system, players, conflict, rules, and outcomes to be considered a game. The next ingredient of the video game medium is explicitly stated in its name: video. As such, not all electronic games are video games. For instance, the game *Simon* (1978) is played on a round plastic game unit with four large multi-colored buttons

that illuminate at random intervals. It is an electronic game but not a video game. It is missing a screen.

Screens

Video games require some form of a screen to present the digital system of the game to the player. This screen can come in a number of different forms from a CRT (Cathode Ray-Tube) to a PDP (Plasma Display Panel) or an LCD (Liquid Crystal Display). They can be small or large, black-and-white or full color. They can be projected onto a wall or appear through a grid of pixels. Each pixel is a dot of light assigned a specific color and luminosity. The screen constrains the digital space of the game by giving it clear borders and boundaries. It is the primary channel that conveys the game world to the player. It creates a digital space for the player to engage. Like paintings, the screen provides a window for the player to engage in an imaginary world constructed by an artist. However, unlike paintings video games have struggled to achieve status as a medium.

Mark Wolf (1997) was one of the first scholars to formally call video games a medium. Wolf, whose background is in film theory, establishes the video game medium with two principles: game and video. However, Wolf's definition is incomplete. Under this rather broad term, a television drinking game could be called a video game since it is a game and uses a screen. Therefore, two more elements are necessary. Video games must rely on a computer to process the game content and provide some means for player interaction. A video game is digital. It is software and it requires a computer to decode the digital data that is the game text, project that information onto a screen, and accept commands from the

player usually through some HCI (Human Computer Interface) device like a keyboard or a video game controller.

Computer

Exactly when and how computers were first used for the purpose of a game is debatable. However, many (Poole, 2004; Wolf, 2000) contend that the very first recognizable video game was *SpaceWar!* (1962), a game developed by a couple of MIT students for personal amusement. The computer component of the video game medium turns the experience into a social activity. Players play with the computer. It actively engages with the player to construct a mediated experience.

It is helpful at this point to quickly clarify two concepts that are often confused. What is the difference between a video game and a computer game? One outdated view suggests that computer games are different from video games because one is played on the personal computer whereas the other is played through a video game console system hooked to a television screen. However, such a distinction misses the point. All video games are computer games but not all computer games are video games.

Video game console systems are computers specifically designed to process video game software. Many recent systems like the Nintendo Wii, the Microsoft XBOX 360, and the Playstation 3 have begun to offer other functions such as web-surfing, content downloading, and even online chatting making these game systems almost indistinguishable from desktop computers. What distinguishes a video game is that it is played on a screen and it doesn't matter whether that screen is on a television, computer, or even a cell phone. A

game, like *Simon* uses a primitive computer and counts as a computer game but lacks the screen element of a video game.

The computer has two parts: software and hardware. The software is the digital information that constructs the game environment and the hardware is the tool that processes that information in order to project it onto a screen. Both are necessary to understand how the computer constructs the experience of the video game.

The software contains both the processes and content of the game. The processes are defined as how the game stores information and the kinds of actions it allows with that information. The content is a little more complex and has been heavily influenced by several existing entertainment media including literature, board games, sports, television, and film (Bolter & Grusin, 1999). Video games draw upon the visual means of presenting information from television and film, the narrative qualities of literature, and the game structures of board games and sports but they are not just digital replications of these older media. Video game content establishes a unique game system that can be understood through the categories of environment, representation, genre, and narrative.

Video games construct digital environments in which the player may navigate. Game theorist Dariusz Boron (2007) defines 15 different game spaces from 2D games like *Pacman* (1980) and 2D side-scrollers like *Super Mario Bros.* (1984) to text-based games like *Zork* (1979) and 3D games like *Tomb Raider* (1996). Each game utilizes a different form of digital space defined by how the player interacts with it and navigates through that space. Mark Wolf (1997) offered a schema of 11 game spaces utilizing the same logic. Some games

employ different spatial logic within a single game. For instance, the game *Contra* (1988) alternated between a 2D side-scroller and a 3D environment and the Nintendo game *Teenage Mutant Ninja Turtles* (1989) uses three different game spaces. However, it is useful to recognize that video games construct digital environments differently and that these environments impact how the player understands and interacts with those spaces.

These digital environments are not empty. They are filled with visual representations of objects. These objects are often animated but may include film or photo images. Arguably, the most influential object in the game to the experience of immersion is the *avatar*, which is a digital representation of a player within a game space. Given the human need for embodiment, the avatar has become a prominent intermediary in the communication between humans and machines. Media scholar C.J. Feola (1999) suggests that "A strong human drive to humanize the machines of our imagination means that it is inevitable that avatars will become a major part of the user interface universe" (p. 42). The term *avatar* originates from the word *avatara* from Sanskrit and *The Bhagavad Gita*. It literally refers to a divine being coming down from the spiritual plane to inhabit a human body (Andrea & Overfield, 1998).

The application of avatars to the digital domain is sometimes attributed to Neal Stephenson's cyberpunk novel *Snow Crash* (1992). However, it actually originated in a video game. Lucasfilm's *Habitat* (1986) has the honor of using the word first and was one of the first graphical massively multi-player online role-playing games. Although avatars appear in many games and are certainly a key part of video game technology, not all games employ

them and not all games involve player representation. After all, in the game chess one does not identify with the chess pieces.

The third part of the game software involves the rhetorical principal of genre. Game content can be understood by how it constructs meaning. Wolf (1997) offers over fifty different genres for video games but his schema is problematic and contradictory since it is based on interactivity. For instance, he lists role-playing game as a genre but the interfaces for games in this genre could technically fall into multiple genres. The game *Dirge of the Cerberus* (2006) is a third-person shooter and the game *Heroes of Might and Magic* (1995) is a turn-based strategy game but both are considered role-playing games by the video game community. In addition, the survival horror game, a genre that emerged after Wolf's list, includes *Resident Evil*, an action game, and *Left 4 Dead*, a first-person shooter. What define these games as a genre are their narrative themes, not their method of interaction. But genre is still a useful concept. Video games, like films and books, are often categorized into groups or families with shared thematic components.

Game content can also include narrative elements. This has been an issue of contention among game scholars. On one side are the ludologists who argue that games should be understood through action, rules, and play. Scholars like Jesper Juul (2001) and Espen Aarseth (2004) are critical of applying narrative to the study of games because games do not tell stories in the same manner as older media and the game structure depends more on interactivity and play than narrative. On the other side of this debate are the narratologists who seek to apply older narrative media theory to the study of games. Scholars like Jan

Simons (2007) and Janet Murray (2004) do not contest differences between media but argue that narrative is a viable approach because games typically involve story elements such as character, setting, and even plot. Some scholars have attempted to take a middle-of-the-road approach and suggest that some games have narratives and that some games do not (Jenkins, 2006). This debate is not likely to end anytime soon but ludologists like Juul (2005) have acknowledged that video games can and do possess narrative structures.

The software of games is complex and not easily categorized but it still forms an invaluable part of the video game medium. The computer software confines player action or behavior, defines the conflict and outcome, and forces the player to follow specific rules. The computer hardware bridges the gap between the player and the game software. It does this through the interface, which is the fourth component of the video game medium. Without the interface, the player is merely watching a movie.

The Interface

The interface is culturally situated and heavily shaped by the capitalistic system of goods. Ever since *Pong* (1972), video games have been motivated by commercial interests and those interests have affected the technology. It is a media designed for private use unlike film which works on the public exhibitions model. People do not pay to watch others play with the exception of spectator sports like baseball. Video games are private affairs and the technology to play them was initially very expensive thus limiting the people who could afford to play them. The first game, *Space Wars*, was designed for a computer that cost several thousand dollars. Today, video games and systems are more affordable but to make

that transition, game designers drew on several technical innovations. Wolf (1997) traces the design of video games to coin-operated entertainment machines of the turn of the century but most especially the pinball machine.

The pinball machine allowed for players to spend small amounts of change for short gameplay sessions. The influence of pinball is most clearly illustrated in the development of the arcade game, a coin-operated machine, that allowed for one to four people to play a video game. Arcade games were popular in the 1970s and 1980s and appeared in restaurants, arcade halls, and other businesses. Market forces had a major influence on arcade games, which had to promote short but entertaining game sessions to encourage the player to keep plopping quarters into the machine (Herz, 1997). Arcade games usually featured a built-in controller with a joystick and several buttons for the player to control objects on the screen. The physical space in arcades were public but the screen and the controller were wedded to the game system so that players had to stand close to the screen to see and affect the game.

However, the popularity of the arcade games slowly waned in the late 1980s with the development of the home video game market. A short overview of the history of game consoles reveals several trends in the technological development of video game interfaces. The very first game console system was the Magnavox Odyssey (1972). Unlike other game systems, the Odyssey and later the Magnavox Odyssey 100 (1975) were analog instead of digital. They lacked sound and featured an awkward controller with knobs that sort of resembled a television remote control. The Odyssey failed commercially when compared to the Atari Pong (1975), which introduced sound and used joystick controllers. Several other

console systems appeared over the course of the next few years but none would be as influential as the Atari 2600 (1977), which featured plug-in cartridges so that the same system could be used to play multiple games bought separately on game cartridges. This model separated the game interface from the game content, which essentially marked a split between hardware and software. The controllers of the Atari 2600 had a joystick and a button but more importantly were separate units connected by wires, a design that all game systems afterward would follow (Gameconsole, 2010).

By the 1980s, an influx of really poor quality games coupled with bad cultural reception led to a decline in the home video game market almost signaling an early death for this growing medium (Herz, 1997). However, in 1984, Nintendo, a Japanese card company, released the Famicom System, which was later renamed the Nintendo Entertainment System, or NES, upon its release in the United States in 1985. The 8-bit NES revitalized the home video game market by controlling the number and quality of games produced for the system and offering a controller with a unique D-pad design. The D-pad appears on the controller and is comprised of four buttons connected together in a plus shape. The D-pad replaced the often-clunky joystick with controls that were highly responsive and fairly easy to master.

Later game systems kept the D-Pad but added more buttons and eventually brought back joysticks. Each game system featured progressively more powerful computer chips capable of handling more data leading to games with more detailed graphics, larger game spaces to explore, music, sound, and even voices. Alternative controllers were tested including the Nintendo Zapper (1984), the *Dance Dance Revolution* dancepad (1998), and

the *Guitar Hero* guitar (1998). However, these alternative controllers were designed with very specific games in mind. The standard human-controlled interface followed the model established by the NES.

Later developments in controllers have sought to bring more presence of the game into the physical space. The Nintendo 64 (1997) introduced the rumble pack, a small device in the controller that shakes at predetermined intervals. This provided a haptic element to the game play experience allowing the player to "feel" events in the game space such as earthquakes or gunshots. The Nintendo DS (2006) is a handheld game system with a touchscreen allowing players to interact with the game by sliding a special pen across the screen. This eliminates the need for the controller by turning the screen into a direct interface.

All three of the most recent major console systems feature wireless controllers but perhaps the most innovative is the Nintendo Wii (2006), whose controller has changed to resemble a television remote and communicates through a motion sensor. Players wave the controller around physically to affect objects on the screen and oftentimes these motions are designed to resemble physical actions. When playing tennis in *Wii Sports* (2006) the player hits the digital ball by swinging the controller like a tennis racket. The controller still relies on buttons to perform most actions but the game controller reduces the abstract nature of the interaction. In *Zelda: Twilight Princess* (2006), the player doesn't just push a button to swing a sword but swinging the controller causes the player's avatar to swing his sword.

This brief history reveals the wide plethora of technology that is currently being employed in video game interfaces from touchscreens to wireless controllers in the shape of musical instruments. Console computer systems brought the video game into the home. Video games are still played in public spaces particularly through mobile devices such as the Nintendo DS but also devices such as mobile phones. The physical space of these games is more flexible than arcade or console games, which in turn affects gameplay. Mobile games are more easily disrupted by events or people outside of the play, game, or digital spaces. The hardware of the screen and the controller impacts where a game is played and by whom. Video games are commercial products and rather expensive both in time to play and the equipment needed to play.

The video game medium is thus composed of a game, a screen, a computer, and an interface. These four parts will be influential in establishing the rhetorical techniques of immersion in chapter 4. They shape location and structure of the immersive experience. However, it is necessary now to examine the activity that occurs there. That activity is gameplay. This is a unique form of play that results through player interaction with a game structure.

Play

Now, play itself is a tricky concept. It is perhaps the oldest social activity found in every culture in every civilization since the dawn of time. Humans are playful creatures, an observation which lead sociologist Johan Huizinga (1950) to call us *homoludens*, or playful people. But the meaning of play is somewhat ambiguous and shaped by cultural values. Play

has been called a cultural activity (Huizinga, 1950), a response to stimuli (Shultz, 1979), an instinct (Goos, 1898), a need (Dewey, 1944), and even a sin (Weber, 1958). In some cases it serves no function and in others it is a crucial aspect of growth and socialization. We call it play when we describe the activity of children and leisure when referring to adults. Play is symbolic, social, imaginative, unproductive, rule-based, unpredictable, relational, and fun. Play is most-often contrasted with the concept of work, although recent postmodern scholars (Weissman, 1990) have begun deconstructing the distinctions between these two terms.

If play is the foundation of video game technologies, it needs a clear meaning or it threatens the stability of the whole structure. The problem with all of the above definitions is that they seek to define play through its purpose. What does play do? Therein lies the problem. The essence of play is that it can serve a number of purposes. Brian Sutton Smith (1997) identified at least seven. As such, it is more helpful to examine play as a multipurpose activity governed by its own set of behavioral rules and established through communication. I will define the activity of play here through the magic circle theory of Johan Huizinga (1950), the frame theory of Gregory Bateson (1977), and some of the characteristics of play identified by Roger Caillois (2001). These theories explain where people play, what it does to space, how people enter and leave play, and the qualities that define the activity.

First of all, where do people play and what does play do to space? Anthropologist Johan Huizinga suggests that play is an activity that occurs within a unique space, which he called the "magic circle." This magic circle is bounded by space and time. Within the circle, the rules that govern the outside world do not always apply. What would be considered

fighting in a serious way is transformed into not-serious. This play space is temporary. It generally does not exceed beyond specific boundaries that are understood and agreed upon by the players to distinguish those in the magic circle and those who are not. But when and how these spaces are constructed does not have to be predetermined by all players. A person can decide to create a magic circle at any time and invite others into that space.

The borders of the magic circle are very important to understanding the experience of immersion through play. A player's sense of immersion is intrinsically tied to whether they are in or out of the magic circle. Immersion that occurs within the circle is characterized by the activity of play. Immersion that occurs outside of the circle is characterized by the activity of observing others at play. As such, the borders are very important to understanding an immersed individual's unique experience. The problem is that these borders are vague. They are ambiguous and permeable (Rodriguez, 2006), which means that they are not always clearly defined, they can change shape, and they may be built or disappear rather quickly. These borders, I argue, are established through communication.

In his study of otters at the zoo, Gregory Bateson (1977) observed that otters initiate play fighting through very careful communicative cues. Thus language, he argued, could be used to create what he called a frame of play. Bateson's concept of frame serves the same basic functions as the magic circle. The two theories are almost identical except that Huizinga established his magic circle through cultural convention whereas Bateson's frame exists through meta-communication. Regardless, communication establishes that link

between players so that they can determine the boundaries of the magic circle and the participants.

So now that we have examined where people play and what it does to space, what then are the qualities of play? What are people doing during play? Although there are numerous criteria for this activity, several key ideas can be drawn from the work of Roger Caillios (2001) who identified six characteristics of play. Caillios offers an insightful approach but he fails to distinguish between game and play so not all of his characteristics are appropriate. Critically examining each provides insight into how to conceptualize play. First, it is *free*. Players must choose to play. It is voluntary. Obligation transforms an activity into a necessity and can detract from the fun.

Second, play must be *separate*. It occurs in a specific place and time designated for play by the players. Third, play must be *uncertain*. The outcome of the activity should not be determined ahead of time. Fourth, play is *unproductive* creating neither goods nor wealth. Caillios argues that productive activity is work and therefore not play. Fifth, play is *governed by rules* that suspend ordinary laws. Punching someone is illegal but it is allowed, and even encouraged, in boxing. Finally, play is *make-believe*, and exists in its own sub-reality having little or nothing to do with the world outside of the play space.

Caillios' criteria are helpful but make several assumptions. The first criteria of *free* is perhaps the most valuable. Entering and participating in the magic circle is always a voluntary action. However, this means that play must always be desired or the justification for this characteristic falls apart. Players must have a reason to play. If we assume Aristotle

(1991) is correct that people always seek pleasure and avoid pain then the motivation for play is almost always some form of fun or enjoyment. Therefore, if something ceases to be fun or perhaps intriguing, it ceases to be play. Two children wrestling is play until one of them gets hurt, which usually results in the intervention of an adult or the end of the wrestling match. As such, a subquality of free should be the trait of fun. Play is both voluntary and fun or fulfills some other desire.

Caillois' second criteria of *separate* needs work particularly where he argues that it requires planning. If this is true then play can not be spontaneous. The concept of separate is sound based on the theory of the magic circle but play does not require planning. Children can play with little to no warning or foresight. However, it is initiated maintained, and concluded through communication. It has a temporal nature. Caillois' third criteria of *uncertain* is not necessary. Certainty can lead to boredom. The outcome may be certain if the path the player takes is uncertain. However, this is not a necessary prerequisite for play. After all, a child sliding down a snowy hill knows what the outcome will be and how they will get there. Play is not boring. It is interesting.

Play as *unproductive* is the most contentious criteria since it depends on very narrow definition of productivity. It doesn't seem to account for sports athletes who are paid to play or children on the playground who use play to establish social wealth in terms of friendships and status. This criterion can be thrown out. The last component of *rule-based* implies that play must possess rules. This is also not accurate. A kitten playing with yarn isn't following any rules but the normal rules of behavior do not apply. Flying a kite is an act of play but

there are no real rules to obey. Play isn't always rule-based but it can follow its own set of rules of behavior. Rules are only necessary if a person is playing a game. However, play does allow for a change in the normal rules of behavior. According to game designers Katie Salen and Eric Zimmerman (2004), "Play is free movement within a more rigid structure" (p. 304). It is a dance as opposed to walking. It is an action separated from normal social structures because it allows for alternative behavior. In play, the normal rules of social behavior are put aside and a new set of accepted behavior are adopted.

We can therefore draw several useful ideas from Caillois to formulate the characteristics of play. First, play is free. Participants choose to play because any activity can be turned into play provided the participants decide to perceive it as play. Second, it is fun or interesting. It is associated with personal enjoyment and fulfills a desire. Third, it is temporal. It has a beginning and end. Fourth, it can follow its own set of rules of behavior. In sum, play is action established through communication that is voluntary, fun/interesting, temporal, and allows for behavior that distinguishes it as separate from not-play.

These qualities of play are important for understanding immersion in video games because they define the behavior of the immersed individual. Playful actions reinforce a sense of immersion because they sustain the experience. But perhaps the most important quality of play addressed here is the role communication has in creating and sustaining the magic circle. Through this understanding of play, rhetoric becomes even more valuable to the study of video game interactions because it can help to us understand how language shapes the experience.

The Communication of Games

Within games, players engage in a unique form of action called gameplay. It is easy to confuse game and play, as Caillois does. They are related but very different concepts. *Play* is an activity. *Game* is a structured system. Participating in a game is usually called play but they are not always synonymous. A kitten rolling around with a ball of yarn is playing but not participating in a game because the activity has no structure. The referee at a baseball game is participating in the game but not playing because the ref's actions do not involve the game's goal. A player is a person who acts within a game to achieve the desired outcome of the game. Gameplay describes the activity of a player within a game structure. Gameplay involves a player actively engaging the game conflict and following the game rules with the goal of achieving a specific outcome deemed desirable by the game structure (see Figure 1.)



Figure 1. Gameplay

Do all games involve play? While there are numerous motivations for participating in games, the center of this activity is always play. Games can even have multiple purposes. There are simulation games designed for training such as *America's Army* (2002). Games can be used for marketing. Warner Brothers created a game called *Why So Serious?* (2007) to create hype and interest in their film *The Dark Knight* (2008). Regardless of these secondary functions, the primary motivation for participation is still the element of play (Garris et. all, 2002). Education and consumerism are merely the side-effects.

Is it possible to participate in a game structure without play? Yes and no. Such activity is possible but changes the nature of the game experience. Goldfarming in *World of Warcraft* is an example of this. In goldfarming, players use the game to acquire game items in order to sell them outside of the game. This is not how the game was intended and the player is not engaged in play or gameplay. Goldfarmers are interacting through the game structure but they have added new elements to it and ignored others. The player is no longer engaged the artificial conflict but has instead added a new more serious conflict. They must meet specific quotas or they do not get paid. Thus, the system is no longer a game but a work structure. They are no longer players. The structure is no longer a game.

Thus, a game requires play in order to retain its status as a game and play requires game to give it focus and direction. The activity of the player in the game is gameplay. I propose that the video game medium makes this gameplay an act of communication. The computer and player represent different speakers. The computer speaks through the screen to convey game information to the player while the player speaks through the interface to

communicate play. Gameplay results from the dialog between these two communicators. We can take the entirety of the medium and use it to fulfill the components of a communication interaction. Video games are not just tools for experience. They convey communication messages that happen to take form in a game structure.

It is easy to see the communication quality in games like *Tales of Symphonia* (2003) a role-playing game that tells a very definite story through film-like cut scenes and a string of non-player characters that talk with the player. However, what about puzzle games like *Bejeweled* (2001) in which players match gemstones or classic games like chess or poker? What kind of messages do they convey? The key to understand the rhetorical function of these types of games is to recognize that video games are constructed texts that communicate cultural values, beliefs, and experiences and that they possess aesthetic qualities.

We do not question the communication quality of older media such as films and books, which are linear and spatially confined. Video games possess similar communicative qualities as constructed texts. They are not mere tools. A deck of cards is a tool but a game like poker communicates a very specific message that informs value, meaning, and action. The messages that video games convey can vary considerably and may or may not be explicitly stated.

In addition, video games are aesthetic objects. They are part of what we call popular culture (Nielson et. al, 2008), which means that they are not widely recognized as a form of artistic expression. Yet, video games possess many of the same qualities as art (Jenkins, 2005). Video games must employ visual representations usually in the form of artwork or

film in order to present information on the screen. There is little debate that famous works of art are a form of communication so why not games like *Shadow of the Colossus* (2005) or *Okami* (2006), which are widely heralded as some of the most artistic games ever made due to their stunning visuals (Peterson, 2009)?

When comparing the communication quality of video games to their linear counterparts like books and films, we end up stuck in a paradox of authorship. We debate whether the game conveys a message or if it is the player who gives the game meaning. It is more useful to conceptualize communication within digital media as a conversation. The computer talks with the player to create a mediated experience, which is often pre-scripted and takes place in a digitally constructed environment. The game designers create the environment and embed it with cultural meaning, which the player learns either verbally or visually. The interpretation of meaning is subjective much like in art, but it is still a form of communication. This understanding of video games as dialog, or conversation, makes it appropriate for the application of rhetoric.

Conclusions

This chapter has provided the scaffolding for the study of video game technologies. The foundation of this medium is the activity of play, which is defined as a unique activity that reconstructs space and is created and sustained through communication. The support pillars are formed through the game structure, which is a system of rules and outcomes where players engage in artificial conflict. The walls and roof of video games are formed through

the computer, screen, and interface. All of this comes together to create the house that is the video game medium.

Players engage the video game medium through the activity of gameplay, which is an act of communication. Gameplay serves as the primary means of communication between the player and the computer. It is through this interaction that immersion occurs. Therefore, a rhetorical approach is not only justified but also well-suited to examine how the experience occurs and what factors influence it. Rhetoric is the study of language in action. The video game medium is experienced through communication. Thus immersion in video games is heavily shaped by how the game and player interact.

The means of immersion described in chapter 4 will build on the components of the video game medium described here. Each part of the medium contributes to the overall game experience and thus has the potential to affect the players' immersion in the game. However, before we can describe how these components influence the experience of immersion, we must first examine the concept of immersion itself in more detail. Not all gameplay experiences are immersive nor are all immersive experiences necessarily gameplay. The next chapter will explore how scholars have conceptualized immersion among multiple media and then describe how that understanding has influenced our current perceptions of immersion through video game technologies. What emerges from this examination of the literature is a multi-faceted meaning of immersion, which is informed by the unique qualities of the video game medium described here.

CHAPTER 3. IMMERSION

"Let's reserve the term 'immersion' to stand simply for what the technology delivers from an objective point of view. The more that a system delivers displays (in all sensory modalities) and tracking that preserves fidelity in relation to their equivalent real-world sensory modalities, the more that it is 'immersive'" - Mel Slater.

"Immersion is mentally absorbing and a process, a change, a passage from one mental state to another" (p. 13) - Oliver Grau.

"Immersion is a metaphoric term derived from the physical experience of being submerged in water" (p. 98) - Janet Murray.

"Immersion means the player is caught up in the world of the game's story (the diegetic level), but it also refers to the player's love of the game and the strategy that goes into it (the nondiegetic level)" (p. 68). - Alison McMahan.

"Immersion means to be completely absorbed in a make-believe world" (p. 146) - Florian Schmidt.

Introduction

The term "immersion" has been understood by many different definitions. It has been called a psychological experience (Murray, 1997), a cognitive act (Grau, 2003), sensual stimulation (Slater, 2003), imaginative involvement (Schmidt, 2007), and even emotional engagement (McMahan, 2003). But one thing that ties all of these definitions together is the assumption that this term, this feeling, this experience, this sense of being is an important and desirable characteristic or outcome of the interaction between humans and media.

This chapter explores the concept of immersion and how it has been understood in a variety of different media traditions from literature to virtual reality. What emerges from this examination are the basic trends regarding the meaning of immersion, which take form into

three distinct definitions. I call these definitions *physical immersion*, *psychological immersion*, and *attention immersion* and each offers a different perspective on how immersion feels, what happens during it, and the factors that contribute to it. These definitions follow distinctly different underlying logic and draw on the theory of different media and communication traditions. All three definitions of immersion have been applied to video game experiences in some fashion and have had an impact on technological development and interpretation.

The goal of this chapter is three-fold. First, it will explain why immersion is an important concept for the study of video game technologies. Second, it will identify three major interpretations in existing literature for the meaning of immersion and explicate how these definitions have influenced our perception of immersion in video games. Several common characteristics regarding the nature of immersion will be identified. The third part of this chapter will suggest how a rhetorical approach may overcome the theoretical limitations of prior studies because it is not tied to any one specific definition of immersion but can recognize its multifaceted quality. Let's begin by answering why this concept is so important to the study and development of video games.

The Value of Studying Immersion in Video Games

New media scholars (Ryan, 1994; Murray, 1997; Manovich, 2001) have identified the concept of immersion as a crucial part of the experience of new media. Understanding immersion enables us to better understand why and how people interact with the messages of digital technologies. This is particularly true in video games. The concept of immersion has

attracted the attention of game developers, game scholars, game designers, and game players. It is seen as an invaluable part of the player experience and thus to understand immersion not only tells us what people are doing during gameplay but also why and how.

In the Fall of 2009, I conducted a short discourse analysis of the online communication of the communities that use video games in order to see how these communities view the concept of immersion.¹ What emerged from this analysis is an overwhelming consensus regarding the value of immersion as well as details on how each community used the concept to meet community-specific needs and goals. I will briefly outline the results of this study here in order to explicate the importance of immersion as a way of understanding player experience and because it influences the reception and development of video game technologies.

The discourse analysis examined the online communication of video game players, designers, and producers specifically looking for instances of words immersion, immersive, and immerse. These communities were chosen because they design, develop, promote, and consume video games thus their perspectives have a profound impact on the usage and development of the medium. I looked at forums, design columns, and advertisements on key websites where these communities converge to ensure a multiplicity of voices. I conducted this study between September and November of 2009 in order to answer two key questions. First, do the discourse communities consider immersion a desirable aspect of the gameplay experience? Second, what kind of meaning do these communities associate with the term immersion?

By looking at the language surrounding immersion, I was able to discern what aspects of gameplay each community considered significant to the immersive experience and the value of immersion to the gameplay experience. In general, immersion was perceived as a positive attribute. Out of a pool of three hundred sentences, ninety-one percent identified immersion as being a good experience. The positive associations primarily equated immersion with feelings of fun and/or pleasure, enjoyment, and depth. Players often used the term to describe specific gameplay experiences. Game producers used the term to promote specific aspects of a unique game whereas game designers focused on a generic sense of enjoyment experienced through gameplay or video game mechanics. In general, these communities used the term immersion to evaluate the overall entertainment quality of a video game. There appeared to be a desire among these three communities for immersive experiences.

The literature on game development reflects this desire. Game designer Francois Laramee (2002) makes that claim that all forms of entertainment are essentially immersive. It is the pleasure derived from immersion in entertainment media that is the main appeal of the media. Game scholars Douglas and Hargadon (2004) concur and argue that immersion is an affective experience that alleviates stress and allows player to vicariously enjoy the exploits of fictional characters. Game designer Richard Rouse (2001) initially argued that immersion was necessary for a good gameplay experience. His later edition (2005) removed the "necessary" part of that statement but still maintained the importance of immersion in video games. This high praise of the immersive experience is fairly common among game

designers although some game theorists like Katie Salen and Eric Zimmerman (2004) consider it a fallacy to believe that the sole pleasure of media is immersion. Overall, the results of the discourse analysis suggest that immersion is valued by players and thus game designers and producers are encouraged to seek ways to cultivate the experience. As such, the value of researching immersion becomes very important for understanding what people desire in games and how the games can meet that need.

Interestingly, the discourse analysis also revealed a general sense of confusion among the communities over an exact meaning for immersion. The communities used immersion to refer to a variety of different game mechanics as well experiences. It was used to describe gameplay, game worlds, game narrative, presentation technology, and even the game itself. Sometimes the game was the source of the immersive experience and other times the players were creating it. Such diversity suggests that the meaning of immersion is either ambiguous, contextual, or multi-faceted. Since immersion is not exclusive to videogames it is likely that these game communities are drawing from the experiences of older media and applying them to this new medium, which could explain some of the confusion regarding the concept of immersion and why it is applied to so many aspects of the gameplay experience.

Scholars (Bolter & Grusin, 1999; Manovic, 2001) contend that our understanding of video games is informed by our experience with various older media like literature and film. This in turn would also influence our understanding of immersion. Through my research I have identified three different ideologies surrounding the concept of immersion among those media technologies that have been most influential in shaping the development of video

games. These different definitions of immersion have affected our understanding of how immersion occurs, what enhances or hinders it, and what exactly the experience means. I call these definitions *physical immersion*, *psychological immersion*, and *attention immersion*. Each draws on different media traditions although all of them have been applied to video games at some point. As such, let us examine each of these different perspectives of immersion in order to understand why past approaches to immersion have been hindered by inappropriate application of these definitions.

Physical Immersion

Description

Physical immersion is a physical state, an ontology. It defines immersion as a state of being. It is cultivated by the senses and identified as a feeling of transportation, of being, in another place. Under the logic of physical immersion, the goal of media is to create a virtual mobility allowing passive viewers to "travel" to new places by redefining space and time (Friedberg, 1993). Immersion occurs naturally as a response to the simulated stimuli of location. The technology surrounds the body and thus "transports" it to a new location that is artificially constructed.

Historical Tradition in Art, Photography, & Virtual Reality

Physical immersion draws from the theoretical traditions of art, photography, and virtual reality. These media have all long sought to immerse the body, particular through visual stimulation. This excludes auditory art such as music, which could be said to immerse

by exciting emotion and the aesthetic experience. However, visual art has a long history with immersion through multi-sensory experience and simulation.

Art serves a variety of functions but as a form of representation, it is held to a high standard of visualization. In order for a piece of fruit in a basket to be recognized as an apple, it must look like an apple and thus artwork has long sought to visually make the signifier, the art, replicate the signified, the physical object. Immersion in art does not result from creating deep characters such as in literature but rather by representation of space (Grau, 2003). This is accomplished primarily by creating images that are indistinguishable from their real-world referents. A viewer becomes immersed by playfully submitting to the appearance of the constructed reality.

But not only is sight a necessary sense for evoking immersion, so too are the other physical senses of the body. Early attempts to invite more bodily involvement with art include the wall to wall paintings of the Roman Republic of Pompeii (Grau, 2003). By eliminating the frame of the art, the boundary, and surrounding the body with an image, the painting invites the viewer to move through the art. To further create this sense of an alternate reality, artwork began to move into the third-dimension. The technique called faux terrain, blends three dimensional objects with two dimensional paintings thus allowing the art to expand its boundary. This technique would later inspire Robert Barker to develop the panorama in 1787.

The panorama is a room with a curved wall that employs three dimensional objects and paintings to create the illusion of a landscape such as Paris or the Wild West in which the

viewer is placed literally in the picture. This was later refined by Jacques Daguerre in 1822 into the diorama which used miniatures to give a further feeling of depth. Both of these artistic media create an illusion that simulates reality and appeals to the physical senses, particularly sight, which led to a feeling of virtual travel of space and time (Friedberg, 1993).

The ability to simulate reality was profoundly changed with the development of photography. Although artwork originally held some flexibility of representation, photography marked a shift from what Don Slater (1995) calls *trivial realism* in which an artist could use some interpretation to create a representation. Trivial realism accepts that a stick figure could represent a human body. Photography introduced *modernism realism*, which follows perspective laws, only allows existing referents, and encourages a detached mechanical objectivity. Photography flipped the relationship between the referent and the reference so that the image caught on camera, which is frozen in time becomes perceptually more real than the object itself, as time progresses. Students without the means to travel may only know the pyramids of Giza through pictures and thus the pictures are more real than the object itself which is out of reach. The widespread availability of photography further created a visual culture with a specific code that defines image quality, directs our attention, and objectifies the objects within the representation (Sontag, 1977).

Virtual reality maintained this bodily focus of immersion from art and the photorealism of photography but added the element of interactivity to the equation. The general trend of virtual reality literature tends to define immersion as the ultimate, almost exclusive goal of virtual reality and then to provide concise lists of exactly how to achieve that goal.

The quality of interactivity has introduced several new criteria of physical immersion regarding the interface and content behavior of represented space. Scholars are struggling to define the experience of virtual reality creating terms such as presence (Slater, 2003), tele-existence, tele-immersion (Tachi, 2003), tele-embodiment (Paulos & Canny, 2001), and tele-presence (Steuer, 1992), that are related if not synonymous to the concept of immersion.

Virtual reality as a concept is still highly theoretical although the trend seems to be for it to mean a completely digital space that blends non-digital physical space. Jonathan Steuer (1992) argues that immersion is defined by the experience it creates rather than the type of equipment used to create it. Currently such equipment includes CAVE devices, goggles, gloves, and other such tools designed to bring a person's body into a digital space. However, another possible design path could be holographic technology such as appears in *Star Trek's* holodeck which would bring the digital environment to the audience's physical body (Murray, 1997). Regardless, the end goal of virtual reality is to construct a mediated environment and somehow bring that world physically to a person.

The quest to achieve immersion through virtual reality is informed by three main assumptions. The first harkens back to art in that immersion results through the excitement of the senses, particularly sight (Hillis, 1999). The second is that because virtual environments allow for interactivity, it must use a distinctly different approach to elicit immersion than that of literature and language (Ryan, 1994). The third is that space and meaning can be established mathematically (Manovich, 2001). Each of these is important for how scholars

have conceptualized the immersive experience of virtual reality and by extension other digital media.

Virtual reality's reliance on the senses is the primary focus shaping the development of this technology. According to Hillis (1999), "The nature of immersion is to make the users feel drenched in sensation" (p. 70). The mediated content is judged based on its realism of behavior (McMahan, 2003) and fidelity in appearance (Narayan et. all, 2005), which is determined by how closely they match their non-mediated referents. Simulation of the representation's appearance and its behavior is necessary for immersion to occur. In addition, the presentation technology must allow for seamless interactions (Lee et. all, 2006) in order to hide the fact that the computer must process and relay information so that the interface remains transparent.

It is the interactive nature of virtual reality and digital media that has caused some problems applying the concepts of immersion from literature and language. Marie-Laure Ryan (1994) argues that interactivity destroys the immersive quality of a book because it draws attention to the semiotic quality of the words whereas the opposite is true for virtual reality. The expectation in a virtual environment is that the participant should be able to interact with the representations and somehow affect the environment. This requires a delicate balancing act because a virtual reality environment must make the interface invisible to hide the constructed nature of the mediated message but still allow for audience agency.

The third characteristic of virtual reality is its mathematical nature. Representations in virtual reality are computer-generated and computers are dependent on mathematical

structures, since that is the language they speak. Representation and meaning through computers relies on mathematical logic. It is one of the five basic components of new media identified by Lev Manovich (2001). Such representation is finite, stored in databases, reflexive, and denotative. This impacts how the technology presents information, how it defines object behavior, and the intelligence of the environment when a participant interacts with it. The medium has its limitations. Unlike the other media discussed thus far, virtual reality is entirely digital and so its presentation mode and object behavior are all constructed and constrained by mathematical formula. It can only react to participants' actions. That action is further limited by a list of possible behavior stored in a database. The presentation mode will emphasize lines versus curves because mathematics cannot account for them (Manovich, 2001). In a sense, virtual reality cannot duplicate reality entirely so simulations must hide these limitations stylistically by directing attention in the mediated content and using the technology to block out external stimuli.

Virtual reality theory suggests that immersion results from excitement of the senses. The content should be seen, felt, smelled, and heard. However, because of its interactive and temporal nature, the participant should be able to act on the content and it should respond appropriately. The goal drawn from art and later photography is still simulation. By duplicating representation and behavior of existing referents, the participant is less likely to recognize the constructed nature of the medium. The media has power over the participant but unlike film and television which overpower the mind, virtual reality overpowers the body. It brings the technology physically onto the body covering the eyes, hands, and even

legs and feet. The content is still important but the interactive nature of virtual reality adds on the required elements of object behavior and responsiveness.

Techniques of Physical Immersion

Given this history, physical immersion requires that a medium possess very specific qualities in order to immerse an individual. Although we generally recognize that a media text is constructed, under the logic of physical immersion we allow ourselves to forget this fact and give ourselves to the fiction presented for us. This is encouraged through an intense image that overwhelms the perception of difference between reality and constructed reality. The image so closely resembles its referent that we cannot distinguish the two apart. The goal is thus immediacy (Bolter & Grusin, 1999) or the invisibility of the media. This is accomplished through manipulating the senses, particularly sight, through the techniques of simulation and presentation technology.

A common technique used to create physical immersion is linear perspective (Grau, 2003; Bolter & Grusin, 1999) based on Euclidian math and conceptualization of space (Hillis, 1999). This is inherently a Western philosophy of constructing representational space. Objects recede into the distance to create the illusion of three-dimensionality. This style favors objects with straight line borders such as rectangular tables, square tiled floors, and angular doors and windows as opposed to curves and circles. Linear perspective is well-suited for digital construction because it turns space into a grid of lines that can be mathematically generated, positioned, and organized. This concept turns space into measured

increments, absolute, and favors sight as a means of locating self and others. Everything must be boiled down to x, y, and z locations.

Another common technique of eliciting physical immersion is visual and audio fidelity (Narayan et. all, 2005; Slater, 2003). In fact, some argue that this is the only necessary element. Fidelity here is defined as clarity and vividness. This is primarily accomplished through simulation. Is the mediated text an accurate portrayal of an existing referent or does it look and function like it could exist in the non-mediated world? In other words, is it photo-realistic? Does the dragon walk like it has weight? Do the city buildings have windows that reflect light? Does the sound of a siren seem to come from the digital image of the ambulance?

However, physical immersion is highly dependent on presentational equipment and whether it can render images filled with greater and greater visual detail that move smoothly and sound consistently. The goal is to make the referent indistinguishable from the reference in how it looks, sounds and behaves. The third technique of physical immersion is to allow the player to interact with digital objects much like they would outside of the game. Do the digital constructed environments meet user expectations by acting accordingly (McMahan, 2003)? Does a person or an object respond like their representational counterparts with complete and utter freedom of the user to interact with the environment (Herz, 1997)? Games like *Fallout* (1997) work on this principle.

Summary

Physical immersion draws from the theoretical interpretation of immersion from art, photography, and virtual reality theory. It defines immersion as sense of being. People become immersed when they are bodily transported to a mediated space. Immersion is a physical sensation that results when a media technology acts on a participant and manipulates the senses so that the participant cannot distinguish the mediated message from the unmediated world. The audience is a passive receptor to the media text. Anything that draws attention to the interface or the representational quality of the text disrupts the immersive experience. The techniques to achieve physical immersion are mathematical representations of space, photo-realistic images, simulation, and agency. Table 3.1 summarizes the media characteristics that enhance and disrupt immersive experiences under physical immersion.

Table 3.1 Physical Immersion

Immersive Elements	Disruptive Elements
Simulations	Abstract images
Realism of object behavior	Unnatural object behavior
Consistency of object behavior	Inconsistent object behavior
Agency	Passivity
Audio fidelity	Unclear audio
Photo-realistic images	Unclear images
Haptic simulation	Minimal interface responsiveness
Real-time data transfer	Loading delays
1st-Person perspective	2nd or 3rd-Person perspective
Invisible interface	Visible interface

Psychological Immersion

Description

Psychological immersion is an emotional experience, a phenomenology, a way of feeling and experiencing. It is popular among narrative scholars (Murray, 1997; Ryan, 1994) and draws much of its logic from narrative theory. Psychological immersion defines immersion as an emotional experience that emerges from the interaction between a tool and a human. It requires both. Immersion is not just a result of our interaction with media but rather a realization of a desire for a specific mediated feeling. Immersion results when a text awakens aesthetic desire, creates a demand for that desire, and then offers a particular pleasure by fulfilling that desire.

Historical Tradition in Literature, Film, and Television

The term immersion itself does not appear in rhetorical dialog but the concept can be seen when words and language are used to evoke the imagination and affect perception. In *The Republic* written around 400 B.C., Plato (2006) provides one perspective of how language can be used to immerse through the allegory of the cave. In a mock conversational style, Plato's Socrates describes humans chained in a cave and forced to watch shadow puppets. Denied natural light, the humans assume the images of the puppets are real. Although meant as a political commentary on justice and power, the allegory of the cave is also a story of representation. The shadows are specifically presented by unseen puppeteers who choose the objects for show and determine how they are presented. The shadows are a

metaphor for language and media. The prisoners not only confuse the messages as being accurate but they also blindly ignore the status of these objects as representations. Herein lies the first connection between language and immersion and that is the ability of language to create illusions, a practice that Plato associated with rhetoric.

Although Plato had serious misgivings regarding the value of rhetoric as can be seen in his dialog between Gorgias and Socrates (Wardy, 1996), Plato recognizes the power of language to excite the imagination and even to blur the distinctions between fantasy and the so-called reality. For language is the art of representation. Words and images are used to signify objects, feelings, actions, and even other symbols. Through this, language has the ability to conjure images in the minds of its listeners. Aristotle (1991) referred to this process as "bringing before the eyes" and Kenneth Burke (1968) argued that it is directly related to the imagination. This ability of language to create illusionary images and spaces is what allows language the power to immerse. By drawing the listener into a deep relationship with a representation, language can effectively immerse a person within a message through the careful use of style and form.

However, it is not an immersion into the language itself but rather the imaginary spaces evoked by the language. That, for narrative theorist Marie-Laure Ryan (1994) reflects the primary mode through which literature can immerse. For Ryan, literature induces immersion through story by making the audience subject to the authority of the author. This passive subjection causes the reader to experience semiotic blindness and loss of critical consciousness, which for Ryan are both necessary to maintain the immersive experience. The

moment the reader begins to pay attention to the language, the reader is no longer immersed in the imaginary space conjured by that language. Style and form are thus used to make the language transparent so that the listener can ignore them and focus instead on the message and not the means by which it is conveyed.

The focus of immersion in language is in content. Words evoke ideas, feelings, and images in the mind. Content takes precedence. The words themselves do not immerse but instead excite the imagination. Thus immersion requires the work of both speaker and listener. The means of immersion, the text, must vanish and it does so by using a form that the listener readily recognizes and understands. Drawing attention to the text draws the mind away from the content. Here, we can see a very clear structure. A person becomes immersed in content through their imagination. The content includes an imaginary space, the characters and objects that fill that space, and the actions that occur there. The speaker has power over the listener and immersion results from the listener accepting that relationship. Art and photography have also assumed this power structure but the focus instead is on the body as opposed to the mind.

Television and film also employ a narrative approach to immersion but they added visual and audio elements. Television also has the unique quality of broadcasting, which allows for more spontaneous communication as opposed to the pre-scripted narratives that film employs. Regardless, immersion within these two media is less about exciting the senses and more about overloading them, which creates a psychedelic state of mind (Ludwig, 1972). The movement of film and television to increasingly hyper-edited content, louder audio, and

larger screens reflects this emphasis on sensory bombardment. The goal is to overwhelm the audience's emotions.

Within film, the viewer is subject to a series of images reflected on a large screen. In fact the size of the screen becomes a strong selling point as can be seen in the popularity of IMAX movie theaters, which feature enormous screens and large sound systems. Another example of this is the growing trend of 3-D films that cause the images to seemingly project off of the screen. The film audience is immobilized in chairs and encouraged to remain passive to an onslaught of images and sounds that assail their senses (Friedberg, 1993). Immersion results, not from thinking, but by allowing the mind to become overwhelmed by sensory experience. This kind of experience is also considered highly desirable at home at least according to the numerous advertisements that sell larger and larger screen televisions and surround sound systems.

Such a mediated experience causes the audience to no longer recognize their involvement and transforms the experience into a spectacle (Debord, 1994). The spectacle forces an immersive experience by transforming it into an unconscious movement. Such immersion, however, does not have lasting power because the mind either handles the intense information overload and ignores some of it, or the body shuts down. Sensory overload causes perceptual disruption, reduced cognitive activity and emotional responsiveness, and a lack of spatial awareness (Lidenmuth et. al, 1980). The transformed state of mind created by this experience is often called immersion, which is why the term is sometimes associated with a hypnotized state of being. The spectacle does mean that the media should never

simulate reality but rather create a sort of hyper reality that differentiates it and draws the audience's attention.

Techniques of Psychological Immersion

Psychological immersion can be encouraged, much like in literature, through careful emotional arousal, creating a spectacle, and encouraging masks or role-play (Murray, 1997). Through this perspective, we are immersed when our minds enter a middle-point between reality and constructed reality. Immersion results from the excitement of the imagination through careful manipulation of the emotions.

Like physical immersion, psychological immersion results from an individual submitting to a mediated message. However, the participant is not passive. This is because the media message somehow arouses an emotional desire in the subject and encourages a willing submission. This technique of psychological immersion reflects its literary background and can be created through empathetic characters, an engaging plot, sensory setting descriptions, and themes that appeal to a person's beliefs, values, and attitudes.

The second technique of psychological immersion draws from the visual story-telling methods of film and television. This means using images to create a sensory overload to obfuscate the participant's mind and ability to react. The body must also be constrained, usually to a chair facing the screen. This allows the media to act on a person's emotions without the body or mind getting in the way. The result of this approach is usually a sensory overload, which creates a psychedelic experience, similar to drugs, that is felt more than thought about. The goal is to create a spectacle.

The third technique of psychological immersion is the use of masks or role-play. Such activity encourages a person to use their imagination. Through this, they are more likely to become more emotionally involved in an activity. These masks allow the individual to experience new feelings and thoughts and more receptive to the narrative world of a mediated message. The individual's interaction with that world should be framed as a visitation so as to encourage the individual to feel safe within it.

Summary

Psychological immersion is an emotional experience. It draws from the traditions of literature, film, and television. Unlike psychological immersion, which places all of the power in the hands of the technology, psychological immersion recognizes the importance of both people and media to generate an immersive experience. However, the person is still passive because agency requires a visible interface. The interface again needs to vanish because drawing attention to the mediated quality of a message may distract from its emotional impact. Psychological immersion is created through narrative techniques, spectacles, and role-play. Table 3.2 summarizes the elements that enhance or hinder psychological immersion.

Table 3.2 Psychological Immersion

Immersive Elements	Disruptive Elements
Controlled narrative	Interactive narrative
Emotionally engaging narrative	Boring narrative
Social interaction	Poor communication channels
Empathetic characters	Unlikeable characters
Spectacle	Simulation
Emotional regulation	Unemotional involvement
Role play	Lack of empathy
Deep characters	Flat characters
Large fictional worlds	small fictional worlds
Passivity	Agency

Attention Immersion

Description

Attention immersion is a cognitive act, an epistemology, a way of thinking and understanding. We can trace attention immersion from the cognitive science work of attention theorists (Crary, 1999; Lanham, 2006) although they do not generally refer to the term immersion or talk about video games except in passing. Basically, immersion here can occur voluntarily or involuntarily. It is an outgrowth of focused attention. An alternate idea suggests that this human contribution is imagination (Schmidt, 2007). Regardless, the source of immersion is the same: the human. The tools do not generate immersion, they are merely the focal point for the human who can become immersed in anything. "Technology is always a noncommittant or subordinate part of other forces" (Crary, 1992, p. 8). This is not to say that the technology can't encourage attention or immersion but they are dependent on the will or design of the human who uses them.

Historical Tradition in Cognitive Science

Attention Immersion is a relatively untested ideology, which can be traced to our understanding of attention as a process of the mind. Theorist Jonathan Crary (1999) argues that before modernity in the 19th century, attention was largely understood as a sensory experience dependent on external stimuli. Things existed in the world and their physical attributes determined how people could perceive them. Attention was situated largely outside of the body. The more forceful the event impinged on the senses, the more it would attract our attention. This definition actually fits rather well with the ideology of immersion as being. However, Crary (1999) argues that the literature on vision and attention after the 19th century generally showed a shift of thought that placed attention within the body and turned it into a mechanical process. As a process, it became a problem because this implies that there is a right way and a wrong way to direct attention. If people could perceive things in the wrong way then the problem was biological and could be fixed through strength of will or proper training. Through this understanding of attention, immersion can be framed as a conscious choice or potentially controllable through stimulation.

Attention immersion is not without emotional or even physical side-effects. Psychologist Mihály Csíkszentmihályi (1990) offers up the theory of *flow*, which is an emotional state of bliss that accompanies total involvement with an activity. In a sense, flow really describes the same experience as immersion but it provides emotional rewards that go beyond feeling of happiness. The means to establish flow involve directed attention. First, flow results when action merges with awareness so that a person doesn't reflect on the action.

The attention is on action. Second, the person's attention centers on a limited stimulus field. The attention is focused. Third, the person loses a sense of self. The person does not think about self-presentation. Fourth, the person has control over action and environment. The person has agency. Fifth, the activity contains clear goals and feedback. The person knows what to do and thus doesn't have to learn it. Sixth, the experience is autotelic and the goals or rewards are self-contained. These last three characteristics of flow matches the definition of games established in Chapter 2. since games provide agency, contain clear goals, and the rewards in games typically to do not extend outside of the game space. In fact, Csíkszentmihályi (1975) considers games ideal sites for flow. He writes, "Games are obviously flow activities, and play is the flow experience par excellence" (p. 36-37).

Techniques of Attention Immersion

The most powerful method of enhancing or hindering attention immersion is style. In order to immerse someone, a text must somehow direct and channel that person's attention by requiring deep cognitive involvement. Some tactics used to channel attention immersion include structure, selection, management, and organization (Lanham, 2006). These are rhetorical techniques and they basically make certain objects or actions more important than others.

Structure refers to the form of the media text. Video games are ideally situated here because they have a game structure as part of the medium. It is impossible to pay attention to everything so selection refers to how the media text emphasizes specific aspects of a message. Management refers to how the message of the media text flows and how it uses

themes to maintain consistency among the message. Organization refers to the order of the message and how a media text positions ideas. All of these techniques serve to attract a person's attention and direct it.

Summary

Attention immersion defines immersion as a cognitive act. It draws its logic from the work of cognitive science. Scholars recognize that the human contribution to immersive experiences is important and perhaps necessary but prefer to downplay that aspect in favor of other characteristics located within the game. As such, attention immersion is the least utilized of the three ideologies partly because it turns immersion into an epistemology, a way of knowing and understanding media that is individually subjective and thus hard to encourage. Attention immersion places all the power of immersion on the participant and it is not specific to media consumption but rather any activity. Although it has an emotional component, attention immersion does not rely on emotional investment. Attention immersion can be achieved through rhetorical techniques that attract and direct attention. Table 3.3 summarizes those characteristics that enhance and disrupt attention immersion.

Table 3.3 Attention Immersion

Immersive Elements	Disruptive Elements
Puzzles	No mental work
Timed challenges	Undirected challenges
Skill challenges	Easy challenges
Agency	Passivity
Rewards	Undirected activity
Punishments	Boring activity
Levels of difficulty	Static mental work
Clear goals	Unclear goals
Representations direct attention	Unclear representations
Limited stimulus field	Sensory overload

The Meaning of Immersion

To summarize, we have looked at three different approaches to the concept of immersion. Physical immersion defines it as a sense of being. Psychological immersion defines it as an emotional experience. Attention immersion defines it as a cognitive act. Each of these different perspectives affects how immersion is conceptualized, what happens during it, and the factors that enhance and hinder it. Although different, these three definitions do share some common ground regarding the character of the immersive experience. This section will briefly summarize those qualities as space, time, pleasure, depth, and width. These qualities are apparent through the metaphor of water that the term derives its meaning.

Literally, immersion is a metaphor used to describe the sensation of being submerged in water (Murray, 1997). It is somewhat surprising, therefore, that immersion would be used to describe the experience of media when water is not usually a factor. The answer to this conundrum lies in the figurative meaning of immersion.

The concept of immersion describes a sense of transportation, of traveling to a space that is apart from the normal one we inhabit and the feeling of transformation that occurs

there in which we are changed by the experience. It creates an altered state of perception that channels the senses and focuses the mind so that an individual feels closer or in tune with the new space. This transformation is also accompanied by a perceptual distortion of the space of origin. In other words, immersion is a sensation that arises from an interaction that alters how a person thinks, feels, and behaves. When we jump into a pool of water, the space around us feels different. Our vision becomes blurry, our skin feels wet, we can no longer move like normal. This delayed movement perceptually distorts our sense of time as well. We are taken to a space that is wholly different from the normal world we inhabit that obeys different laws regarding time.

Water has transformative powers. This is why some Christian denominations use full-body immersion to represent the cleansing power of baptism. Immersion can change the way we view and understand the world even if the experience itself is short. In fact, the experience has to be short or we suffocate. Complete immersion replaces one world for another permanently. Linear media has a definite end so immersion in such texts can persist only until the text itself ends. Non-linear suggests that immersion could go on for indefinite periods but eventually basic needs such as sleep, bathroom breaks, or even hunger and thirst provide natural barriers to extended immersive experiences. Immersion can end as abruptly as it begins. Like a magic spell, immersion can be broken once the audience is made aware of the trick. However, this experience is desirable because it is generally pleasurable.

It is unclear whether immersion causes pleasure or whether having fun causes immersion. The two feelings are typically described as walking hand in hand. The pleasure

found through immersion acts on multiple levels. It has physical, psychological, social, and ideological qualities (Norman, 2004). Physical pleasure may arise from the sensations evoked in the body by the media text including beautiful art, erotic imagery, and pleasurable music. Psychological pleasure may result from the media's ability to excite emotions or encouraging the audience to forget about the stress of their everyday lives. Social pleasure may emerge from interactions or sharing the experience with others. A person may draw social pleasure from interacting with a screen or computer or with the characters within a story (Morse, 1998). Ideological pleasure is perhaps the most complicated because it is the most culturally situated. Does the media text evoke cultural notions that are consistent with the beliefs and values of the audience? Reinforcing those beliefs and attitudes encourages an audience to enjoy the experience more by providing a satisfying message.

If we continue with this metaphor of immersion like a pool of water, not only is it deep but it is also wide. Current models of immersion (Calleja, 2007; McMahan, 2007) suggest that immersion can be understood in layers, which are determined by degree of attention and the difficulty of what could disrupt the experience. The deeper the immersion, the more a person ignores the world outside of the mediated text. As an example, game scholars Brown and Cairns (2004) identify three potential layers of video game immersion that they call *engagement*, *engrossment*, and *total immersion*. Each layer represents a different depth of immersion and barrier to it. *Engagement* is the lowest level. It is identified by cognitive attention and broken when the player recognizes the representational status of the media usually when the person lacks the time or energy interacting with the text.

Engrossment is the second layer of immersion and it is characterized by emotional involvement. The barriers to engrossment are determined by the interface and whether it is intuitive or natural. The highest level of *total immersion* is characterized by a feeling of physical presence. Notice how these three layers correspond with the different definitions of immersion. The barriers here are whether the player identifies with the game avatar and whether the atmosphere of the game remains consistent. In other words, it is the game narrative that influences this final layer of immersion. Such a schema has potential but there is little justification for the order of the layers nor a clear method of application.

The width of immersion reflects the multi-media quality of media texts. It is possible to become immersed into different aspects of the text. An example of width can be seen in the work of game theorist Tuomas Harviainen (2003) who argued that immersion may occur in one of three parts of role-playing games. Players can become immersed in either their character, the game world, the game narrative, or some combination of the three. Based on sociologist Erving Goffman's frame theory, Gordon Calleja (2007) suggests six game components, which he calls frames, that players can become immersed into. It is possible for a player to become immersed in one element of a game and not another. However, the game characteristics that either elicit or disrupt the immersive experience are shaped by how the concept is understood.

In essence, the metaphor of immersion reveals four distinct qualities of immersion that are found in physical, psychological, and attention immersion. Water distorts the senses, it can only be visited for short periods, it changes behavior, and it has depth and width. A

mediated message can also have these qualities. As such, immersion defines a unique relationship between a person and a mediated message.

The qualities of immersion are consistent among the different scholars and represent areas of general agreement as to the quality and feeling of immersion. It is a pleasurable experience although it may cause feelings of guilt afterwards especially if the immersed individual spent more time in the activity than he or she intended. The experience is temporary having a clear beginning and end. It also possesses the qualities of depth and width. There are degrees of immersion shaped by how perceptually close a person feels to a media text and it is possible to become immersed in one or more aspects of a text. Although these are areas of agreement, the factors that influence it are dependent on what immersion means. Physical, psychological, and attention immersion reflect very different interpretations regarding the experience and all of them have been applied to video games in some way. I will now explicate these applications in order to suggest how they have hindered prior studies of immersion in video games and to suggest how a rhetorical approach may overcome these difficulties.

Immersion Literature in Video Games

Like virtual reality, immersion has become an important topic in the development and research of video game technology. However, this medium is unique among all of those discussed before because it has a very distinct purpose and structure. It has a game structure and is designed for gameplay. Video games are immersive but whether that results from the game narrative (Newman, 2004), the gameplay (Ermi & Mäyrä, 2007), agency (Herz, 1997),

player identification (Laurie, 2003), or the interface (Rouse, 2005) remains a subject of disagreement. The reason for this disagreement is that scholars have been relying on one or two of three definitions of immersion outlined earlier in this chapter. These scholars have been trying to apply the techniques of immersion drawn from the logic of other media, which is detrimental because these interpretations don't often account for the unique qualities of the video game medium.

Immersion through narrative (Murray, 1997) references psychological immersion. As such, literature on video game immersion sometimes draws upon the techniques of language such as empathetic characters (Rouse, 2005) and an expansive game world that possesses numerous embedded narratives for the player to discover (Jenkins, 2006). The problem with this approach is most clearly articulated in the the ludology-narratology debates. Most ludologists (Frasca, 2003; Juul, 2005) have conceded that some video games have some narrative elements some of the time but maintain that video games tell stories differently than books and film.

The real hurdle for applying such literary techniques of immersion is due to a video game's status as a digital text and as a game, which means that it must involve interactivity. The story is also interactive in the sense that the player's actions are necessary to progress it and sometimes the player can even determine the direction of the plot. In an interactive narrative, the formal structure of authorial control must somehow balance audience agency and yet provide a satisfying narrative experience. This is why, according to Marie Laure-Ryan, the principles of immersion established in literature are not appropriate for video

games. However, this assumes a very idealized view of interactivity and that audiences of traditional media are passive (Newman, 2004). A completely interactive narrative in a video game is virtually impossible (Mateas & Stern, 2006) unless we count player experience as narrative. Some authorial control must exist because of limitations within the technology to present and enable stories. This argument has justified the application of narrative immersion principles to video games but the influence of this approach to immersion has been limited. After all, video games do tell stories differently than older narrative media like books.

The second area that is assumed to immerse video game players is the act of gameplay itself. This often draws on the definition of attention immersion. For game scholars Laura Ermi and Frans Mäyrä (2007), immersion is a fundamental component of the gameplay experience and it is primarily a mental process. The danger of this approach is that can lead to a Cartesian perspective of gameplay that split the actions of the mind and body. This becomes problematic when applied to *twitch* video games that require the player to react at specific intervals because this form of gameplay requires the mind and body acting in unison. As such, attention Immersion is often utilized in part by some game scholars but only in tandem with immersion as sense of being (McMahan, 2003) and immersion as experience (Calleja, 2007).

The third approach to immersion in video games assumes that immersion occurs through player agency (Herz, 1997). This approach can be traced to physical immersion perspective. The idea is that the more the player can affect the game environment, the more they will become immersed. Agency here refers to how well the game responds to the player

and whether that response simulates an unmediated environment. The goal isn't complete agency. Players don't need to fly. Immersion occurs through simulated agency in which the player can randomly pick up and use items in the digital domain and explore all areas of it. The problem with this approach is that it potentially ignores the game structure which constrains actions.

The fourth perspective of the literature on immersive games argues that player empathy with the characters (Rouse, 2005) particularly the avatar (Laurie, 2003) is important for the immersive experience. The logic behind this argument tends to come from psychological immersion and empathy is often established through narrative techniques and role-play. While interesting, this approach does not address games that don't have characters or avatars such as *Tetris* (1988).

One last train of scholarly work (McMahan, 2003; Rouse, 2005) regarding the immersive value of video games suggests that immersion occurs through the presentation equipment. This is popular among the game study work of computer scientists (Lee et. all, 2006, Qureshi, 2009) and draws heavily from the physical immersion definition. Under this argument, an immersive game is one that uses VR equipment, 3D environments, photorealistic imagery, and simulated object behavior. As such, the literature of video game immersion has sometimes focused on the interface and the behavior of in-game objects. The principles of immersion established in virtual reality theory are sometimes applied here to argue that video games can only immerse if they offer a fully interactive environment (Herz,

1997) that behaves appropriately (McMahan, 2003). However, full interactivity neglects the game structure and behavior is also misleading pretext.

Games are games and as such should not be confused with non-game content or the magic circle of play collapses and the activity ceases to be a game. It is possible to think of the magic circle as the pool of water through which video game players become immersed. Blurring the lines of the magic circle does not create an immersive game as T.L Taylor and Beth Kolko (2003) have argued, but rather offers an immersive experience in which the game element becomes unrecognizable. This works for virtual reality but not games. In terms of behavior, an interesting study (Cheng & Cairns, 2005) found little to no correlation between consistent game behavior and player perceived immersion. Game components may change quickly and without warning and players merely perceive this as being part of the game structure itself. As a game, the focus is not to immerse the player into a game world indistinguishable from the outside world, but rather immersion results from interaction with that world (Ermi & Mäyrä, 2007). What that interaction is and why it is important to immersion has not been fully addressed in the literature.

Scholarship on video games is still struggling to determine how exactly immersion occurs. Douglas and Hargadon (2004) have used schema theory to argue for video game immersion. This theory contends that we have cultural schemas that enable us to make sense of objects and events by comparing them to a knowledge base of schemas generated through experience. Gordon Calleja (2007) offers a similar argument using frame theory, in which experiences are conceptualized as frames and we use these frames to determine the validity

of events as well as personal behavior. The logic behind both of these arguments is that media builds on the familiar enabling the audience to slip into sort of a cognitive acceptance of the message because it resembles past experiences. Although potentially correct, it doesn't explain how immersion be experienced through spectacles or events with no prior reference.

Within video games, we are left with more questions than answers. Our understanding of video games may draw upon similar and older media but the application of immersion from these media don't seem to recognize certain key aspects of the video game medium. The relationship between player and the text requires active engagement. While the text remains dominant, the player has power too leading to more of a willing engagement. The interface does not need to vanish as it does in virtual reality. For a video game to remain a game, the players must always know in the back of their minds that they are playing a game. The interface should reflect that goal and instead of being transparent, should strive for what Lev Manovich (2001) calls opacity in which the player can quickly oscillate between the interface and the game content because it allows the player to be aware of both. The techniques to immerse are multiple because the game works in multiple spaces.

Conclusions

This chapter has examined the meaning of immersion across a variety of different media traditions. I have identified three different ideologies regarding the experience and traced their historical roots. Each of these tradition have been applied to the study of immersion in video games but because their underlying logic comes from older media with

very different purposes and discourse modes, these ideologies are not easily applied to the medium of the video game.

As the technology changed so too did the means to immerse the audience. There are certain themes that run throughout the different media. First, of all, immersion is always understood as a distinct closeness between a human and a message. This message has spatial properties, whether it is physical, imaginative/emotional, or digital. The technology used to bring the message to the audience is assumed to be a detriment to the immersive experience. The general rule of thumb is that when the audience pays attention to the discourse as opposed to the content, they are no longer immersed. As such, each discourse uses different techniques to make the mediated nature of message to disappear from the attention of the listener.

There are also differences between what each media assumes is the source of immersion and the power relationship necessary between the media and the human listener in order for immersion to occur. These differences more than likely resulted from the unique presentational qualities of each media and how they are used. The media establishes specific expectations of the participants and immersion occurs when those expectations are met. However, from these different media we can formulate specific characteristics of immersion. These characteristics inform all of the definitions of immersion and help provide a more cohesive understanding of the term and its application.

Physical, attention, and psychological immersion reflect different logical

approaches to the concept of immersion and each has its constraints over the interpretation of meaning. This is because each of these definitions draws from a different media tradition and emphasizes the primary means of message expression through that media. See Table 3.4 for a summary of each definition and the media traditions it draws upon. It becomes problematic when we apply these definitions to video games because it creates constraints on the types of games that can immerse.

Table 3.4 Immersion Definition Comparisons

Immersion Type	Theoretical Tradition	Immersion Definition	Source of immersion
Physical	Art/Photography	State of being	Technology ---> Immersion ---> Human
	Virtual Reality		
Psychological	Language/rhetoric	Emotional experience	Technology <--- Immersion ---> Human
	Film/Television		
Attention	Cognitive Science	Cognitive act	Technology <--- Immersion <--- Human

Adherence to any one particular definition could potentially lead game development into a genre trap, producing the same type of game over and over because it meets the requirements of immersion. For instance, physical immersion would value 1st person shooters and de-value games with narrative components like role-playing games. Attention immersion would lead to a plethora of puzzle and action games but ignore games like *Grand Theft Auto* (1997), which encourage undirected exploration of the game world. Psychological immersion would place heavy emphasis on role-playing games but downplay puzzle games.

As such, these definitions seem incomplete for application to video games. Under the logic of physical immersion, the video game *Tetris* (1984) could not possibly be immersive. The graphics are simple, highly abstract and the player has little to no agency over the 2D

game world. The game has no narrative component and offers no emotional meaning thus making it un-immersive under psychological immersion as well. And yet, *Tetris* is widely considered one of the most highly addictive, immersive, and entertaining puzzle games ever invented. Attention immersion also has problems because it doesn't seem to account for the repetitive narrative of many action games. Repetition is one the quickest way to extinguish attention to stimuli (Näätänen, 1992). A game like *Pacman* (1980) could not be immersive because the screen and challenge never changes between levels thus leading to extremely repetitive gameplay experiences. And yet, *Pacman* is often heralded as the most famous and popular arcade game of the 1980s spawning comic books, television shows, and numerous sequels.

The definitions of immersion by themselves seem inadequate at least when understood as mutually exclusive. As of now, there is no overarching theory that somehow combines or takes into account the constraints of these different approaches to immersion. Rather than saying that one interpretation is better, or more correct, than the others, perhaps all three are important for the experience of immersion in game technologies. The discourse analysis of the communities surrounding video game technologies reflected this multi-faceted understanding of immersion. The communities applied all three interpretations of immersion in their dialog to describe the experience.

A rhetorical methodology would be able adapt to these different meanings of immersion because it would be able to identify how a game works on a player physically, emotionally, and cognitively. It would also be able to recognize the interaction of the

medium as a communicative act that involves both the player and the computer technology as well as those characteristics such as the game structure that are specific to the medium. Many of the techniques to immerse described under each of the definitions have rhetorical roots or application. Physical immersion relies on manipulation of the senses while psychological immersion relies on manipulation of emotions. Since rhetoric is the study of how language affects people, manipulation is a concept ideally suited for rhetorical study. The techniques of attention immersion are almost all rhetorical. For this reason, I have constructed a rhetorical model of immersion that can be used to judge the immersive value of a video game. This model draws on the principles of immersion from all three definitions identified in this chapter and the medium of the video game described in the last chapter. The next chapter lays out and describes this model and compares it to other existing immersive models from the literature.

1. I conducted the discourse analysis between the months of October to November of 2009. I examined the online discourse of players, designers, and producers for how they used the term immersion. Several videogame-themed websites were selected and searched for sentences that contained the terms immersion, immersive, and immerse. One hundred sentences were collected from each community with no more than three sentences from any one web page to ensure that more voices were pooled. Using the techniques for verbal data analysis (Gee, 1999) the sentences were then examined under three different coding schema: *value*, *definition*, and *language*. The first code of value examined whether or not the author

of each sentence perceived immersion either as a positive, negative, or neutral aspect of the gameplay experience. The second code of definition interpreted how the author described immersion based on the actors and actions of the sentence. This required breaking each sentence into independent clauses and parsing out the cause of the experience or what aspect of the game is described as immersive. The third coding schema looked at the language of the text and whether the author used the term immersion as a subject, predicate noun, predicate verb, or predicate adjective.

According to the data, all three groups perceived immersion as a positive attribute of the gameplay experience or the game itself. Immersion received primarily positive associations from all three groups with an average mean of 91%. Very few negative statements were identified with an average mean of 2.3%. The average mean of neutral comments was slightly higher at 6.7%. The code of definition showed more variance. Interestingly, each community used all three definitions of immersion, although there were some slight differences across the groups. In general, all three groups used physical immersion the most with the average mean of 46.6%. Psychological immersion appeared almost one-third of the time with an average mean of 31.4%. Attention immersion was used the least with the average mean of 22%. When it came to the language of immersion, the discourse communities showed surprisingly similar trends. In general, the writers used immersion the least as a subject with the average mean of 5.3% and used it the most as a predicate adjective with the average mean of 48.3%. Immersion appeared as a predicate verb around 13.3% of the time and a predicate noun 33% but differences between the groups

creates some disparity here since game producers used immersion more as a verb and less as a noun than the other two communities.

The conclusions of this study revealed several interesting aspects of how these communities perceive and employ the concept of immersion. This study supports the assumption that immersion is generally perceived as a positive aspect of video game design and should remain an important design goal. However, the question remains as to what aspects of video games are immersive and how best to enhance the immersive experience. Since no significance could be drawn from how the different communities define the term immersion, it is possible that these communities are co-constructing its meaning and are therefore influencing one another.

CHAPTER 4. MODELS OF IMMERSION IN VIDEO GAMES

“Today we are beginning to notice that the new media are not just mechanical gimmicks for creating worlds of illusion, but new languages with new and unique powers of expression.” - Marshal McLuhan

Introduction

The last chapter examined the concept of immersion. Through the literature of immersion across a variety of different media traditions, I identified three different meanings for the term called physical, psychological, and attention. All three have been applied to the study of video games at some point. However, reliance on any one of them becomes problematic because they are derived from older media traditions and do not account for the interactive structure of the video game medium described in Chapter 2. Instead, they work together to describe the complex relationship that forms when people become immersed in media messages. This chapter offers a new approach to the study of immersion that recognizes this multi-faceted meaning of immersion. I call this approach the *rhetorical model of immersion*.

A comprehensive model of immersion would provide video game designers and producers a blueprint for the type of technical aspects and techniques they can use to cultivate immersion when developing new games. Researchers too would find it easier to analyze and critique the immersive components of new and old game technologies and perhaps use that data to make arguments regarding innovation, reception, and interactions. Critics could use this model to evaluate the quality of new video game products.

Theoretically, such a model may offer insight into the communication relationships of other interactive digital media aside from video games.

In order to test the value and versatility of the rhetorical model introduced in this chapter, I will compare it two other existing schemas: the *presence model* by Alison McMahan (2003) and the *incorporation model* by Gordon Calleja (2007). These models are designed specifically to study immersion in video game technologies and were developed by two prominent game scholars. I will begin this chapter by describing these two models and how they approach the concept of immersion in video game technologies. The majority of this chapter will then lay out the structure of the rhetorical model and explain why it offers a more comprehensive understanding of immersion. I will use these three models in the next chapter to see what they teach us about immersion when applied to the study of five distinct video games.

The first model by Alison McMahan (2003) consists of six criteria drawn from virtual reality theory. The model can be used to evaluate the immersive quality of a game. This model details technical components that can be used to cultivate immersion and I will refer to it as the *presence model* of immersion. The reason for this term is that McMahan relies heavily on the concept of presence as defined in virtual reality theory to define the experience of immersion.

The second model by Gordon Calleja (2007) builds on symbolic interaction theory to construct six phenomenological frames that can be used to describe how immersion feels. These frames reference specific components of a video game in which a player may become

immersed. Calleja calls his model the Digital Game Experience Model but I will refer to it as the *incorporation model* since the concept of incorporation defines the primary mode of immersion through it.

The presence and incorporation models have some similarities because they draw on existing game research and both can be used to discuss the immersive quality of video game technologies. However, these models are limited in their scope and quality. The presence model is the most constrained because McMahan (2003) applies it solely to the study of 3D games, which leaves out a large number of video games that use different spatial representations. The incorporation model is more descriptive than prescriptive. Calleja (2007) primarily constructed this model as a means for analyzing player experience as opposed to the study of video game technology or mechanics.

This leaves a gap in our study of immersion. The presence model offers a clear list of video game components that create immersion but it is limited by its reliance on virtual reality theory. The incorporation model, while useful for describing what immersion feels like, is ambiguous when it comes to explaining how video games immerse. A more comprehensive model is needed in order to understand how immersion happens across a variety of different video game systems, what factors enhance or hinder the experience and why, and what makes immersion in video games unique from other media. The proposed rhetorical model addresses these issues because it offers both a comprehensive list of immersive components in video game technologies and it accounts for the distinct communication qualities of the video game medium.

The rhetorical model of immersion consists of seven means by which a game can evoke an immersive experience. I developed these means from the different elements of the video game medium defined in chapter 2 and the techniques of immersion described in chapter 3. They are grounded in rhetorical theory and justified through existing game theory. These means are *narrative*, *spatial*, *temporal*, *social*, *interface*, *memory*, and *exigence*. The rhetorical model differs considerably from prior attempts because it offers a clear methodology to understand how video games cultivate immersion through a variety of different techniques and avoids some of the ideological traps that currently hinder our understanding of the experience. In particular, it can be applied across a variety of different video game genres and technologies. It is not limited by technological determinism, the belief that technology is the sole proprietor of change. Nor is the rhetorical model inhibited by new technological developments because it is based on established theories of communication that have withstood the passage of time. Such flexibility is necessary in the ever-changing video game world.

This chapter outlines all three models of immersion and provides the background for the analysis of these models in Chapter 5. This chapter begins with a brief description of the presence and incorporation models by explaining their theoretical foundations, main components, and the strengths and weaknesses of each model. The majority of the chapter covers the rhetorical model. I will explain the rhetorical theory behind each mean, justify it in existing game literature, and describe how video game technologies can use these means to

encourage or hinder the experience of immersion. The models are ordered by their age so we will begin with the oldest, the presence model.

The Presence Model

The presence model by Alison McMahan (2003) traces the mutually influential relationship between video games and virtual reality to construct six immersive game characteristics. McMahan argues that the virtual reality term of presence is synonymous to immersion. As such, she utilizes the six characteristics of presence identified by Matthew Lombard and Theresa Ditton (1997) to propose a model of immersion. McMahan takes these six characteristics and adjusts them to create a tool for the qualitative analysis of video games. She justifies her claims with virtual reality theory and a case study application to the video game *Myst III: Exile* (2001).

McMahan arrives at the interesting conclusion that video games are being developed under the logic of virtual reality. The creation of 3D games that use vector graphics, first-person perspective, and real-time response rates such as *Doom* (1993), *Quake* (1996), and *Unreal* (1998) reflect a desire to emulate the form of interaction found in virtual reality systems. As such, McMahan contends that there are three conditions that create a sense of immersion in virtual reality and video games. The first is that the player's expectations of the game's environment must closely match the environment's conventions. Second, the player must have agency over the environment. And third, the conventions of the world must remain consistent. These three criteria inform all six of the immersive characteristics in the presence model.

McMahan employs both physical and attention immersion in her model to create a hybrid meaning of immersion that involves the body and the mind. She differentiates this hybrid immersion from engagement which refers to the player's interest in the non-diegetic elements of a game such as points, underlying game systems, strategy development, and meta-communities. According to McMahan, engagement does not mean the same as immersion but may enhance the psychological elements of it. She basically assigns the game components of the medium to the concept of engagement while applying the representational and behavioral aspects of the technology to immersion. Through this, she identifies six criteria.

The first component of the model is the *quality of social interaction*. In essence, does the player perceive the game environment as possessing a positive social space that encourages communication and the formation of relationships? Does it achieve both intimacy and immediacy as defined by physical and psychological closeness (Mehrabian, 1971)? This component analyzes how the game environment allows players to communicate with one another. The better the communication, the more immersive the game becomes. Better is defined as how good the experience duplicates face-to-face communication. The avatar plays an important role here. An immersive game encourages the player relate to the avatar and effectively use that avatar to communicate. An immersive game allows for multiple players to effectively communicate over time and location, convey equivocal information, and provide the means for non-verbal communication.

The second component is *realism*, which McMahan divides into the social and the perceptual. *Social realism* refers to the naturalistic quality of character behavior and interactions. Do they seem appropriate given the situation of the game and do they match what the player perceives as normal social behavior? *Perceptual realism* asks whether or not the objects, environment, people, and events in the game world reflect photo-realistic image quality and appropriate sounds. Do the objects on the screen look and sound like their real-world referents?

To describe how objects and events establish social and perceptual realism, McMahan draws on the perceptual opportunities theory of Clive Fencott (1999). Perceptual opportunities break objects in virtual environments up into categories based on how they are expected to behave and the user's response to them. All objects are either surities (mundane objects like doorways and street lamps), shocks (poor design elements like polygon leaks and latency), or surprises (non-predictable details that either attract attention, facilitate exploration, or invite interactivity). Surities enhance immersion. Shocks distract from it. Surprises can do both.

The third component of this model involves three terms that revolve around the idea of transportation. Telepresence, teleoperation, and teleportation increase a player's sense of immersion through movement. *Telepresence* is the sensation of bringing something distant to user's physical presence and establishing a rapport between the two. A video game creates telepresence by encouraging that player to interact with it. *Teleoperation* is the ability to use tools through a medium to physically affect something distant from the body. This is not

necessarily important to the study of video games and McMahan does not place much emphasis on it. However, she does highlight a third term called *teleportation*, which involves instantaneous movement from one part of a game space to another. She lists as examples, the portals in *Diablo* (1997) and the map system from *Titanic: Adventure Out of Time* (1996), which allow the player to move instantly from one spot in the game world to another.

The fourth component is perceptual and psychological immersion. This component clearly represents the hybrid nature of the model by appealing to the physical and mental senses. *Perceptual immersion* occurs by blocking as many senses as possible from perceiving the unmediated world. Techniques that surround the body with technology should totally obliterate outside interference in order to heighten perceptual immersion. This may involve goggles that keep the eye contained or headphones that block out all sound except the desired audio.

McMahan's *psychological immersion* subsumes the quality of attention immersion defined in chapter 3. and refers to a player's mental absorption in the artificial world. Techniques to encourage psychological immersion are primarily established through agency. The more the player can do, the more immersive the game. Mental awareness of objects or events outside of the game space destroys psychological immersion. The goal seemingly of this component is to keep a person's mental and physical attention directed to the game environment and ignore everything else.

The fifth and sixth components are inter-related because they refer to the artificial intelligence of the game computer. One is localized and the other is more global in nature.

The fifth component is how the game system uses *social actors in the medium*. This applies more specifically to the characters within the game system such as monsters and non-player characters under the computer's control. Socially interactive characters encourage relationships, behave within player expectations, possess personality, and offer a range of interactive opportunities can heighten a player's sense of immersion. However, what really defines the immersive quality of these artificial actors is how they relate and communicate with the player. Is it clear, efficient, and does it feel natural? The second component of social interaction focuses on communication between players while the fifth component is communication between the player and computer controlled characters.

The sixth component is an *intelligent environment*. This refers to the computer itself as a social agent. Does it communicate with natural language? Does it behave and communicate in such a way that the player gives it a personality? Humans tend to naturally associate human personality to inanimate objects and if the medium itself follows basic social cues, a player becomes more easily immersed. Both the fifth and sixth components are informed more by communication theory than virtual reality because they rely on social interaction to elicit immersion.

In sum, the presence model offers an evaluative tool for gauging the immersive quality of a video game. The primary focus is on the technology but there is also an emphasis on the perceived experience of the game. Immersion is heightened by social games, realistic images and behavior, agency of movement in the game space, presentation equipment that constrains the body and the mind, empathetic social actors, and good artificial intelligence.

Table 4.1 provides a brief description of the model and its characteristics. As a tool, the presence model suggests several very clear qualities that a game should possess to immerse a player. This model recognizes the digital quality of the representations and interactions found in video games. It also builds on solid communication theories to understand the relationship between players and computer controlled actors.

However, the presence model is not all-inclusive. McMahan applies it almost exclusively to 3D games thus limiting its applicability. There are a number of games that don't use this spatial structure such as *Bejeweled Blitz* (2009), a 2D puzzle game, which would not be immersive under this model. Another major weakness is the role of narrative in the immersive experience. The presence model only addresses narrative indirectly as a part of the social actors in the medium component. The model also ignores many of the elements in the game structure such as rules and goals that define the video game medium.

The presence model thus neglects the game component of video games and cannot explain the immersive quality for games that don't have very specific spatial structures. The assumption that video games seek the same type of mediated experience as virtual reality fails to account for key differences between the media. The next model examined here addresses these concerns and actually highlights narrative and tactical action as important parts of the immersive experience.

Table 4.1 Presence model

Component	Description	Techniques to Immerse
Social interaction	Communication between players	<ul style="list-style-type: none"> • Player immediacy with avatar. • Verbal and non-verbal communication channels. • Real-time communication channels.
Realism	Appearance and behavior of object representations	<ul style="list-style-type: none"> • Non-player character behavior is believable. • People, objects, and environment are photo-realistic. • Objects behave appropriately.
Telepresence, teleoperation, and teleportation	Bringing the player to the digital world and the digital world to the player.	<ul style="list-style-type: none"> • Large screen. • High definition sound. • VR technology. • Multiple modes of travel in game space.
Perceptual and psychological immersion.	Acting on the body and the mind of the player	<ul style="list-style-type: none"> • Surrounding the body with technology to block out unwanted sensory input. • Highly interactive game environment.
The use of social actors in the medium.	NPC characters with developed A.I.	<ul style="list-style-type: none"> • NPC encourages relationships • NPC reflects unique personality. • NPC behaves within player expectations.
Intelligent Environment	Computer A.I.	<ul style="list-style-type: none"> • Computer uses natural language. • Computer follows basic social cues and behavior.

Incorporation Model

With a background in literary theory and media studies, Gordon Calleja (2007) offers a phenomenological approach to the study of immersion in video games. Calleja calls his model the Digital Game Experience Model but I am going to shorten this to the *incorporation model* because that is the primary goal of his schema. The incorporation model is based on the social symbolic frame theory developed by Ervin Goffman (1974) and seeks to describe the different forms of immersive experience in video games. Calleja justifies his model through qualitative research by interviewing video game players and identifying those qualities of the video game that the players associate with immersion. The components of

this model are, according to Calleja, "meant to play a descriptive rather than prescriptive role" (p. 238). However, these frames can still be used to evaluate the immersive potential of a video game because they reference specific components of the video game medium and the interaction of gameplay.

The incorporation model builds on Ervin Goffman's frame theory. Under this theory, an experience can be understood through frames, which provide structure and direct interpretation. These frames help people to understand the experience and how to properly act within it. Calleja identifies six frames that are important for the sensation of immersion called *tactical, performative, affective, shared, narrative, and spatial*. These frames do not act in isolation but intersect with each other and define different game mechanics in which a player may become immersed. Although different games will naturally place more emphasis on some of these frames than others, the key that holds them together is dramatic performance. Players become immersed as they perform and act within each of the frames.

The different frames reflect the width of immersion but they are also shaped by two temporal phases that represents their depth. At the deepest level are macro-involvement forces, which are motivational attractors that sustain engagement over a longer period of time. Such motivations are determined by what the player desire from the game such as social interaction, prestige, wealth, or a cathartic escape from everyday life. These forces shape the replayability of a game, long-term goals, and the desire to repeat an experience. The surface level of immersion include micro-involvement forces, which are the moment-to-moment actions within a game that emerge from a singular instance of gameplay. These are

the mini-goals established by the game structure such as defeating an enemy unit or moving from point A to point B.

This model builds primarily on a psychological definition of immersion. Although physical immersion qualities such as graphics and simulation are still considered valuable, it is not their ability to act on the senses that induces immersion but rather the emotional responses they evoke. Graphics are valued less for their realism and more for their ability to create a mood for the players. Interestingly, Calleja reverses the role of attention immersion. Rather than immersion arising from a player's cognitive attention to their actions, it becomes deeper when the player internalizes the game world and acts through it without thinking about it. The player assimilates the controls and feels corporally embodied within the game.

To distinguish this experience from the type of immersion that results in other media, Calleja recommends replacing the metaphor of immersion with the term incorporation. Calleja writes, "Incorporation is the subjective experience of inhabiting a virtual environment facilitated by the potential to act meaningfully within it while being present to others" (p. 257). Incorporation allows Calleja to bypass the immersion-interactivity dialect posed by literary scholars by tossing out the term immersion and replacing it with something that has less theoretical baggage. Each of the six frames assumes that the ultimate form immersion results through incorporation.

The first frame is *tactical involvement* and it includes those elements of gameplay that require decision-making. Immersion through tactical involvement requires planning, strategy, and eventual performance. They are cognitive challenges established by the game rules to

accomplish set goals. Without a cognitive challenge, interest in the game fades and so does immersion. These cognitive challenges may involve determining a good avatar build in *World of Warcraft* (2004) or the kind of defensive strategy required to protect your towns in *Travian* (2006).

The second frame is *performative*. This is the centerpiece of Calleja's model since it relies heavily on dramaturgical theory. This frame is an actualization of the tactical frame. To achieve immersion through performance, a player must internalize the controls so that he or she no longer thinks about them. The player reacts instinctively and the movement in the game space becomes second nature. Of course, perspective plays an important role here as well. First person perspective evokes deeper involvement because it requires an internalization of the avatar. Third person, while it offers a wider viewing field, makes the accuracy of movement more difficult. However, the desired perspective depends on which one will make it easier to accomplish game goals. Games like *Counterstrike* (2003) benefit from first-person because the goal is simulated combat while game like *World of Warcraft* (2004) are better suited for third person because these games rely on complex social interactions. Either way, movement is key for establishing performative incorporation in digital game spaces and thus impacts a player's sense of being in the game world.

The third frame is called *affective* and it draws heavily from the phenomenological background. Calleja contends that the affective frame is inherently rhetorical but he doesn't reference any rhetorical theory. The affective frame emerges through a video game's ability to rhetorically evoke desire and emotional arousal. A video game establishes the affective

frame through textual interpretation and performance. This may include the game story, its goals, and the type of mood it creates through graphical representation and music. Players have different motivations for playing games. When a game meets a player's desire, the player is drawn into the affective frame. How a game accomplishes this depends on the subjective desires of the player but a game may utilize film techniques to establish specific visual tones as well as provide controls that enable a player to adjust the game to meet their individual needs.

The fourth frame is *shared* and it applies primarily to multiplayer videogames that allow players to establish social presence. Single player games such as *Tales of Symphonia* (2003) have a large world of characters for the player to interact with but these characters are controlled by very limited AI. As such, they do little to evoke a shared frame because they do not provide much opportunity for social interaction. The model does not address the value of video games that allow multiplayer interaction outside of the game space such as *Super Smash Bros. Brawl* (2008). Instead, this frame focuses primarily on the type of communication established through networked connections in which the game space provides the primary, or sole, space of performance. Games like *World of Warcraft* (2004) that possess strong communication components that allow identity expression, relationship-formation, collaborative or cooperative efforts, and audience presence intensify a player's sense of immersion through this frame.

The fifth frame, *narrative*, returns to the defining roots of psychological immersion. Calleja briefly addresses the ludology-narratology issue but also contends that most scholars

today recognize the value of narrative in video game studies even if the interactive nature of the medium requires a different form of narrative than appears in linear media. As such, this frame distinguishes two types of narrative in video games that evoke immersion. The first is *designed narrative*, which are those story elements built into the game's architecture by the game designers. The second, called *personal narrative*, emerges from the player's past experiences of playing the game. Games like *The Longest Journey* (1999) have a very strong designed narrative that is crucial for the player's enjoyment of the game. Social games like *Planetside* (2003) do not have much in the way of designed narrative but offers the opportunity for numerous personal narratives. This frame's importance increases through reflection of an experience and how we make sense of it as opposed to acted performance.

The last frame of this model is *spatial* and it takes the form of locating oneself within a digital world either through mental maps, directions, and game maps and it covers the player's exploration of the game space. Internalizing maps gives players a stronger sense of comfort and inhabiting a game space. Immersion results after a player experiences a particular game space, creates a mental map of it, and then moves through it with that knowledge. Easily distinguishable areas or simple layouts allow for quicker mental mapping.

All six frames of this model reflect different aspects of the gameplay experience and involve different technical components of any given video game. Immersion in video games, relabeled incorporation in this model, involves the movement from conscious attention to the media to an internalized knowledge of the game world thus allowing players to seamlessly integrate themselves into the game space. It results from a synthesis of internalized tactics,

designed and personal narratives, communication with other agents, movement, and a habitable domain. Table 4.2 outlines the different frames and how a video game could immerse.

Table 4.2 Incorporation Model

Frame	Description	Techniques to Immerse
Tactical	Elements in game-play that require decision-making.	<ul style="list-style-type: none"> • Cognitive challenges. • Achieving game goal requires planning, strategy, and performance.
Performative	Acting in the game world through avatars.	<ul style="list-style-type: none"> • Player understands and internalizes controls. • First-person perspective. • Easy movement in the game space.
Affective	Evoking desire.	<ul style="list-style-type: none"> • Allows player to act out their desires such as aggression or social communication. • Game uses film techniques to visually evoke mood.
Shared	Social presence.	<ul style="list-style-type: none"> • Multi-player networked games. • Game allows expression of identity. • Game makes performances public.
Narrative	Stories created by designers and players.	<ul style="list-style-type: none"> • Memorable game-story. • Memorable gameplay.
Spatial	Locating oneself in the game world.	<ul style="list-style-type: none"> • Player memorizes game map. • Simple digital world layouts. • Small digital spaces.

The incorporation model recognizes the multi-faceted quality of immersion, the gameplay aspect of video games, and accounts for the player's investment in the experience. As such, it is more applicable to a variety of different games and experience than the presence model. However, the model is vague when it comes to identifying specific characteristics of a video game that are immersive. Are all personal and designed narratives immersive? Are all multiplayer games immersive? This model doesn't answer these questions.

In addition, the concept of incorporation seems problematic when applied to all six frames. Calleja relates the process of incorporation to Csíkszentmihályi's (1990) theory of flow in that they are both associated with a deep, seemingly effortless involvement with an activity. Incorporation may help a player interact within the game space and succeed at game goals so it is very useful when applied to the interface of the game. However, incorporate of space only works if exploration isn't a part of the game goals. Certainly, successful navigation of a first person shooter such as *Medal of Honor* (2010) heightens the player's ability to immerse in that space because the goal isn't exploration but rather search and destroy competitive gameplay. A game with a large world that invites exploration such as *World of Warcraft* (2004) becomes more boring and less immersive if the player already knows where everything is.

Incorporation doesn't seem to explain how new players could become immersed because they are still learning their way through an environment nor does it explain the immersive value of games in which exploration and discovery are important game mechanics. The concept also doesn't mesh well with the narrative qualities of games. Is a player going to be more immersed in a story that they have already seen or one in which they do not know what will happen? The frames of the model offer some interesting ideas of what immersion feels like but the logic of incorporation doesn't connect well to all of them.

The incorporation and presence models offer unique perspectives to study immersion but they are limited by the underlying definition of immersion that they draw upon. The presence model offers a clear criteria for how to create an immersive experience but the

model is limited on the type of games it studies and does not address the gameplay elements of the medium. The incorporation model has the opposite problem. It recognizes key aspects of the medium and can be applied to more diverse game structures but it does not offer a clear description of exactly what or how a game evokes immersion. One uses primarily physical immersion so it neglects the emotional side of the experience while the other draws from psychological immersion and thus doesn't address the technical aspects of the medium. This necessitates a need for another model that is both comprehensive and thorough and not tied heavily to only one aspect of the immersive experience. I suggest that the rhetorical model may overcome these difficulties.

The Rhetorical Model

Description

Video games are an extremely diverse medium. Each individual game is its own separate text that provides a distinct experience. There are trivia games like *You Don't Know Jack* (1995) that test the mind and action games like *Bioshock* (2007) that test hand to eye reflexes. Video games can be played on computers, televisions, and even mobile phones allowing for a wide variety of interactions. The only thing that these texts share is the presentation method of a screen, a computer program, and a game structure. As such, it is difficult to provide a model of immersion that can account for the sheer diversity of video games.

This section introduces a rhetorical model for the study of immersion in video games. It is designed to examine a video game text in order to understand how and why it is

immersive. It identifies formal mechanics of a game text that are influential in creating an immersive experience. These immersive mechanics are justified by existing game literature and explained through rhetorical theory. In chapter 2, I discussed how the video game is a text that is experienced through discourse. This interaction, which I called gameplay, gives rise to immersion. In chapter 3, I described the multi-faceted aspect of immersion and suggested the need for a methodology of analysis that could recognize the complex nature of the experience of immersion through the distinct communicative nature of the video game medium. All of this suggests that rhetoric may offer a valuable approach to this kind of study since it is the study of language in action.

This section begins with the theoretical background that I will use to justify the application of rhetoric in constructing this rhetorical model of immersion. I rely on the Sonya Foss' (1994) schema for the analysis of visual images to create seven means which can be used to study the immersive quality of video game technologies. I then describe in detail each of the seven means. This section concludes with a brief discussion of what the rhetorical model may offer to understanding of immersion and how it differs from the presence and incorporation models.

Theoretical Background

Aristotle (1991) described rhetoric as the study of the persuasive power of language. A diverse field of knowledge, rhetoric is generally concerned with the functions of communication (Jasininski, 2001). Rhetoric offers a theoretical perspective to study the content and presentation of messages. It can reveal how language enables identity formation,

social relations, persuasion, and even interpretation (Ramage, 2006). Although rhetoric has a long history in the field of verbal and literary language, recent scholarship has expanded it to include visual media such as fine art (Helmets, 2004), photography (Hariman, and Lucaitis, 2006), and film (Blakesley, 2004). This recent trend in scholarship reflects a shift in rhetoric towards the study of all forms of communication and was heavily influenced by the work of Kenneth Burke (Olson, 2007).

Rather than focusing on verbal utterances with political implications, Burke applied rhetoric more broadly. "For Rhetoric is not rooted in any past condition of human society. It is rooted in an essential function of language itself" (Burke, 1969; p. 43). This influential interpretation has allowed rhetoric to examine language across a variety of different media and for a variety of different purposes. Some scholars like Sonya Foss (2004) define rhetoric as the human use of symbols to communicate. Therefore, if video games are a form of communication that conveys meaning then it is possible to study that interaction through a rhetorical lens.

The last chapter established that scholars, players, designers, and producers see the value of immersion in the experience of video games. Designers like Francois Laramee (2002) and Richard Rouse (2001) argue that good games evoke immersion and designers should *make* immersive games. Whether or not it is intentionally constructed or happens naturally, video games have the capacity to immerse a player. Immersion is thus a function of video games, particularly if these games are intentionally designed to achieve it. Rhetoric provides the tools to study how a text, in this case the video game, achieves a specific

response or function. Through rhetoric, it is possible to identify those technical qualities of the video game text that either enhance or hinder the sensation of immersion.

As such, I have constructed a rhetorical model of immersion to study the immersive quality of video game texts. This model builds upon Sonya Foss' (1994) schema for the rhetorical analysis of visual texts. Foss' schema explicates the difference between rhetoric and aesthetics, which is important for this study to be both proscriptive and descriptive. Rhetoric and artistic criticism are similar because they are both concerned with style and structure. However, while aesthetic criticism focuses on meaning, rhetoric studies affect.

The section introduces the different parts of the rhetorical model and how it fills a gap in our current understanding of immersion in video games. As a visual medium, Foss' schema works well to explain this process. There are three steps to the schema and the first is to identify an image's function. As discussed in chapter 3, one of the main functions of video games is the experience of immersion. The discourse analysis showed that designers construct games explicitly to evoke immersion, players use immersion to judge the quality of a game, and producers use immersion to sell games. Some scholarship (Ermi & Mäyrä, 2007) even argues that immersion is a natural effect of gameplay. So while video games may have other rhetorical functions, immersion is a consistent experience expected from all games.

The second step of Foss' schema is to assess the communication of the function through style and substance. I have identified seven means through which a video game text can immerse a player. Each mean is a rhetorical technique that can be used to invite the player into an immersive relationship with the video game text. They are not a list of

ingredients that a game must possess in order to be immersive. Rather, they describe a methodology, a system of analysis that can be used to understand how and why a video game constructs immersive experiences. The third and final step of Foss' schema is to assess the legitimacy of the function. Given that this would involve a scrutiny of the function's soundness and consequences, I will address most of this step in the final chapter of this dissertation.

The means of the rhetorical model are *narrative, spatial, temporal, social, interface, memory and exigence*. Each mean reflects a specific attribute or aesthetic within the video game's formal structure that may encourage immersion. The *narrative* means of immersion refer to the game story including the characters, setting, plot, theme, and the discourse. The *spatial* means of immersion involve the arrangement of space both in the digital world of the game and the physical play space of the player. The *temporal* means of immersion are the temporal mechanics of the game. The *social* means of immersion emerge from how the game encourages the player to identify with his or her avatar and join the social environment of the game. The *interface* means of immersion are determined through the interaction between the player and computer through the screen, controller, and avatar. The *memory* means of immersion are developed through personal, public, and cultural memory, how the game utilizes intertextuality, and the game's use of conventions and genre. And finally, the *exigence* means of immersion include the game's conflict, goals, and constraints/opportunities.

The seven means identified here are also not completely isolated from one another. Because they are part of a larger game structure, they are inter-related. It is also possible for one mean to offer an immersive experience while another hinders it. The dominance of each mean depends on their function in the game and the player's expectations and taste. The more important the mean is to the game experience and how it arouses and fulfills player desire, the more it affects the immersive value of a game. However, only one mean is needed to immerse a player.

This model is intended to study the immersive quality of any video game. It recognizes that video games have distinct qualities that separate them from other media. The model is not specific to the psychological, physical, or attention understanding of immersion although the different means sometimes draw upon the techniques of one definition more than the others. The model itself assumes that immersion is formed through gameplay, which is a communicative relationship between players and video game texts. It is intended to further our understanding of interactive digital technologies and how they influence our behavior and actions.

The Narrative Means of Immersion

Description

Not all games can be understood as having narrative components but when they do, the stories of these games have strong immersive potential. Unlike the presence model, this understanding of narrative does not include personal or emergent narratives. Personal narratives are given form through reflection, which situates them in the memory means of

immersion. Only the designed narrative, those story elements built into the game by the game designers, are part of the narrative means of immersion. This includes the characters, setting, plot, and theme of a story as well as the discourse used to tell it.

Although the application of narrative theory to video games remains an issue of contention, several scholars (Schmidt, 2007; Newman, 2004) have made the argument that narrative is important for player immersion. Both the presence and incorporation models feature narrative as a tool for the experience. However, no one has yet offered a clear description of how or why a game's narrative encourages immersion. Instead, a great deal has been written about how video games tell stories differently than other media because they are interactive.

This section lays the foundation for a rhetorical approach to video game narratives and immersion. It identifies how narratives immerse, how we can understand this process through form, and the means of immersion within video game discourse and stories. Video games narratives are in their infancy and we are still learning how to use the medium to effectively tell stories. The literature (Murray, 1997; Jenkins, 2007) of narrative suggests that video game stories immerse by arousing and fulfilling player desire. We can understand how a game does this using Kenneth Burke's (1969) theory of form. This rhetorical theory enables us to study the immersive potential of video game narratives by identifying those story and discourse elements that create the conditions for immersion.

Theory

So how do video game narratives immerse? They immerse by evoking an audience's emotional interest and investment in a story. When the audience becomes emotionally involved in a story and its characters, and cares about the outcome of the plot, they are more likely to become immersed. Careful manipulation of desire and the control of emotions is necessary to create and sustain an immersive experience (Murray, 1997). This is a delicate art because emotional overload can disrupt the sense of immersion. Janet Murray (1997) writes, "Traditional narratives have clear conventions for regulating arousal so that it is strong enough to make a story compelling but not so strong as to render the viewer uncomfortable" (p. 119). Kenneth Burke (1968) offers a rhetorical term to describe how this process works, which he called *form*. A narrative has form by creating an appetite in the mind of an audience and then satisfying that desire. A narrative induces immersion when it possesses proper form.

Burke described form as eloquence in language. It is the use of style to evoke emotion. The specific emotion itself doesn't matter as long as it creates and fulfills a specific desire in the audience. Video game narratives that evoke feelings of fear, success, intrigue, anger, lust, challenge, and aggression can all create immersive experiences provided that the player desires them. Form is not just a vague, subjective concept. There are specific techniques that can be used to evoke desired emotions in most audiences. For video games, this requires us to understand the kinds of stories that they tell and how. We must recognize that video games do tell stories differently from film and television because of player agency but it can still draw from the story-telling methods found in these older media. The

techniques of immersion are the discourse, which includes authorial control and player agency and the story, which is composed of character, setting, plot, and themes.

Techniques

Authorial control appears most often in the presentation of the narrative. Video games are viewed on a screen. As such, video games can use many of the visual aesthetics found in film and television. This may include stylistic use of camera angles, lighting, sound and music. The perspective of the viewer to the screen is often explained through the metaphor of the camera. This metaphor, drawn from film, helps us to understand the viewer to object relationship. The game *Alone in the Dark* (1992) used canted camera angles, low lighting, and somber music to create an eerie atmosphere. In many 3D games like *Prince of Persia: Sands of Time* (2003), the player can manipulate the perspective to allow the player to adjust their view. However, when the camera position is important for a story event, the game takes control of it and positions it appropriately.

Another common story-telling technique borrowed from film is the cut-scene, an animated short film movie provides narrative information. A cut-scene usually involves limited or no interactivity on the part of the player. To some this may seem like a disruption of the immersive experience because it basically strips players of agency so that they can no longer control the action of events nor the player's character. It also typically involves animation of greater detail than the graphics of normal gameplay creating a discontinuity in the visual representations.

Whether or not cut-scenes have an adverse effect on immersion depends on who you ask because interactivity changes the discourse mode. I would argue that cut-scenes are not disruptive provided they possess form and are used in appropriate amounts at key dramatic intervals. Overusing this technique, such as appears in *Xenosaga* (2003), which has over three hours of cut-scenes may distract from the experience because players may not get to play as much as they want. Too few cut-scenes may discourage players because they may not see any progress in the plot. The cut-scene is an example of authorial control and it must be balanced with the interactivity or the text merely becomes a movie that occasionally prompts the player to push a button.

For Marie-Laure Ryan (1994) the interactive nature of video games means that the medium must utilize different techniques to immerse than linear media like literature and film. This is not necessarily true. A completely interactive narrative is currently a fictional ideal (Wooster, 1991). A video game may have some narrative elements that the player's controls but such interaction is limited. The game *Myst* (1991) can only end in four ways. Even though player involvement is necessary to move from one plot point to the next, those plot points, the challenges, the characters, and the setting were are all designed by the creators and do not change. A truly interactive game that allows the player to do anything is technically no longer a game because it lacks structure. Game narratives, while flexible to account for player input, should still direct the player's attention (Mataes & Stern (2006).

The interactive component of games is what establishes the discourse as a conversation. The video game *Chrono Trigger* (1995), for instance, contains thirteen unique

endings all dependent on the choices that the player makes during the game. However, this fragmented nature of digital media does not destroy the game's narrative value, it merely makes the player a co-constructor of it (McGee, 1999). Such interactivity possesses form when it gives players the desire to impact the plot and the ability to fulfill that desire. Not all games have to allow this form of narrative agency in order to immerse a player but it does help establish narrative as a dominant mean of immersion.

A game with appropriate form is replayable if it can recreate an emotional feeling in the player. People return to games like *Silent Hill* (1999) because of how it arouses fear even upon replay. Games such as *You Don't Know Jack* (1991) have limited replayability because once a player knows the answer to all of the questions, the challenge and emotions evoked by the game lessen significantly.

The story also plays an important role in the narrative means of immersion when it has form. All stories are composed of characters, setting, plot, and themes. Although some video games allow the player to control one or two of these elements, the game structure falls apart if it gives the players agency over all of them. Examining each in turn helps define the types of stories video games can tell and their immersive value.

Game scholar Simon Nielson (et. all, 2008) defines four different types of characters that can be found in video games. They are *stage*, *functional*, *cast*, and *player*. *Stage* characters provide the setting and are merely part of the background. The generally faceless crowd that sit in the bleachers of *Mario Tennis* (2000) are stage characters. *Functional* characters also sit in the background but they serve a game mechanic. The random cats in the

game *Paperboy* (1984) become obstacles that the player must avoid and are thus functional but relatively unimportant characters. *Cast* characters serve a purpose for the game story. The character Kairi in the game *Kingdom Hearts* (2002) is a cast character because she plays an important role in the progression of the plot.

The most important character for establishing form is the *player* character, who usually serves the function of the protagonist in the story. This is the game avatar. Rarely does a game allow a player to define the stage, functional or cast characters. Player characters are also usually predetermined. The player must play as Sora in *Kingdom Hearts*, although the player has some control over the cast characters who follow him. Sora has a distinct personality and behavior that the player cannot change. The game *World of Warcraft* (2004) gives players freedom to design their own unique player characters from a list of options. Some games offer a middle-ground like *The Legend of Zelda* (1985), which requires players to play as Link, a pre-made character, but Link is a blank slate. He has no personality except what the player attributes to him through gameplay choices.

Stage and function characters are important for establishing the tone and mood of the game story. Their success at this role gives them form. The functional characters are more important to the game's immersive value. It doesn't matter if these characters are empathetic but they need to have distinct personality and serve an important function in the story. Many of the characters in *God of War* (2005) are cruel, self-serving, and vicious but they act together to create an intriguing tale of murder, revenge, and redemption. The player character

Kratos is particularly nasty, but what matters most for this game's form is how the story arouses anger and directs it.

The player character has form when it is empathetic and provides the player with the means to fulfill desires. Link works particularly well because he follows a mythic archetype. Players can easily project themselves through this heroic persona. In social games where individuality matters, character creation is more valuable. Pre-constructed characters only work to evoke immersion if the player legitimately cares what happens to them whether for good or ill.

The setting is the digital world where the game takes place. Game settings contribute to the story by adding atmosphere and mood. The *Resident Evil* series (1996-present) takes place in an alternate version of the present world with the addition of zombies. The locations of the game reinforce a suspenseful, horror tone. The first *Resident Evil* (1996) had players exploring an abandoned mansion in the woods filled with narrow passages, monsters, and blood-splattered walls at night. *Resident Evil 2* (1998) takes place again at night in an abandoned police station. In most games, the player has limited impact on the setting thus making it a strong site for authorial control.

The plot is where scholars are most excited about the possibility for interactivity. As such, it is where video games differ most from other media. The plot is the chain of events that establish the story over time. In linear movies and books, the audience sits through an established plotline. In video games there is more flexibility. Players can explore the plot at their leisure and their actions impact the flow of events. Sometimes a plot is pre-established

such as the story of Artus and his children in the game *Myst* (1993). Henry Jenkins (1996) calls these embedded narratives. They are pre-established story events that the player discovers through gameplay. This includes the backstory, which are events that happened before the player enters the narrative. Games can establish these events through the game manual, a cut-scene at the beginning of the game, or bury them in the game so that player finds them as they progress. In *Myst*, Artus' children trapped him in a book but not before he managed to trap them. This happens before the player even arrives and the player discovers this information as she/he tries to free Artus' kids.

The plot is the most difficult to establish form because video game stories cannot easily follow the same structures as film or literature. It is hard to establish rising tension when the length between events is uncertain because they depend on player action. It is hard to use exposition to reveal key plot information if the player can ignore or potentially miss it. As such, many games employ film techniques like cut-scenes to give plot information because it gives them more authorial control. Such techniques are not necessary for a plot to have form but they do make it easier for the game designer to control it.

The theme, or meanings, drawn from the game are subjective but they often rely on cultural conventions. A classic theme is the save-the-princess story featured in many games from *Super Mario Bros.* (1984) to *Resident Evil 4* (2005). Such narrative stories appeal to established gender roles and cultural values of success (Sherman, 1997). Themes are the implicit meaning drawn from games established through recognized narrative tropes. Many

games like *The Legend of Zelda* series (1985 to present) draw on mythic narrative structures and themes, which helps to explain their widespread appeal and success.

Summary

In conclusion, narrative establishes immersion through form. If the game story arouses a particular desire and then fulfills that desire, it will immerse the player. A game can do this through discourse and story. The discourse methods of form rely on traditional visual story-telling techniques while balancing interactivity. The story can evoke immersion through interesting characters, emotional settings, intriguing plots, and themes that reinforce cultural beliefs and values. The narrative means of immersion are strong during initial gameplay but their influence may lessen over time when the player becomes familiar with the plot. Such knowledge can negatively affect the emotional impact of a story. However, narrative remains a powerful part of the immersive experience. The next means of spatial builds on the setting established here in narrative to understand how players interact with digital environments.

The Spatial Means of Immersion

Description

All video games have spatial qualities. As computer constructs, video games create a digital space where the player interacts. The digital environments of games are fairly diverse and include everything from the text-based fantasy world of *Zork* (1979) to the 3D battlegrounds of *Medal of Honor* (1999). The spatial means of immersion result when players

feel like they are inside these digital environments. We can understand the process by which this happens through the rhetorical concept of presence. The key to creating presence is through arrangement, which defines both movement and boundaries within video game spaces.

This section first addresses how immersion has been understood as a spatial experience. Then it builds on the concepts from this literature to explain how we can understand the spatial means of immersion through presence, which is achieved by repetition, evocative details, and figurative use of style. In order for a player to feel immersed in a video game space, the game must carefully arrange the digital environment, game elements, and the physical space of play to encourage a feeling of transportation into the game world.

Theory

Space is very important to the experience of immersion, which is often associated with a feeling of spatial distortion and transportation (Murray, 1997). The player becomes heavily involved in the constructed world of the video game space and becomes less aware of their physical surroundings. Some scholars (Taylor & Kolko, 2003) have argued that immersion results when a game blurs the physical with the digital space. This is the ultimate goal of virtual reality but there are problems with this approach when applied to video games. If a player loses the ability to distinguish the game space from the physical space, what results is not immersion but rather a disintegration of the game structure. It ceases to be a game.

A better goal is to draw players into a sensation of visitation (Murray, 1997). In order to experience immersion and retain the game structure, the players should feel like they are in a new world but with the awareness that they are playing a game. Spatial distortion results from the players' feeling of immersion. It does not cause it. An immersive game evokes a sense of space, allows the player to move within it, and makes it clear where the game spatially begins and ends. Immersion through space is thus concerned with presence, movement, and boundaries.

Presence and immersion are similar concepts that are often indistinguishable from one another (McMahan, 2003). Presence appears throughout virtual reality literature especially after the work of Jonathan Steuer (1992). According to Steuer, virtual reality is not a technology but rather the sensation of *telepresence*, which he defined as "the experience of presence in an environment by means of a communication medium" (p. 76). Another virtual reality scholar, Mel Slater (2003) defined immersion as what the technology delivers while presence is about being in a new place. According to these scholars, presence is the human reaction to immersion. Although presence is a rhetorical term, neither of these scholars draws specifically on rhetorical theory.

Both Slater and Steuer have some valid points. Presence is the way to immersion, not immersion itself. In classical rhetoric, presence is the use of language to make something vivid to the audience or to bring something to the audience's attention (Perelman & Olbrechts-Tyteca, 1969). It is designed to bring a phenomenon, idea, concept, or process to the audience's minds and then make them perceptually close (Tucker, 2001). A video game

can use the techniques of presence to spatially immerse a player by making a vivid digital environment and transporting the player to that space.

Techniques

Presence is achieved through repetition, evocative details, and figurative use of style (Tucker, 2001). Many video games already employ these techniques in some form.

Repetition has been a common feature of video games as far back as *SpaceWar!* (1962). Not only does the game structure require repetition of player actions but many games use the computer's database logic to repeat object representations. All video games involve players repeating the same action over and over again, whether this action is jumping or sword-swinging. Because it is a game, players expect a repeatable experience especially if they lose the game and want to try again. Unlimited lives and save spots are helpful to this technique of repetition.

Repeated game objects establish the feeling of being in another world. In *Halo: Combat Evolved* (2001) players must fight thousands of alien soldiers. But each of these monsters is only made up of only four different sprite objects that are copied a bunch of times. Repeating the monsters makes them more present for the player as opposed to hundreds of different sprite objects that could easily get lost in the background, which happens to the teeming crowds of *Assassin's Creed* (2007).

Evocative details are another way to establish presence and the feeling of otherness. A game can draw attention to specific game objects and actions by making them stand out. In *Legend of Zelda: Twilight Princess* (2006), when the player-character Link walks past a stage

character whom Link can talk with, a small menu pops up on the side of the screen. This menu does not appear when Link walks past stage characters that do not have anything to say. Although potentially distracting because it draws attention to the mediated element of the game, this type of detail actually reinforces the game space and makes those game elements present to the player. The heads-up-display found in many games is another way of featuring key information for play such as health meters, ammo reserves, and mini maps.

Lastly, presence can be created through figurative use of style. This is what Slater (2003) calls form and Steuer (1992) calls vividness. Although many games strive for photo-realistic detail, this is not necessary to create immersion. In order to immerse, the game objects and their functions should be recognizable to the player and draw the player's attention to the important elements of the gameplay and narrative. Graphical fidelity, in a sense, is irrelevant, which does contradict many assumptions in immersion literature (McMahan, 2003; Narayan et. al, 2005; Thomsen, 2010) What matters instead is whether or not the presentation mode uses appropriate style to make the game space and digital space present. For instance, *Okami* (2006) uses a mixture of cell-shading and water color that mimics the Japanese ink-illustration called sumi-e. The artwork is simple but stylistic and establishes the use of the paint-brush as an important game element. The game actually requires the player to use a digital brush to manipulate the environment.

Presence is enhanced when a video game arranges the space to encourage movement and to establish boundaries. This involves the arrangement of the physical space of play and the digital environment of the game world. To understand how arrangement can be used to

enhance the spatial means of immersion, we can apply the three-pronged approach of analysis used by Marguerite Helmers (2004) to study spectator, viewing space, and objects. Helmers used these tools to understand how people derive meaning from fine arts. However, these three qualities are useful in discussing arrangement in space and can be applied to other forms of visual texts.

A good method for determining the play space is to go back to the concept of the magic circle (Huizinga, 1950). The exact dimensions are flexible but a player must enter it voluntarily. The play space in video games may extend beyond the screen into a person's living room, desk, or even into the homes of other people. The spectator or player establishes the play space by their actions and attitude and may leave it as quickly as they enter. The physical qualities of the space impact the immersive quality of a game. Is it comfortable? Does it allow easy access to the viewing space? Is the player sitting or encouraged to move? Are there any physical objects that might get in the way of the player's view? Distractions or hindrances in physical space can disrupt the immersive experience.

The typical image of a video game player is a young boy sitting on the floor looking up at a television screen with a controller in his hands. This image reflects the stereotypes that games disempower the player and that they are primarily played by young males. However, this stereotypical image helps identify the importance of the physical space to the gameplay experience. Where is the player? Where is the screen? What does the player use to interact with the digital environment? If the physical environment is comfortable, places the player in an even position with the screen but not too far from it, and the player's physical

actions reinforce their movement in the game, then the physical play space can heighten the immersive experience into the digital environment.

Careful arrangement of the digital space is also important. The player needs to be able to understand the digital environment, recognize game and digital world objects, and be able to successfully navigate the digital space. The spectator's movement and perspective is usually confined to an avatar. However, games like *SimCity* (1989) allow the player to move through the world in an isometric almost godlike view while games like *Bejeweled* (2004) present the whole digital space in one screen and thus do not need or allow movement through it. The viewing space is the screen, which is a natural boundary for the game but the game should also maintain a balance between digital world and game components (Manovich, 2001) and make them easily discernable from one another. In other words, what parts are diegetic and what is nondiegetic. Navigation in game space can be enhanced with clear directions such as streets and doors which are clear markers for spatial movement.

Summary

In sum, the spatial means of immersion are established through the rhetorical concept of presence and enhanced by arrangement. The goal is to encourage a feeling of visitation and it is important for players to recognize the boundaries of the physical play space and digital game space. Player movement is shaped by the spatial arrangement and immersive games invite but constrain that movement. Such constraints are comforting because they reinforce the sensation of visitation. Presence is established through repetition, provocative details, and figurative use of style. Careful arrangement of the spectator, viewing space, and

objects encourages presence by reinforcing spatial boundaries and movement through that space. The next means of temporal reflects the temporary nature of the visitation.

The Temporal Means of Immersion

Description

Immersion is not only associated with spatial distortion but also temporal (Murray, 1997). Immersion can make a person lose track of how long they have spent engaged in an activity. The news media is rife with stories like Lee from South Korea who played the video game *Starcraft* (1998) for over 50 hours straight before dying of exhaustion (BBC News, 2005). Such sensational stories are often accompanied with media pundits abhorring the addictiveness of games. Video games, unlike a lot of entertainment media, offer the potential for extremely long gameplay. For example, players must spend a minimum of 40 hours to get through the main story of *Elder Scrolls IV: Oblivion* (2006) (Kasavin, 2006). Online games like *World of Warcraft* (2004) offer so many possibilities for play that a player could theoretically spend an infinite amount of time in the game and not experience everything. Video games are played in and through time and the game can use time to create the sensation of immersion.

In order to understand the temporal means of immersion, it is important to distinguish three different meanings of time. There is clock time, subjective time, and the absence of time. Immersion occurs when the player enters a state of subjective time. We can understand this movement through the rhetorical concept of *kairos*. A game can cultivate *kairos* through the careful use of time in the video game. An immersive game makes time an important

game mechanic so that there is a right time for player action. This section begins by highlighting the temporal qualities of games. It then makes the argument that *kairos* can help us understand how time induces immersion and concludes with a description of techniques used in the temporal means of immersion.

Theory

Games are temporal structures by nature because they involve play. Huizinga (1950) described play as operating in its own space and time. Certainly, it is easy to understand how play establishes space and defines insiders and outsiders but what does he mean by time? Isn't time absolute, defined as specific intervals between moments, established by the movement of the sun, and calculated by clocks? This form of time is what the ancient Greeks called *chronos* and we can interpret it effectively as clock time. What Huizinga meant is that play involves a unique application of *chronos* to describe movement in the activity.

Jesper Juul (2004) identifies several ways that video games can employ time based on the relationship between play and the game state. *Play time*, according to Juul, is time actually spent in action. The game state moves through *event time*, in which things in the game change. Juul uses time to describe action. The action is measured in *chronos*. Pausing the game, saving the game, and loading screens disrupts both play time and the game state because neither change. It creates a form of time that follows the concept *stasis*, which is a point of inaction. In ancient Greek and rhetoric, *stasis* referred to a point of disagreement in debate but the more recent interpretation of inactivity is more appropriate here. *Stasis* in video games is exemplified in *paused time*, which results when the event and play time stop.

This form of time reflects the influence of film technologies on games. A player may pause the game usually through a pause button much like pausing a movie on a video tape player. In paused time the player can walk away from a game and come back at a later time.

A third application of chronos in video games is the idea of *cyclical time* in which actions are repeated in a very simple pattern (Wolf, 1997). Cyclical time reveals the computer controlled elements of the game. In *Frogger* (1981) the cars move back and forth across a highway endlessly as they never reach any destination. The game objects loop the event time. In addition, players in games are often encouraged to repeat events. If the player loses the game, the player must start the game over or they are taken back to a convenient point in time "saved" by the computer. The video game *Prince of Persia: Sands of Time* (2003) offers a very unique example of this time mechanic. If the player makes a mistake in the game, they can push a button and effectively reverse time much like rewinding a video tape in order to try an action again.

Time can also be used as part of the game structure. Players may be asked to race against time. Video games like *Super Mario Bros.* (1984) have a time requirement. Players must perform actions while a clock counts down. If the timer reaches zero and the player has not accomplished the specified task, the player loses. Players may also be asked to wait a certain amount of time. In the video game *Dungeon Keeper* (1997) certain levels are only available on certain days such as during a full moon or on the lead designer's birthday. *World of Warcraft* (2004) employs a feature called dailies which are short quests that players can do only once a day.

When play and event time act in tandem like in the video game *Quake III* (1999), the game is said to play in *real time* (Juul, 2004). Cut scenes disrupt play time while event time continues. In addition, time in a game may pass without player involvement. MMORPGs like *Freerealms* (2009) are called *persistent games* because the game worlds are always running. Even if one player leaves, others are still playing the game. Events occur within the game with or without any one players' involvement.

Play time, event time, paused time, cyclical time, and real time are all different reiterations of chronos. However, immersion results from the subjective form of time. Jesper Juul (2004) equates this subjective time to Csíkszentmihályi's flow. The game is fun and enjoyable and thus creates a perceptual distortion of time that typically does not match clock time. The ancient Greeks had a term for this form of time as well. They called it *kairos*, which is a subjective point in time often referred to as the right time or the opportune moment (Smith, 1986). Kairos is an often-overlooked but crucial term in rhetoric and I would argue that it is essential to understand the temporal means of immersion. When a game cultivates kairos, the player becomes immersed.

Most of the traditional work on kairos from Aristotle applied it to the subject of public discourse. It is often used to describe a moment ideal for persuasion, doing something correctly at the right time, or when conditions have paved the way for persuasive action (Kinneavy & Eskin, 1994). Kairos is often applied to social issues and as a means for determining where they intersect and collide (Carter, 1988). However, it has broader uses. "As the principle of timing or opportunity in rhetoric, kairos calls attention to the nature of

discourse as event rather than object; it shows us how discourse is related to a historical moment; it alerts us to the constantly changing quality of appropriateness" (Miller, 1992).

Kairos is an intersection of time and action.

This application of kairos will take a slightly different approach by examining how games employ time and action in order to cultivate a feeling of subjective time. Unlike Juul (2004) who places emphasis on player agency and constant action as essential to immersion, I argue that kairos emerges through both event and play time because both involve moments of action. Stasis is the only point in which immersion does not occur.

Kairos refers to a point in time when an audience is most receptive to persuasion. Likewise, immersion can only occur when the player either seeks it or allows it. The form of immersion that occurs in games is voluntary and requires a willing participant. As such, a game that allows flexibility for when a player may pick up and play the game is more likely to encourage immersion. In addition, the player should be receptive to fun. If they are in a bad or foul mood or have something weighing on their mind, the player is less likely to have fun and also less receptive to video game immersion. The player needs to be in the mood to play and become immersed in the game. If these conditions are met, the game can use play, event, and cyclical time to encourage kairos.

Techniques

In many ways, games are a practice in kairos, particularly games that play in real time. The player's decisions and responses must occur at precisely the right moment in order for the player to successfully navigate the game world. For instance, the video game

Dragon's Lair (1983) follows an animated knight named Dirk the Daring as he tries to rescue a princess from a dragon. The game plays like a movie but every now and then something flashes and the player must press an appropriate button or Dirk dies in some horrible way. It is what we call a *twitch* game because the player must press buttons, or twitch, on command in order to play the game. Press the button too soon or too late and Dirk dies. The game's dynamic cultivates kairos because the player must wait for the right moment to decide which button to press and then act by pressing it.

Play time involves action but real time can evoke kairos when it makes the player anticipate action. Cut-scenes are often considered detrimental to player immersion because they signify moments where the player is not acting. However, this assumption fails to recognize the multimodality of the game structure. Cut-scenes are still moments of event time in which action in the game occurs even if this means a pause in play time. Cut-scenes can encourage kairos if they occur at the right moment, usually determined dramatically, either to establish information, provide the player with rest between moments of action, reward the player for successful action, or to create pacing in the game's narrative or play time.

Cyclical time may or may not enhance kairos depending on whether it refers to an event that may change depending on player action. The cars in *Frogger* (1981) are obstacles that the player must avoid. Their cyclical movement is irrelevant because it doesn't matter if they reach their destination. Rather, they create a dangerous, moving environment that invites player action. Such repetition of object behavior has been firmly established as one of the

qualities of the video game medium and is expected. It is therefore not detrimental to the player's immersive experience.

Time can disrupt immersion. Paused time is a temporal structure that creates the sensation of suspension. It is neither *kairos* nor *chronos*. Such inaction is the fastest way to end immersive experiences. The player is temporally removed from play. Persistent games also risk temporally alienating the player. A persistent time is a game with never-ending event time. Such games are likely to be immersive if the player has some way of quickly catching up on missed events. Otherwise the player will feel left out and may instead feel like they are in stasis while the game continues. It is still important in these games for the player to feel comfortable leaving and to know exactly when they are not playing the game. The temporal boundaries, like in space, are important to establish in order to maintain the game structure.

Video games are consumed much like books, films, and other entertainment media. They are picked up, played, and then put away. This historically situates the game meaning and some have more significance because of when they were released and how they fit into broader social, political, cultural, and technical events surrounding them. *Pong* (1972) was heavily constrained by technological limitations during its initial release. Today, it would need to take advantage of the technical developments of color, sound, and storage space to attract new players. However, at the time, *Pong* (1972) represented a significant technical development. Some games have limited lifespans. The video game *Nuclear War* (1989) featured a bevy of characters that parodied then well-known public figures such as Ronnie

Raygun for Ronald Reagan and Gorbachev for Mikhail Gorbachev. The cultural references are not nearly as recognizable today nor is their importance in nuclear warfar. In essence, some games like chess are timeless while others are very much the products of a specific era. This temporal quality of video games connects this mean to the memory means of immersion.

Summary

In conclusion, kairos is a helpful tool to analyze the temporal means of immersion. Video games can cultivate kairos through careful control of play, event, and cyclical time. The subjective feeling of time establishes the play space and reinforces the sense of immersion felt by the player. The act of stasis, when event and play time ceases is the quickest way to disrupt the immersive experience. In essence, the game stops. Space and time are ways of establishing the game boundaries and distinguishing who is playing the game. The next section examines how social interactions within game can encourage the immersion experience.

The Social Means of Immersion

Description

Games are inherently social activities. Within a game, people assume identities and roles, perform behavior, and establish relationships. These social interactions may or may not extend outside of the game space, but they are an important part of the gameplay experience. The social quality of games offers another means by which a game can immerse

a player by inviting them not only into a relationship with the game but also with other players. We can understand how this occurs through the process of *identification*, a rhetorical concept introduced by Kenneth Burke (1968).

This section outlines a brief history of the ways that video games have been used for social communication. In particular, it will highlight the social motivations that drive players together in order to explicate how those desires encourage immersive game experiences. By determining what players want from each other and from the game as a medium for social interaction, we can construct a theoretical argument for the social means of immersion. Kenneth Burke's theory of identification helps us to understand this player desire and how a game can cultivate it. The section concludes with a brief description of the social means of immersion in both multiplayer and single player games. These social means are identity performance, social responsibility, community construction, and power relations. The avatar is the primary mode through which these means are achieved. It is important, however, to distinguish social gameplay from online social networking.

Digital social gaming has an interesting history. Many online games today can trace their roots from the role playing games of *Dungeons & Dragons* (1972) to the development of MUDs, multi-user-dungeons and MOOs, mud-object oriented (Dibbell, 1999). These text-based programs allowed players to engage in imaginative role-playing games using an early form of the Internet to connect to each other and play. MUDs and MOOs were text-based games. Early graphical games were single-player and it wasn't until LucasFilm's *Habitat* (1986) that console and graphics games began to offer social capabilities. From here, social

gaming branched into two directions. On one hand were the people who merely enjoyed communicating with each via the computer. They moved towards social networking sites like *Second Life* (2003). On the other side were the gamers, who moved onto mmorpgs, massively multiplayer online role-playing games. The type of community established in these early role-playing games set forth many of the cultural conventions that would later appear in these massive online games (King and Borland, 2003). These players not only desire social relationships but they want to situate these relationships within the context of playing a game.

Some of the most popular videogames on the market are mmorpgs that allow people from all over the globe to play together in the same digital game. Currently the largest, *World of Warcraft* (2004) has an estimated 11.5 million subscribers (Blizzard, 2009). Players of these games spend an average of 22 hours per week playing these games (Yee, 2006), which is almost a part-time job. Online play has become an important development in all game consoles and especially the mobile systems like the Nintendo Dsi (2008) and the Playstation Portable (2003). These video games allow players to compete, cooperate, form friendships, construct identities, and build relationships.

Multi-user games are not the only site for social interactivity. Even standalone games have social qualities. In television, the human need for reciprocity and social interaction encourages the viewer to develop a relationship with the actors on the screen (Morse, 1998). This is even more apparent with computer because we communicate and it listens and responds. Players will establish rapport and perceive a social relationship with the computer

controlled characters in a video game particularly if those characters follow human behavior and communication conventions.

Theory

This social component of video games is seen as an important factor for immersion as can be seen in both the presence and incorporation models. The extreme popularity and sheer amount of time spent in mmorpgs supports this position. However, there isn't a clear description in the literature as to why or how social interactions encourage video game immersion. I argue that a video game can immerse if it enables players to develop social relationships. The social pleasure that emerges from these relationships and the effort it takes to create, sustain, and maintain them encourages the player to feel immersed through a sense of belonging to a community. This community is situated in and through the game world thus encouraging a deeper relationship between the player and the game. It encourages the player to emotional invest in the game and the people in it.

The process by which a player becomes socially immersed in a game can be understood through the rhetorical concept of identification (Burke, 1968). "Identification is the process of symbolically joining with other human beings at the level of social rules, roles, and strategies" (Ambrester & Strauss; p. 30). It is motivated by the desire for social acceptance. Games can evoke immersion through social means when the player establishes a sense of identification with either the characters in the game or with other players. It is the desire for a sense of belonging or working towards belonging. This is established through a perceived sharing of experiences, concepts and ideas, language, and shared goals. Immersion

results by satisfying these social needs and creating a sense of investment within a game community.

Techniques

The social means to establish identification are numerous but this study will highlight four: identity performance, community construction, social responsibility, and power relations. *Identity performance* is the act of constructing a digital representation of the self and the social performance of that identity to others usually through some sort of role. In games, players may take on both *social* and *game roles*. These are often intertwined and both invite identity performance. *Game roles* are positions with defined tasks and responsibilities that function towards the accomplishment of game goals. *Social roles* are positions that serve community-oriented goals such as conflict management and leadership. Both of these roles can give a player social purpose and value, which can encourage a feeling of being needed by the community.

Identity performance in games allows for players to experiment with who they want or wish they could be. Sometimes players will express identities similar to their out of game persona, and sometimes the anonymity and lack of physical presence encourages the player to engage in what Sherry Turkle (1995) called *identity play*. In this case the player creates a wholly new persona in order to explore aspects of their personality that they can't or won't express out of the game. Through identity performance players can seek out individuals with similar likes, beliefs, and desires and heighten the sense of belonging to a community of like-minded peers.

Once a player finds a group with whom to play, the next social means of immersion is *community construction*, which is the process by which individuals join together to establish a social network of relations. This adds a new dimension to the communication structure of gameplay because it allows players to play with one another, with and through the computer (Taylor, 2006). Within many games there are numerous group associations. In *Ragnarok Online* (2001) players may join together in parties, small groups that convene for limited time to accomplish specific tasks or longer-lasting groups called guilds. These players are also grouped by server worlds, alliances of guilds, gender, and classes. In addition to in-game groups, video games have spawned a number of meta-communities outside of the game environment. These communities may revolve around specific games or even video games in general and provide a place for fans of the medium to convene and communicate. The effort of joining these different group associations, establishing roles, and maintaining relations all serve the end-goal of identification.

As spaces of play, video games are governed by a different set of social rules and behavior (Huizinga, 1950). However, group play encourages a form of *social responsibility* that reflects the cultural desire to maintain relationships. Not only does this push players to adopt cultural and communication norms but it also creates a sense of obligation. Players of games like *World of Warcraft* (2004) will schedule their time to participate in game events even weeks ahead of time. Older players may feel it important to offer guidance and support to new players or they may feel it important to protect their community by hazing interlopers.

Players may become involved in social meta-communities that require specific behavior, like posting daily or supporting the group.

This social work leads to the establishment of power relations. The type of language one employs distinguishes experienced players and members of the group from newcomers (Nielsen et. all, 2008). The term *noob* is often a derogatory term for someone who has not yet learned the social rules and nuances of play. In addition, players will establish hierarchies of relations based on gameplay skill, communication skill, and experience. These social relations are complex but form the overall social environment that allows player immersion. The struggle of noobs to learn social norms and become a valuable member of a community results from this desire for identification. Players who are indoctrinated members of the community maintain identification by regular involvement and fulfilling social obligations. Games that enable these acts encourage strong social immersion.

However, the social means of immersion are not exclusive to multi-player games. The establishment of roles, identity, power, and community are facilitated through the communication channels made available through the game. The value of the communication is not how well it mimics face-to-face communication but how it enables identification through imagery and purpose. Much of this work occurs through an avatar. Identification increases when the avatars enable social presence and personality. In single-player games with pre-constructed avatars, immersion depends on the player's ability to identify with their avatar and then use that avatar to establish relations with the other characters in the game.

Games that allow players to create their own avatars have an advantage here. Players are more likely to establish identification when they can individualize their persona and invest time in its creation. Although identity play can and does occur, slippages of what we would call authentic identity emerge as the player establishes social relations (Turkle, 1995). The ability to manipulate the avatar image is also important. Avatars with hyper-idealized body forms don't really matter too much but players seeking to construct social interaction will seek social structures to which they are familiar. This includes the ability to choose male or female bodies and to use the avatar image to represent roles and status.

Game mechanics that encourage a sense of community through shared interests and purpose cultivate immersion by drawing players closer together. This is strengthened by the communication channels that allow players to interact, share, plan, strategize, complain, and establish rapport. The communication format of texting or voice doesn't really matter unless it heightens this sense of identification for the player. It helps when the player learns the slang and cultural nuances of the community allowing the player to feel socially involved.

It should be noted that not all players are attracted to social gameplay for the purpose of identification. Richard Bartle (2006) and Nick Yee (2006b) both determined that the appeal of games for some players are their competitive aspects. These players, sometimes called *griefers*, like conflict with others and even take pleasure in causing others pain. For these players, it is not identification that provides an immersive and enjoyable experience but rather power over others. These players instead draw immersion from the means in which they can establish dominance over other players. Of course, this might be an immature

rebellious desire for power, which may discourage immersion and player involvement with it conflicts with community development and leads to alienation.

Summary

In sum, the social means of immersion are those qualities of the game that allow for social interaction and community involvement. When a player feels socially close to other players or characters within the game, the player will feel more immersed. We can understand this process through the rhetorical concept of identification, which is what drives the social desires of the player. Games can accomplish this through communication channels that allow identify construction and performance, roles, power, and community formation. The type of social interaction within games is heavily influenced by the interface and how it directs the communication channels. The next section identifies those aspects of the interface that invite immersive experiences.

The Interface Means of Immersion

Description

Video games are digital technologies that require two-way communication. Lev Manovich (2001) defines the interface as those technical mechanics that determine how a person accesses a media. This includes the screen and the controller but I add the avatar to this equation. The interface defines how a player interacts with a game system, communicates with other players, experiences the game narrative, and navigates the game space. It facilitates communication between the player and the computer and subsumes the

qualities of presentation and interaction. Similar to the social means of immersion, the rhetorical goal through the interface is to establish a relationship between the player and the game. However, instead of working towards identification, an immersive interface is both opaque and enables effective communication.

This section begins with a brief description of how the interface has been understood in immersion literature particularly under the logic of physical immersion. A great deal has been written about how the interface negatively affects immersion by drawing attention to the mediated aspect of the content. This has led to the desire to make the interface invisible. However, the game dimension of video games allows us to accept not an invisible but an opaque interface as useful for immersion (Manovich, 2001). The interface induces immersion through effective communication. We can understand how an interface achieves these goals of opacity and effective communication through stylistic patterns.

Theory

So how does the interface immerse? The interface serves the primary function of human-computer communication. The three parts of the interface are the physical screen, the controller, and the digital avatar. If the player becomes immersed solely in the content, then the interface becomes a liability. In literature, it is sometimes thought that people must look through the words on the page in order to locate the meaning of the text (Lanham, 1983). Under this argument, the interface must become invisible in order for the audience to concentrate on the message. Drawing attention to the interface reveals the mediated component of the text and thus makes it impossible to become immersed in the content

(Ryan, 1994). This is the primary approach to interfaces driving much of virtual reality development (Hillis, 1999) and new media theory (Bolter & Grusin, 1999).

However, even in literature, the interface does not need be separated from content or made invisible in order for an audience to appreciate and enjoy its message (Leff & Sachs, 1990). This is particularly true of video games because a visible interface helps the player recognize the game structure and separate it from non-game content. A truly invisible interface risks destroying the game structure by making it unclear to the player what actions and mechanics are part of the game and what are not. Instead, a video game should strive for what Lev Manovich (2001) called an *opaque interface*, which is an interface that is visible but doesn't interfere with the player's interaction with the digital world of the game. The goal is for the player to effectively navigate the game world and recognize the game structure behind it.

Effective communication brings the player closer to the game content and creates an environment conducive for immersion. In order to do this, video game interfaces must construct a bridge for the player between the physical play space and the digital space. The interface needs to also be concerned with *response time*, how long it takes for the player to make a request and the computer's ability to respond to that request. If the interfaces interfere with the player's communication with the computer then it can have a negative impact on both the player's understanding of the game and their sense of immersion. When Microsoft announced its release of a motion sensitive camera for the X-Box 360 called Project Natal,

the slow response time of the camera was a major setback to quality according to media reviewers (Newman, 2010).

As such, an interface must be carefully constructed in order to be both opaque and enable effective communication. The rhetorical concept of style allows us to analyze an interface's capability to achieve these two goals. Aristotle (1991) referred to style as those elements like vivacity that brings things before the eyes. Thus style has long been associated with the presentation and eventual interpretation of messages. I argue that the rhetorical canon of style determines the quality and clarity of the interaction.

However, there is no easy way to codify style (Jasininski, 2001). Older models of style focus primarily on speech acts and their relation to political discourse (Kennedy, 1980). Since video games communicate through visuals as well as spoken and written language, a more inclusive stylistic analysis is required. As such, I propose a three part schema here based loosely on the levels of structure proposed by Martha Cooper (1989) in her study of public discourse. Cooper identified three stylistic levels of language called *large-scale*, *intermediate scale*, and *small-scale* structures. She based her stylistic levels on linguistic patterns and established them by their proliferation. *Large scale* involves identifying characteristics shared between texts. *Intermediate-scale* examines a single text for grouped patterns. *Small-scale* looks at tropes and figures of speech for specific instances of style used to convey information and establish vividness.

I apply these three levels to visual and audio patterns and differentiate them by consistency both internally in a specific game and externally between games. The highest

level, or large-scale pattern, will refer here to the physical appearance and the material tools used in the interaction. This level involves those presentation aspects of the interface that are common between games. The next level, or intermediate scale pattern, are the types of movement and actions used to communicate. Many games use the same communication structures for player actions. The small-scale pattern includes object representation and behavior. This refers to the presentation within the digital environment. These three levels of style explicate the immersive potential of screens, controllers, and avatars.

Techniques

The screen is the primary means of visual and audio communication for a video game. Although there are really only a few types of screens in terms of their internal technology as discussed in chapter 2, screens vary considerably in their size, portability, weight, intensity, color, and resolution. These are the large-scale patterns that shape the overall experience of the video game. They are often outside of the control of the video game developer because they depend on player equipment. Video games can be designed for use with specific types of screens and take advantage of certain technologies but they cannot always anticipate them.

The size of the screen has an impact on the player's ability to see the visual images and finer details of the game. The general rule of thumb is that larger is better but that is not always the case. Smaller screens often have the quality of portability such as the screens found on the Nintendo DSi (2008) or the Playstation-Portable-System or PSP (2004). These

screens are meant to be played close to the player's face so that the player can see them clearly and they can be played almost anywhere. However, size does matter.

Over the past twenty years, the sales for games on the computer have dwindled while sales for console games have increased tremendously (ESA, 2008). Most computer screens have much better resolution than television screens and many games are available for both the computer and console systems. Why then, do console games consistently outsell PC games? The difference is size. While the average computer is around 17 inches, the typical television screen is around 46 inches and climbing with some predicting that the average screen size will be around 60 inches by 2015 (Walker, 2008). Essentially, a large screen enables the player to see more of the game.

Weight and portability determine whether a player carries the game with them and where they situate the game. Heavy portable games will naturally move to the lap thus situating the tiny screen farther from the eyes but lightweight screens are more easily carried and held close. The goal again isn't to fill the eyes but rather to ensure that the player can comfortably see and understand the information presented to them. Likewise, color, intensity, and resolution all can impact the player's ability to discern the images. Simple images can be easily understood even with little color, low intensity, or low resolution. However, images with more photorealistic detail require numerous colors, high intensity, and high resolution to properly convey their meaning.

Large-scale patterns of screens also include sound such as background music and voices. Sound helps bring a mediated message to life by giving it ambiance and giving

information. Again, the general rule seems to be the bigger, or in this case louder, is better but really what matters more is if the sound effectively establishes the narrative setting of the game and evokes the appropriate feelings of the player to match the game's message.

Intermediate scale patterns of the screen refer action in the various digital game spaces. While the spatial means of immersion focused on constructions of space in the digital realm and how they created borders and movement, this mean looks at patterns of action. What can the player do within the digital world?

Low-scale patterns refer to object representation and behavior within digital spaces. This also includes sound effects that, while not overtly important, are used to establish the meaning of the digital objects. The important quality is whether or not player can identify those objects and know how to use them. Recognizing that a square is actually a door and that a circle is an apple in the game world is just as immersive as seeing a photorealistic door and apple.

Likewise, object behavior does not have to match real-world referents (Cheng & Cairns, 2005) but must follow understandable and predictable patterns. A common example of object behavior unique to video games is the use of food. Many games employ some form of health meter or hitpoints for avatars that gradually diminish upon taking damage. Food is sometimes used to heal this damage. This works for a video game structure but the idea of chicken noodle soup curing a gun-shot wound is really a ridiculous notion. Players are very forgiving of these deviations from real world behavior provided they follow a consistent pattern in the game structure.

The controller is the mouth and body of the player. It is the player's main method of communication. Interestingly, there are lots of controllers on the market and certain trends characterize them. The large-scale patterns of controllers involves their shape, whether they are wired or not, size, and the number and type of buttons. The traditional shape of controllers for consoles follows the design established by the Nintendo Entertainment System (1984), which resembled a small grey rectangle. Current controllers follow more recent ergonomical design models using curved shapes that allow them to fit them more snugly in the player's hands. They are typically small and have anywhere from eleven buttons on the Nintendo Wii (2006) to 17 on the Playstation III (2006).

Games for the computer typically employ a mouse and keyboard. The keyboard with its numerous keys is well-suited for typing. Players are comfortable with these control formats because they have built on the same basic models for years. As such, the immersive quality of the controller is enhanced by drawing on player expectations and comfort as to how best to hold and use these devices.

The large-scale pattern of controllers is primarily concerned with how and where the player communicates. Many controllers use the hands and fingers while others like the DDR Dancepad use the player's feet. This may even involve the mouth. The Nintendo DS game *Legend of Zelda: Phantom Hourglass* (2007) requires players to periodically scream at the machine in order to accomplish specific game tasks. However, the controller more often than not transfers the primary method of communication to the body. This may require some

effort on new players to learn the controls and their immersive value increases the more the player understands them

The intermediate scale patterns of the controllers involve the physical actions the player makes to communicate through the controller. Pressing buttons is a common action but this may also include the use of joysticks, trackballs, touch screens, or even physical motion. Keeping these actions simple helps encourage their opacity by directing the player's motions so that they can concentrate more on what to do rather than how to do it (Calleja, 2007). The player's overall comfort in using these tools and how well they enable the player to communicate desired messages matters more than how much the controller can do.

Low-scale patterns of the controller are specific to each individual game and refer to the types of actions that the player can perform when they communicate through the controller. Most video games of the same genre employ similar controls in terms of what buttons attack, jump, move, or perform some action like talking or climbing a ladder. This helps the player quickly adapt to the game environment and interact with it. The more readily the player can pick up the controls, the more likely they are to become immersed in the game. Learning to use the game only impedes immersion if the player becomes frustrated with the interaction because they cannot figure out how to communicate affectively.

The avatar is the last mode of the interface. In the social means, the avatar is a form of identity expression but here, the avatar serves as the intermediary between the computer and the player. This goes back to the older meaning of the avatar as an extension of a godlike

being that travels to a different plane of existence. Here again we see similarities between different games and how they use the avatar to establish player location and game interaction. Typically, within any one game, a player uses the same avatar throughout the game.

The large-scale patterns of the avatar include to its overall appearance. Most games employ avatars that have humanoid or animalistic in shape. Hyper-sexualized avatars still have arms and legs even if their torsos and breasts are anatomically impossible. Kratos and Laura Croft are recognizably humanoid. This shape constrains the avatar into a form of motion and action that can be easily understood by the player. We use hands to pick things up or shoot guns and legs for jumping. Games that break this dynamic risk confusing the player and diminishing the avatar's immersive potential.

The numbers of avatars does not necessarily impede their immersive value. Many games use single avatars some allow players to control a small group or even entire armies. However, effective communication requires the simplification of these groups into one avatar so that the player can more readily understand how to communicate through them. In *Secret of Mana* (1993) the player has three avatars but can only control one at a time. The others run on an artificial intelligence. In *Heroes of Might and Magic* (1995) the player controls vast armies of magical beasts but they follow the direction of singular hero leaders. This reduction of avatars to single entities enables the player to more quickly recognize the avatars as embodied representations and heightens their immersive value.

The visibility of the avatar to the player encourages opacity. Although the incorporation model highlights first-person perspective as the best means for establishing a player's sense of embodiment with an avatar, such a perspective actually reduces the opacity of the interface and can disassociate the player with the avatar. This is not to say that first-person perspective is non-immersive but it requires the use of a good display system to make up for the fact that the avatar is invisible.

Intermediate scale patterns of avatars involve the movement of the avatar within a digital environment. Avatars are the primary means by which the player navigates the game world. It restricts vision, situates the player in a location, and defines where and how the player moves through the digital space. Players understand the limitations of their avatar as an embodied representation (Taylor, 2006) and this extends to how the avatar moves. The movement through the game space can be mundane or fantastic. In *Flyff* (2005) avatars may walk or fly. In *Shadow of the Colossus* (2005) the avatar can ride a horse. In *World of Warcraft* (2004) players can walk, fly, or teleport. Such movement conventions are readily recognizable, even teleportation, which has its cultural reference from *Star Trek*.

Low-scale patterns of avatars refer to individual actions the avatar can do whether it is breathing fire like in *Spyro the Dragon* (1998) or destroying buildings like in *Rampage* (1986). The immersive nature of these actions depends on how they help or hinder the player in accomplishing in-game tasks, overcoming obstacles, interacting with the environment, and overall communicating their desires. The ability of the avatar to do anything or everything is not necessary for immersion as some (Herz, 1997) have claimed. Limiting avatar actions to a

simple number of possible responses helps reinforce the opacity of the interface. However, it is important for immersion that the player can use these actions to communicate their desired intentions.

Summary

To review, the interface is the primary means of communication for the player through and to the computer. The computer communicates through the screen. The player communicates through the controller. The avatar represents an intermediary between the player and the game world. The interface needs to be opaque so that the player can recognize the interaction as following a game structure but at the same time be able to observe and interact effectively in that environment. Immersion results from clear and effective communication established through stylistic patterns recognizable to the audience (Douglas & Hargadon, 2004). These patterns can be categorized as large-scale, intermediate scale, and small-scale which describe appearance, movement, and action respectively. Players feel immersed when they can recognize and effectively employ these devices to communicate with the computer and with other players and how these patterns reinforce the opaque nature of the interface.

The interface means of immersion rely on patterns of action that can be learned and applied to almost any game. The controls for most games build on player's memories of similar gameplay experiences. The next section explores this element of memory in gameplay as another means for encouraging immersion. Sometimes people become immersed not just in a game but a memory of playing that game.

The Memory Means of Immersion

Description

The five means discussed thus far bare remarkable similarities to parts of existing models of immersion. The incorporation model includes a narrative and spatial frame. The interface and social communication are important aspects of the presence model. Temporality plays a role in the immersive gameplay schema of Ermi and Mäyrä (2007). However, a distinctly rhetorical mean of immersion is the way that video games construct and evoke memory. As one of the five canons of rhetoric, memory is often applied to memorization of speeches but it has been used to study photographs (Finnegan, 2004), documentaries (Marc, 1993), and monuments (Gallagher & Laware, 2008). It has never been applied to the study of video games but there is clear potential for it. Sometimes a person is not so much immersed in a game but rather in the memories evoked by the game. In the hectic desire to constantly create the next big spectacle, the power of memory is often overlooked.

This section begins by examining the role of memory in video games and how it relates to the experience of immersion. Video games employ personal, public, and cultural memories that inform a player's experience of a game and can have a profound impact on the game's immersive potential. We can identify how these three forms of memory rhetorically evoke immersion through Aristotle's laws of association (2007). Each memory is examined under the four laws to establish the means by which memory can evoke immersion.

Theory

Memory is everywhere in games. As temporal texts, video games are experienced through time allowing individuals to form memories of those interactions. As mass-produced texts, video games are remembered and performed in the public forum. As cultural objects, video games create and draw upon existing cultural knowledge and other cultural texts. In essence, video games are a product of memory. They create experiences that both draw upon existing memories and create new ones. And the games remember us through save disks and files. In this manner, the game creates a history with the player that recognized by both.

Memory is also an important part of the gameplay mechanic in many video games. Success in a game often requires the player to remember where to go, what to do, and to learn from past mistakes. The board game *Memory* (1959) expects players to remember the location of specific cards in order to win. Memory serves an important part of the gameplay experience.

How then does memory relate to immersion? According to Douglas Yellowlees and Andrew Hargadon (2004), immersion in video games results from scripted interactions. In other words, when a game provides a scenario that the player recognizes and can relate to, the game encourages immersion through that interaction. Of course, this relies on schema theory but Yellowlees and Hargadon make some compelling arguments about how players are better able to become immersed when they are in familiar territory. This whole argument relies on memory. Players have a repertoire of situations that they have experienced and remember. When a game presents a situation that a person recognizes they are less likely to focus on their performance and are more likely to act. In other words, they focus less on

themselves and more on the text. This is the primary goal of incorporation (Calleja, 2007) but this application of memory only explains part of the equation.

Another way of thinking how memory impacts immersion is to really think about the act of memory itself. What is memory but the conjuring of images and thoughts to the mind's eye (Allen, 1993)? It serves the same basic function as immersion in that it transports us across space and time. This is not to say that the two concepts are the same. Memory serves a number of other functions including the formation of history, the act of forgetting, the internalization of speeches, and a recollection of events for persuasive action (Jasisinki, 2001). It is this last feature of memory that is the most relevant to immersion. How does a video game evoke recollection to persuade the player into an immersive experience?

Within rhetoric, memory is defined as the techniques used facilitate retention and recall, the act of making something stand out, a database of knowledge, or a psychology of consciousness formed through temporal experience (Reynolds, 1993). All of these definitions point to a very specific purpose of memory, mainly to organize and make sense of the past and then to use that knowledge to act in the present and future. It is the utilization of ideas, concepts, images, and experiences in order to establish associations in the construction of meaning. I argue that memory induces immersion by drawing the player into a deep relationship with a video game text by building on the thoughts, emotions and feelings of past experiences.

The memory means of immersion include *personal*, *public*, and *cultural memory*.

Personal memory consists of the experiences of an individual. In video games, personal memory includes a player's experiences with a particular game and with similar games.

Public memory is "a shared sense of the past, fashioned from the symbolic resources of a community and subject to its particular history, hierarchies, and aspirations" (Brown, 1995; p. 248). Public memory is the public perception of a game, the people who play it, and the how to categorize games into specific genre structures. *Cultural memory* is also shared but it reflects a particular worldview, values, and beliefs of a specific culture (Morris, 1997).

Cultural memory builds on the cultural conventions of behavior and knowledge unique to the video game community. This can be reinforced in blogs and through gaming websites. An example of this is the story of Eric and the Gazebo, which has appeared in numerous versions across a number of places. It is a humorous tale of a *Dungeons and Dragons* (1972) game in which game mechanics and world knowledge become confused and a player attacks a gazebo thinking it is a monster. The parody game *Munchkin* (2000) draws on cultural knowledge of this tale with a card called the Gazebo, which is a monster in the game.

Techniques

In order to explicate how personal, public, and cultural memory induces immersion we can use four principles of memory outlined by Aristotle (2007) that are sometimes called the laws of association (Allen, 1993; Boeree, 2000). These four principles are *contiguity*, *frequency*, *similarity*, and *contrast*. The law of *contiguity* argues that events that occur close to each other temporally are more readily associated together. When objects appear in close succession to one another, seeing one will cause us to recall the other. The law of *frequency*

suggests that repetition reinforces association. The more we are exposed to something, the more likely we are to remember it. The law of *similarity* claims that association is easier with objects or events that are similar to one another. Thinking of one object will cause us to remember a similar one. The law of *contrast* is the reverse of this idea. Thinking of one object may cause us to remember something completely opposite it.

We can use the laws of association to explain how a text builds and reinforces memory. A video game can use these techniques to build a deeper relationship with a player as well as to construct familiar situations that encourage the player to become immersed in their actions. The memory means of immersion are those aspects of the video game that use personal, public, and cultural memory to make the gameplay more emotionally meaningful to the player.

Let us begin by examining personal memory. People play games and form memories of those experiences. According to contiguity, if a person has fun, becomes immersed, finds success, or has pleasant social interactions while playing a game, they will associate those feelings with the game. Design scholar Donald Norman (2004) writes that these positive associations are an important part of reflexive design and explain why we tend to like or dislike objects. These experiences are given form through emergent narratives (Jenkins, 2006), and they may have a profound influence on a person's attitude towards a specific game. Negative personal memories such as frustration or conflict with a friend while playing the game may discourage immersion while positive ones may encourage it.

Consistent good or bad personal experiences reinforce a game's immersive value through frequency. Since video games can be played multiple times, frequency is a double-edged sword for immersion. For instance, if the deigned narrative never changes then the feelings of intrigue or suspense will lessen because repetition reveals a change in the experience. The player will become less immersed each time they play unless a significant amount of time has passed and the player has forgotten the narrative.

However, if the main component of the gameplay benefits from memory, frequency may reinforce the immersive value of personal memories. The repetitive nature of game structures enables players to advance their skills and to navigate the game space more successfully. Frequency of action can have a positive impact on immersion by giving the player a sense of accomplishment (Calleja, 2007).

Similarity and contrast are two sides of the same coin. Here is where games relate to genres and prequels. Does the video game encourage the player to think of another game either in the same genre or from the same series and does the player have a positive association with that memory? Similarities and contrasts set up expectations on the part of players. These expectations shape how players approach new games and how they will interpret their experiences. Players who remember becoming immersed in a one particular game are more likely to expect a similar experience in sequels or games from the same genre. A bad past personal experience sets up negative expectations for immersion. However, if the new game experience is too different from the past then the player may resort to unfair

comparisons and will be less likely to become immersed in the game (Douglas & Hargadon, 2004).

The immersive value of video games is not only influenced by personal experience but also by how these games evoke shared memories. Public memory is political in nature and lives primarily as an expressive form (Brown, 1995). Public memory serves to construct specific memories of a game by directing a player's attention on what and how to remember about a specific game. More often than not, public memory is controlled by the game producers who use copyright law to control how video game content is used and presented. However, public memory of video games is an area of contested meaning. Video game players and the news media also contribute to society's overall memory of games and gameplay.

Contiguity in public memory is particularly problematic for immersion. There is a side of media that tries to associate video games with child violence and addiction. In 1999, two high-school students in Columbine massacred 13 people and injured 21 others. In 2007, a college student started a shooting spree on the Virginia Tech campus and killed 32 people. Within hours of both cases, people on talk shows, radio broadcasts, and other news outlets placed the blame of these terrible tragedies squarely on recently released violent video games (Palfrey & Gasser, 2008). Although it was later shown that these three killers were not avid gamers, such public discourse seeks to establish a direct connection between video games and violence as part of public memory. This form of contestation attempts to define the activity in a broad sense as to who should or does play, why, and what these games mean.

People who draw upon this violent causal understanding of video games are less likely to become immersed in games because they are more likely to associate it with fear and pain as opposed to pleasure and enjoyment.

Video game companies may use to frequency to associate specific characters with enjoyable experiences and company identity. Popular video game characters such as Mario for Nintendo, Pacman for Atari, and Solid Snake for Capcom, appear in very specific games but are used over and over again not only in subsequent games but also other media forms. Mario, for instance, has appeared in over 200 games and can be found in books, toys, an animated television series, and even a live action movie. These reappearances of Mario shape the public's memory of the original games and associate them with a brand image. Each new Mario game builds on the memory of its predecessor and promises to offer a similar experience. However, Mario games are only available on Nintendo console systems. Such use of frequency reinforces brand loyalty and establishes a positive memory of Nintendo games.

Similarity and contrast are used in public memory to designate games into different genres and establish a sense of nostalgia in players for older game experiences. Video games draw upon the techniques of the older visual media of film and literature, which is also categorized by genre. Each game relies on the memory of these other media and game experiences to categorize them. A genre is set of conventions and constraints on the production and interpretation of meaning (Frow, 2005). In other words, video games can be understood not only by their stylistic presentation of content but also how they are

recognized and used by the people who make and play them. This understanding of video game genre is consistent with recent attempts to define digital genres (Askehave & Nielsen, 2005) that recognize the connection between the medium and the content. It also recognizes the social quality of genre (Miller, 1994; Swales, 1990) and how people use them to categorize media texts.

Players come to a game with specific genre expectations. Every *Zelda* game features sword and sorcery, a kidnapped princess, and puzzles. When these expectations are met, the player is more encouraged to become immersed in the game because they recognize the game structure and its expected behavior (Douglas & Hargadon, 2004). In addition to genre, video game producers create sequels and remarket old games to create a sense of nostalgia. Nintendo recently released a revamped version of the original *Super Mario Bros. III* (1988) called *New Super Mario Bros. Wii* (2009) for their new console system. Such remakes are often given labels like "classic" or "retro" and serve to evoke a positive public memory. Sequels too can use similarity to encourage a positive sense of nostalgia and enhance the immersive value of a game.

Classic games and sequels can also draw on cultural memory to invite player immersion. Cultural memory reflects a particular world view and ethos of members of that culture (Morris, 1997). It should come as a little surprise that one of the most common enemies in video games are Nazis and that there are numerous games that build on the American perspective of World War II, and yet there are scant games that address the more embarrassing Vietnam War or Korean War. In terms of cultural memory, video games often

serve to reinforce those values and beliefs of the gaming culture. If a game accomplishes this, it is more likely to immerse the player.

It is important to first mention that video game player culture is not easily defined. A misleading stereotype assumes that video game players are all primarily young, male, single, sexually frustrated, and violence-prone. However, studies (Griffiths et. all, 2004; Yee, 2006b) suggests that video game players are a much more eclectic group of people. They are typically married, have steady jobs, and the number of female video game players is steadily growing. As a culture, it is more helpful to recognize them as members of popular culture (Nielson et. all, 2008).

A game can evoke cultural memory by referencing ideas or concepts found in pop culture. For example, the video game series *Sam and Max Save the World* (2006-2007) relies on numerous pop culture references to establish the comedy of the series and to appeal to its audience. In one episode, Max runs for President of the United States against the animated statue of Abraham Lincoln and against Ralph Nader. Such referencing serves as a premise for the game to make fun of the U.S. political process, its dualistic party system, and the public figure of Ralph Nader. Of course, the reliance of popular culture impacts the game's quality of kairos because pop culture changes so frequently.

Games can use contiguity to establish connection between them and other pop culture events. With each new blockbuster film that comes out, there is usually a video game version released at the same time. The frequency of Mario's appearance in other pop culture outlets from television to film reinforces our cultural memory of the character, his games, and

Nintendo. The similarity and contrast between pop culture icons is another way to reinforce memory of a game. In *Raymon's Raving Rabbids* (2006) there is a character that wears a blue and red costume that bears a remarkable similarity to Superman. Such a referent helps make that character and the game memorable as well as draw upon cultural memory to situate the game as a cultural expression.

Summary

In sum, memory is an often-ignored component of gameplay. In classic rhetoric, memory referred to the memorization of speeches and other oral genres. Instead of speeches, games may encourage the memorization of codes or complex button combinations. Immersion emerges through the activation of memory. Games that evoke positive personal, public, and cultural memories are likely to encourage immersion not just in the present experience but potentially a past experience as well. We can understand how a game does this through Aristotle's four laws of association.

Personal memory is more likely to evoke immersion when an individual makes a positive association between game experiences. The player gives these experiences meaning through narrative reflection in the form of emergent narratives. Public memory situates games into genres and encourages a sense of nostalgia for older game experiences. A player is more likely to expect an immersive experience in games of similar genres, which enhances the likelihood of an immersive experience. A game can draw upon popular culture in order to evoke cultural memory. A game that reinforces a player's cultural beliefs, values, and knowledge invites immersion.

Memory is not the only distinctly rhetorical mean of immersion in this model. Video games involve goals. Players are more likely to become immersed if they are invested in the game goals (Geertz, 1994). We can understand the process of how goals and conflict invite immersion through the rhetorical concept of exigence.

The Exigence Means of Immersion

Description

There is one last means of immersion that is unique to this model. Reflecting back to the meaning of video game technology established in chapter 2 we can readily see the prior six means. Play is an activity with unique *temporal* and *spatial* qualities. Video games are distinguished from electronic games by their *interface*. Gameplay is a *social* interaction. Some games use *narrative* conventions as well interactive ones. Games are cultural artifacts informed by individual and cultural *memory*.

However, there is one distinguishing characteristic of games that has not yet received much attention in the study of immersion and that is the quality of conflict. "A game is a system in which players engage in *artificial conflict defined by rules that result in a quantifiable outcome*" (Salen & Zimmerman, 2004; p. 80). It is here that we can identify one more rhetorical mean of immersion, which I will call *exigence*, building on Lloyd Bitzer's (1999) concept of exigence.

This section begins with a description of the type of artificial conflict that appears in video games and how this quality of games relates to immersive experiences. The conflict and the goals of a game can encourage player immersion if the outcome matters to the player.

Such investment increases what Clifford Geertz (1994) called deep play, which is a deep engagement with a game. We can understand the process by which a game's conflict and goals induces immersion through the rhetorical concept of exigence. This section concludes with a description of how a game creates exigence through social play, rewards/punishments, fairness, and difficulty.

Theory

Video games as with all games are defined by their unique form of conflict. A game present a task or series of tasks that players must accomplish or do in order to successfully play the game and achieve the quantifiable outcome. This conflict can come in a number of forms. Chess requires players to compete with one another in a strategic movement of pieces in order to control board space. Sudoku expects players to logically solve math problems. *New Super Mario Bros. Wii* (2009) encourages players to work together to navigate dangerous paths and fight monsters in order to save a kidnapped princess. *Dungeons and Dragons* (1972) offers multiple goals for players. Working towards the goal is the driving force behind most gameplay. As such, the perceived value of the goal and the challenge of the conflict have a profound impact on the immersive quality of a video game.

There isn't much literature that addresses the immersive value of conflict in games. However, we can see a connection here through the anthropological work of Clifford Geertz (1994). In observing Balinese Cockfights, Geertz described a state of being called deep play, which is very similar to immersion. Players enter a state of deep play when they are heavily invested in the outcome of a game. Deep play results from intense player interest. I would

argue that if a player deeply desires a specific outcome, he or she becomes more immersed in the game. As with deep play, the outcome, or goal, of the game becomes more important if the challenges or obstacles make the outcome unclear. Making the outcome important and challenging are thus two means to encourage immersion and the concept of exigence helps us to identify how a game can accomplish these goals.

Lloyd Bitzer defined *exigence* as "an imperfection marked by urgency; it is a defect, an obstacle waiting to be done, a thing which is other than it should be (p. 221). He uses exigence as one of the four characteristics of what he calls a rhetorical situation, which is a condition where rhetorical action is possible. Bitzer situates the term within the domain of public discourse to describe problems that can and should be solved through rhetorical speech. However, we can extend the term a little bit outside socio-political persuasion into the realm of video game discourse. The initial game state poses a problem, a challenge, a goal for the player and then places obstacles in front of that goal. In *Ghosts and Goblins* (1985), an evil demon has kidnapped princess Prin Prin and the good knight Sir Arthur, played by the character must rescue her. The player must race the clock and fight off hordes of monsters to change the game state, restore the princess to the knight and win the game. Is this not an exigence?

Bitzer offers three qualities that define a problem as an exigence. First of all it must be changeable. With few exceptions, the game system allows players to accomplish the tasks it sets before them. Second, the problem must be capable of positive modification. Conditions of success are determined by the quantifiable outcome. Third, and this is perhaps

the most contentious, the problem can only be modified through discourse. In other words, it requires communication. As discussed earlier, video games are a form of communication between the player and the computer system. Since video games fit these three criteria, we can use the term exigence to describe the goal and conflict within games. It will serve as the organizing principle that specifies the audience, the opportunities and constraints, and the desired change.

Techniques

I have saved this mean for last because it reverses the rhetorical roles. Instead of the symbolic material elements working an immersive experience in the player, the player takes on the role of the rhetor working within the game system to accomplish specific communicative goals. The immersion results from the relative strength or weakness of the exigence, defined by the players' overall interest and the perceived value of the outcome. Strong exigences encourage the player to immerse themselves into the action while weaker exigences are less likely to demand the kind of direct communicative involvement associated with immersion. Four factors impact the power of the exigence: social play, rewards/punishments, fairness, and difficulty.

Many games are multiplayer inviting several players to either compete or cooperate to accomplish the game goals. In these games, the overall value of the outcome is more likely to increase based on the player's desire to perform well in front others. Success or failure involves social currency such as honor, esteem, and identity. Single player games only involve interaction with a computer whose relative opinion of the player may or may not

evoke player concern. This can be offset by computer responses. In the games *Dance Dance Revolution* (1998) and *You Don't Know Jack* (1995), a pre-recorded narrator insults players after mistakes but praises them when they do well.

Such rewards or punishments are another way to increase player interest and the value of the outcome. Rewards like cut-scenes, high score recording, secret objects, more powerful weapons, or the achievement system in the XBox are ways to increase the strength of the exigence. Punishments such as having to redo actions, loss of equipment, or game penalties are also ways to establish the strength of the exigence but they must be used in moderation or else they may frustrate the player, who may perceive such punishments as unfair. The fairness of the interaction is an important part of this means of immersion.

Games follow rules both explicit and implicit. Violation of these rules is not only cheating but also unfair because players expect to operate on a level or even playing field. Video games can "cheat" by violating established game rules or by making the difficulty so hard that players feel incapable of success. Fairness by itself is important for the overall positive experience of gameplay but unfairness can weaken the value of the exigence and thus disrupt the immersive experience.

The last aspect of exigence discussed here is difficulty. An important part of the conflict in the games is the obstacles that stand in the way of the player's success. These problems may require varying levels of intellectual or physical skill to overcome. The value of the outcome increases with the difficulty of the obstacles. If the player breezes through the game without much effort then they are less likely to care about the exigence thus weakening

it. A game that poses a challenge and requires work is more likely to evoke player involvement. If the challenge is too difficult, the game may frustrate the player. Thus it is important for the game to balance hard and easy challenges in order to strengthen the exigence. It is particularly helpful if the game allows players to adjust the difficulty of the game to meet their individual skill level and ability. This also helps increase the likelihood of replay as it encourages the player to try the game over and over but with a higher level of difficulty each time the player manages to succeed.

Summary

In sum, a game's exigence can draw a player into an immersive experience through social play, rewards and punishments, a sense of fairness, and an appropriate level of difficulty. The exigence induces immersion by making the player interested in the desired outcome of the game. This mean switches the persuasive position of the player and game with the player attempting to influence the game to follow through on a desired change. The player's relative concern over the value of that outcome determines the immersive quality of the exigence.

Conclusions

The rhetorical model offers seven means by which a video game can create a sense of immersion in a player. These means are narrative, spatial, temporal, social, interface, memory, and exigence. Each mean draws on theories in game studies to justify why they are immersive and rhetorical theory to explain how. Table 4.3 outlines each mean and provides a

brief description of the techniques used by video game technology to immerse. The rhetorical model offers an effective tool to understand the experience of immersion in video games that recognizes both the multi-modal quality of the medium and its game structure. It is not specific to psychological, physical, or attention immersion but rather assumes that immersion is created through the activity of gameplay within the video game medium.

Table 4.3 Rhetorical Model of Immersion

Mean	Description	Techniques to Immerse
Narrative	Story and mode of discourse.	<ul style="list-style-type: none"> • Story arouses a particular emotion and fullfills it. • Discourse employs form
Spatial	Interplay of play, game, physical, and digital spaces.	<ul style="list-style-type: none"> • Game balances movement through arrangement of player, space, and objects. • Game evokes presence through repetition, evocative details, and style.
Temporal	When games are played and how time functions as a game mechanic.	<ul style="list-style-type: none"> • The game cultivates kairos. • Few loading screens or situations where play time and event time stop. • Real-time games. • Game requires player action at specific intervals determined through clock time.
Social	Communication between players and between the player and NPCs.	<ul style="list-style-type: none"> • Game allows players to take on roles and perform them. • Player understand social rules and behavior of game culture. • Game encourages identification both with other players and NPCs. • Game allows identity expression. • Game encourages a sense of community either internally or externally.

Table 4.3 Continued

Mean	Description	Techniques to Immerse
Interface	Communication between player and computer through screen, controller, and avatar.	<ul style="list-style-type: none"> • Screen is large enough to communicate information effectively and provides appropriate audio feedback. • Player understands how to navigate the digital environment. • Controls are familiar to player. • Avatar is humanoid or animal. • Avatar responds quickly and predictably to player commands.
Memory	Personal, public, and cultural reflections of a game or gameplay.	<ul style="list-style-type: none"> • Players remember game fondly. • Game can repeatedly provide a similar experience. • The game has a positive public image. • The game evokes a sense of nostalgia. • The game reflects the values and beliefs of the player's culture.
Exigence	The game goal and the challenges to accomplish it.	<ul style="list-style-type: none"> • Multiplayer games. • Game gives rewards and punishments. • Game follows its own rules and makes sure that players can't cheat or gain an unfair advantage over each other. • The game is neither too difficult or too easy. • Adjustable difficulty levels.

This chapter has examined three distinct models of immersion each one defined by a different logic. McMahan (2004) builds her model on virtual reality and communication theory and establishes a criteria for which to judge the immersive potential for videogames. She blends together physical and psychological immersion in her model with the main goals of photo-realism, emotionally evocative interactions, and A.I. that engages in appropriate social behavior. Calleja (2007) offers a schema based on symbolic interaction theory to describe a phenomenological approach to game immersion. He leans heavily on the psychological definition of immersion and places emphasis on the player's internalization of

game controls. In contrast, the rhetorical model assumes a dialog between the player and the game and that immersion is a persuasive function that emerges through that interaction. It uses game and rhetorical theory to construct a communicative model of game immersion.

The differences between these models reflect the challenge of how to identify and understand the immersive experience in video games. When we apply principles of immersion from other technology as can be seen in the presence model, we risk ignoring those distinct aspects of the video game medium that distinguish it. When we rely solely on player experience of immersion as can be seen in the incorporation model, we fail to recognize the complexity of the interaction and we cannot clearly identify those parts of the game that are important for the experience. The rhetorical model offers a possible approach that addresses these problems because it recognizes the unique features of the medium and the importance of both player and game in the interaction.

Although theoretically diverse, these three models also possess some similarities. The emotional value of narrative and the spatial arrangement of games appear in all three models in much the same manner. All three highlight the value of player motivation and how that impacts the immersive quality of a game. They draw upon similar game mechanics as important to the immersive experience. However, they differ on exactly on these mechanics invite immersion. The rhetorical model is not intended to replace these older two but rather expand on them and look at immersion from a different perspective to see what it offers to our understanding of immersion. The areas of disagreement are places where the rhetorical model may offer refinement whereas the areas of agreement are places where the model

further support each other's arguments. The next chapter will apply each model to five different games in order to explicate their similarities and differences. Through this analysis, it will be possible to question the limitations of the two older models and underscore what a rhetorical approach may offer to our understanding of video games and immersion.

CHAPTER 5. VIDEO GAME IMMERSION IN ACTION

“Didn’t we have some fun though? Remember when the platform was sliding into the fire pit and I said ‘Goodbye’ and you were like ‘NO WAY!’ and then I was all ‘We pretended we were going to murder you’? That was great.” - GLaDOS *Portal* (2007)

Introduction

Good experiences are sometimes hard to put into words. Describing immersion is like trying to explain laughter while laughing. The three schemas discussed in the last chapter, the presence, the incorporation, and the rhetorical model, are all attempts to understand the unique experience of immersion in video games. Each model employs a different stratagem and theoretical justification. This chapter takes these three models and applies them to five specific videogames in order to see exactly what they tell us about immersion. The selected games represent different gameplay experiences in order to test the versatility of the immersion models and to provide a thorough understanding of the many ways that video games can immerse. The goal of this analysis is to see how well each model elucidates the immersive potential of the selected games and to determine what the rhetorical model adds to our understanding.

The five games selected for this analysis are *Tetris* (1989), *Final Fantasy VII* (1997), *Halo: Combat Evolved* (2001), *World of Warcraft* (2004), and *Wii Sports* (2006). They are all standalone games in the sense that they consist of a single program that plays on either a computer or game console system. They follow the definition of video games established in chapter 2, because they are all games played through a screen with a computer through an

interface. These particular games were selected because they were commercial successes and also well-received by professional reviewers and game players. As such, it is assumed that these games offer quality entertainment experiences and are likely to be highly immersive. In addition they are all different genres, have different release dates, and employ different technology so as to explore immersion across a wide range of the medium.

Each game is analyzed using the presence, incorporation, and rhetorical models. Table 5.1 offers a quick a summary of the results of this study. Each component under the different models is identified as either strong, weak, or detrimental. A strong label indicates that the game possesses those technical qualities considered immersive according to the different models. A weak label means that the game partially met the characteristics that would either encourage or discourage immersion as identified by the model's component. If the game possessed characteristics that the models' suggested would hinder or disrupt the immersive experience, it received a label of detrimental. In essence, each model identified specific technical characteristics that could either enhance or disrupt an immersive experience. These techniques of immersion are described in Chapter 4. However, some technical components were weighted as more valuable based on the underlying logic of the different models. For instance, the incorporation model values player knowledge as necessary for enhancing the immersive experience so technical components that encourage this quality such as a simple interface were important for determining the labels of each component. I used qualitative analysis using the criteria of each model, which is detailed in this chapter.

What we see through this analysis is that the selected games are generally immersive according to each of the models and that each game has different qualities to encourage the experience. This analysis reveals some of the similarities and differences between the models as well as their limitations. For example, all three models identify narrative elements as important to the immersive experience but as can be seen under *FF VII*, the differences in how each model identifies the immersive quality of the narrative impacts the analysis. A more thorough description of these results will be examined at the end of this chapter. It is important first to describe the steps taken in this study to establish its validity and relevance.

This chapter begins with a description of the criteria used to choose the five games under analysis. It was important for this study to use games with strong immersive potential in order to assess the models regarding their criteria or characteristics that each uses to determine the immersive value of a game. In addition, the games needed to be different enough from one another in order to explore how different video game technologies and gameplay may impact the immersive experience.

Having established the value and differences of these games for this analysis, I will then apply the three immersive models to each individual game. This will be the real test as to what each model offers to our understanding of how and why video games immerse players. The games will be examined in chronological order so that this study can more readily address whether the age of a video game affects its immersive quality. The study of each game will conclude with a brief description of what each individual game tells us about immersion and the contributions of each model. The chapter will conclude with a discussion

of the trends that emerged in each study and a description of where the models overlapped and where they differed. Through this analysis we will see that the rhetorical model offers a valid methodology for understanding immersion because of how it builds and expands on the other models.

Table 5.1 Study Results

	Tetris	FF VII	Halo	WoW	Wii Sports	
Presence						
Social Interact	Detrimental	Weak	Weak	Strong	Weak	<div style="display: flex; flex-direction: column; align-items: center;"> <div style="width: 20px; height: 20px; background-color: #00FF00; margin-bottom: 5px;"></div> Strong <div style="width: 20px; height: 20px; background-color: #FFFF00; margin-bottom: 5px;"></div> Weak <div style="width: 20px; height: 20px; background-color: #FF0000; margin-bottom: 5px;"></div> Detrimental </div>
Realism	Weak	Weak	Strong	Weak	Weak	
Telepresence	Detrimental	Weak	Strong	Strong	Strong	
Perceptual	Weak	Weak	Strong	Strong	Weak	
Social Actors	Detrimental	Strong	Strong	Strong	Detrimental	
Int. Environ	Detrimental	Weak	Strong	Strong	Strong	
Incorporation						
Tactical	Strong	Strong	Strong	Strong	Detrimental	
Performative	Strong	Strong	Strong	Weak	Strong	
Affective	Weak	Strong	Strong	Strong	Strong	
Shared	Detrimental	Detrimental	Weak	Strong	Strong	
Narrative	Weak	Weak	Strong	Strong	Weak	
Spatial	Strong	Weak	Strong	Weak	Strong	
Rhetorical						
Narrative	Weak	Strong	Strong	Strong	Weak	
Spatial	Strong	Strong	Strong	Strong	Strong	
Temporal	Strong	Detrimental	Strong	Strong	Strong	
Social	Detrimental	Strong	Weak	Strong	Strong	
Interface	Strong	Weak	Strong	Weak	Strong	
Memory	Strong	Strong	Strong	Strong	Strong	
Exigence	Weak	Strong	Strong	Strong	Strong	

Criteria for the Games

There are hundreds of thousands of video games on the market today. In order to test the immersive models, it was important for this study to first identify games that are widely recognized as immersive. That way the models have the opportunity to explain how and why the games immerse. As such, I begin by explaining the criteria of reception, which I used to determine the immersive potential of the games. I follow this description with the criteria of genre, age, and technology, which establish diversity in the games in order to examine immersion across a greater range of the video game medium.

So how did I determine that these particular games were immersive? In chapter 3, the discourse analysis revealed that players generally perceive immersion as a positive experience and a means with which to judge the entertainment value of a game. This chapter also described how video game scholars and designers (Ermi & Mäyrä , 2007; Laramee, 2002; Rouse, 2005; Newman, 2004) argue that immersion plays an important role in the overall enjoyment of video games. Given this desirability and value of immersion, it logically follows that popular games are immersive because they would be both enjoyable and well-received. A positive reception is a strong indication that a game possesses immersive qualities.

Thus, the first criteria for this study required that each game sold well and received heavy praise from both players and media reviewers. While commercial success is not always an indicator of entertainment or artistic value, it is a broad way of determining the popularity and the potential influence of a media text. This is important not just to determine

the game's immersive value but also its impact on the industry. Because video games are a commercial business, the games that sell well are set up as the models for future games. Understanding the means by which popular games create immersive experiences is therefore more valuable for future studies because the formal structures of these games are more likely to be mimicked by later game designers.

Commercial success is not quite enough by itself since it does not account for external factors such as the changing trends in the video game market or possible manufacture manipulations. The game *Pong* (1972) sold very well but it had little to no competition. The game *Super Mario Bros.* (1984) was also a commercial success but that could be due to the fact that it came bundled with the Nintendo Entertainment System. It is unclear whether people would have bought the game if they had to buy it separately. As such, each of the selected games also needed to have received generally positive reviews within the popular press. None of the games were released within the past two years in order to ensure enough time to determine their reception.

The next three criteria ensure diversity in the gameplay experience so as to test the flexibility of the three immersion models. The selected games are played on different interfaces, represent different game genres, and were released at different time periods. Video games are a diverse medium and thus a respectable model should be able to adapt to new developments and modes of gameplay in order to be useful. Interface, genre, and age are an effective means to test the resources of each model because they reflect very different game structures.

The interface has probably seen the most change over the past forty years. From the bulky room-sized PDP-1 that could only display in one color to liquid plasma screens that feature millions of colors, the tools used for video games for the interaction and presentation are almost as diverse as the games themselves. However, the basic game structures of video games haven't changed a whole lot. *Spacewar!* (1961), *Space Invaders* (1979), *Gradius* (1985), *Wing Commander* (1990), and *Geometry Wars: Retro Evolved* (2008) are all basically the same game. They have different stories, are played on different computer systems, use different graphical representations, and are played with different controllers. Essentially, they have different interfaces. So the question to ask is does the interface really matter when it comes to game immersion or is it inconsequential to the ludic elements of the game? Are games with older technology less immersive than current ones and how do the changes in technology impact older games? These are the questions this chapter will pose for the three immersion models.

The second, and perhaps most crucial criteria, is that each of the selected games needed to represent a different game genre. Chapter 2 discussed the challenge of establishing a clear formula for genre division in games. John Frow's (2005) rhetorical definition of genre as a set of conventions and constraints on the production and interpretation of meaning is particularly useful here. The selected games have some interaction and structural similarities but are considered different genres by game producers and player communities. They have different game goals, involve different forms of gameplay, and convey different meaning regarding the entertainment experience.

The third, and perhaps most debatable criteria, is that the selected games were released at different time periods. The earliest game is Tetris (1989) while the most recent is Wii Sports (2006). The video game market is built on the consumption model in which games have temporary lifespans in terms of their widespread usage. Each of the games under study is still played today albeit not necessarily to the degree of their initial release. Video game experiences are historically situated and they are influenced by technological change. The common argument among some game immersion scholarship (Laramee, 2002; Rouse, 2005) is that video games should become more and more immersive as time progresses. If this is true then older games upon reflection and analysis should lack immersive qualities. I contend that this argument is poorly founded on the assumptions of technological determinism and a belief that immersion results only from the interface. However, by choosing different games from different time periods and applying the different immersion models to these games, we can uncover a rich explanation for how they may or may not evoke immersion today. A comprehensive immersion model should be able to explicate the immersive quality of games upon reflection and account for technical and cultural changes.

Based on these criteria of reception, genre, technology, and age, the immersive models should be able to explicate the immersive components of each game. The games selected were *Tetris*, *Halo: Combat Evolved*, *Final Fantasy VII*, *World of Warcraft*, and *Wii Sports*. Table 5.2 shows how each of the games meets the different criteria for this study. These games do share some similarities in that they all meet the game, screen, computer, and interface requirements for the medium described in chapter 2. They all construct a digital

space, which is the primary site for the gameplay. However, the chosen games have very different game systems. They use different game objects, rules, goals, and skill sets used by players in order to accomplish the game goals. This is not an all-encompassing study of the medium but the chosen games do provide a diverse area for analysis. Table 5.3 highlights some of the differences in the game systems of each of the chosen games. Each game offers a unique mode of gameplay but before I delve into the analysis, I will briefly revisit the immersion models to preview what they should tell us about the games and immersion.

Table 5.2 Game Criteria

Game	Genre	Technology	Age
Tetris	Puzzle	cell-phone	1989
FF VII	RPG *	Sony Playstation	1997
Halo	1st Person Shooter	Microsoft X-Box	2001
WoW	MMORPG**	Computer	2004
Wii Sports	Sports	Nintendo Wii	2007

* Role-Playing Game

** Massively-Multiplayer Online Role-Playing Game

Table 5.3 Game System Differences

Game	Digital Space	Avatar	Primary Goal	Multiplayer	Conflict	Winning State
Tetris	2D	No	Point Accumulation	No	Alea	High score
FF VII	2D/3D	Yes *	Story progression	No	Mimicry	Enemy destruction
Halo	3D	Yes *	Combat	Yes	Ilinx	Enemy destruction
WoW	3D	Yes **	Avatar Development	Yes	Mimicry	None
Wii Sports	3D	Yes **	Point Accumulation	Yes	Agôn	High score

* Predesigned

** Player Constructed

Summary of the Immersion Models

Having identified five games with immersive potential, the next task is to examine what makes them immersive. The presence, incorporation, and rhetorical models described in Chapter 5 are designed with that purpose in mind. Although each model seeks to understand the immersive experience in video games, they are differentiated by their theoretical background and the types of questions about immersion they attempt to answer.

The presence model of Alison McMahan (2002) is a set of criteria that can be used to assess the immersive potential of a 3D game. Based on a schema of immersion in virtual reality, this model is composed of six criteria that describe specific technical traits a game must possess in order to immerse a player. The more criteria that a game meets, the more immersive the game experience should be. This model draws heavily on the meaning of physical immersion as defined in Chapter 3 in that immersion results from the technology acting on the body and its senses. Under the presence model, immersion is heightened by social games, realistic images and behavior, agency of movement in the game space, presentation equipment that constrains the body and the mind, empathetic social actors, and good artificial intelligence. We can expect this model to highlight how the game technology acts on players to immerse them.

The incorporation model designed by Gordon Calleja (2007) offers a different perspective to the study of immersion. He describes six frames, which correspond to different game mechanics through which a person may become immersed. A game only needs to be immersive in one frame, although the depth of the experience benefits from immersion in

multiple frames. Based on social interaction theory, this model is more descriptive of how immersion feels rather than prescriptive of what induces immersion a player. However, we can still apply it to this task using the logic of the model, which argues that immersion results from the movement from conscious attention to the media to an internalized knowledge of the game world thus allowing players to seamlessly integrate themselves into the game space. This model relies more on the psychological and attention immersions defined in chapter 3 in that immersion arises from the interplay between the player and the game and maintained through the focus of the player's attention. We can expect this model to look at the ways that games immerse by exciting player emotion and action.

The rhetorical model introduced in Chapter 5 includes seven rhetorical means through which a video game may use to immerse a player. Each of these means correspond to a game mechanic and I propose that the model can be used to understand how a game evokes an immersive experience. Based on rhetorical theory and justified through game theory, this model assumes that video game texts are sites of rhetorical action and that gameplay is a form of dialog between player and game. It suggests that immersion is a rhetorical function of that interaction. A game can immerse through techniques of any one mean but the interplay between the means and the focus of the gameplay determines the means' overall strength and the depth of the immersive experience. This model is not specific to psychological, physical, or attention immersion but rather assumes that immersion is a multifaceted relationship between player and game. Immersion results when the mechanics

of the game function to rhetorically draw the player into a deep relationship with it. This model will likely assess specific game attributes for their persuasive power.

As we can see, these three models are based on very different logics but have similar goals. Each tries to establish criteria that can be used to evaluate or assess a game's according to how immersive it is. The presence and rhetorical model seek to describe the game mechanics needed to create an immersive experience. The incorporation model attempts to define how the player experiences immersion but it does so through an examination of the different game elements. As such, it is appropriate to compare it to the other two. Table 5.4 briefly summarizes the three models, their goals, their theoretical justification, and how each conceptualizes immersion in video games.

Table 5.4 The Immersive Models

Model	Theoretical Background	Components	Key Question	What does the model tell us about immersive games?
Presence	Virtual reality	Six criteria	How can we judge the immersive quality of a game?	Immersion results from perceptual manipulation.
Incorporation	Social semiotics	Six frames	What does immersion feel like for the player?	Immersion results from players internalizing the game.
Rhetorical	Rhetoric	Seven means	How does a game evoke immersive experiences?	Immersion results through persuasive communication.

Having reviewed these three models and their main characteristics, this chapter will now apply them to five video games in order to explore what these models offer to the study of immersion in game technologies. The analysis is organized chronologically from *Tetris* to *Wii Sports* and each begins with a brief introduction that describes the game, its history, how it is played, and how it meets the criteria for this study. Following this description will be an

analysis of the game under the presence, incorporation, and rhetorical models. Each study concludes with an overview of the findings of these analyses regarding the immersive nature of each individual game.

Tetris

Description

The name Tetris is a combination of two words: tetra, the Greek word for four, and tennis. In the game various shapes composed of four small squares, called tetrominoes (see figure 6), fall down a well. The player can move and turn the pieces so that they fit together. When the player makes a solid line of squares horizontally, the line vanishes and the player receives points. When the player acquires a specific number of points, the game advances a level and its difficulty increases. The tetrominoes fall faster and faster until the squares reach the top of the well ending the game.

Although *Tetris* now comes in numerous versions, the particular text examined here is the classic version of *Tetris* produced by Electronic Arts Inc. for cell phones (see figure 3.). It has six different single-player game modes and a multiplayer mode. The goal in all of these modes is to score points by creating lines.

Reception

Russian programmer Alexey Pazhitnov created *Tetris* mostly for his own amusement but he shared it with his colleagues and within months, the game had spread across Russia and then to Hungary where it caught the attention of commercial game designers (Atari,

2009). Since that time, Tetris has been released for computers, mobile phones, and hand-held game consoles. As of today, Tetris has sold more than 70 million copies around the globe (Johnson, 2009).

In terms of reception, *Tetris* has won numerous awards. The game magazine *Electronic Gaming Monthly* (2007) ranked Tetris as the number one game of all time. The video game review website IGN (2007) ranked it as the second most important game in history. IGN (2007) contends "It's the puzzle game. Not a puzzle game. THE puzzle game; the most-played, most-imitated, most influential puzzler of all time. Nothing else comes close."

Tetris has also received academic attention across a variety of different disciplines. Ludic game scholars (Eskelinen, 2001; Juul, 2001; Frasca, 2004) often use *Tetris* to challenge the value of narrative theory in games. *Tetris* has also been used to study brain development (Haier et. all, 1992), stress relief for post-traumatic stress disorder (Holmes et. all, 2009), and even as a metaphor for success and failure in life (Coffin, 1990).

Age

Alexey Pazhitnov developed *Tetris* in 1985 at the Moscow Academy of Science. Although the particular text under study here was released in 2007, it uses the visual design of the 1989 game developed for the Gameboy and NES. As such, it represents the oldest game in this analysis.

Genre

Tetris is a puzzle game, which means that it primarily involves cognitive challenges. The player manipulates objects to form specific patterns. The game presents a logical problem that the player must solve in order to achieve a positive outcome. Because of its simple game mechanics, *Tetris* is easy to learn but highly difficult to master, which is a common characteristic of the puzzle game genre.

Technology

The game in this analysis plays on a cell-phone (see figure 3). It is designed for a small 1-3 inch screen and uses the number and arrow keys on a standard cell phone. The game is portable and can be played almost anywhere. Players pay a monthly service fee to play. This means that the game requires an active wireless signal because it must verify that the user has paid the service fee. The game uses this signal to connect players in its multiplayer mode (see figure 4).

The Presence Model

In all fairness, the presence model was not designed for the study of this type of game. Because *Tetris* is 2D as opposed to 3D, many of the components in the presence model are not applicable. As such, *Tetris* does not fully meet any of the criteria of this model.

Quality of social interaction

The quality of social interaction component is enhanced by an empathetic avatar and strong communication channels. *Tetris* does not possess either of these. The game has no

avatar. Players control tetrominoes. The player can move the tetrominoe to the left and right and turn it but once the piece reaches the bottom, it becomes part of the floor and the player loses control over it. Players have neither the time nor the capacity to develop an empathetic relationship with each individual piece. The game does allow players to compete against each other in multiplayer mode. However, it does not utilize the speech or textual communication abilities of the phone. Players can only see each other's wells in the bottom left side of the screen (see figure 4). *Tetris'* lack of avatar and poor communication potential indicates that it fails to meet this criterion.

Social and Perceptual Realism

Social and perceptual realism means that representations in the game look and behave like their real-world referents. This is problematic in *Tetris* because the game objects do not have real-world equivalents. The game uses abstract objects. They are simple blocks and are by no means realistic. This design is detrimental to perceptual realism. Despite this, the tetrominoes do have some social realism because they do consistently fall, reflecting a gravitational quality and they stack on top of each other showing that they have substance. The blocks behave consistently even if that behavior is limited to falling and stacking. As a result, *Tetris* only partially meets this criterion.

Telepresence, Teleoperation, and Transportation

The game does not meet the technical requirements of a large screen or virtual reality equipment. The game plays on a tiny screen. It also has no digital world to explore and play

is confined solely to the small well. As such, *Tetris* does not involve telepresence, teleoperation, or teleportation.

Perceptual and Psychological Immersion

Perceptual immersion occurs by blocking out unwanted sensory input. This game is played on a very tiny screen, only around an inch in diameter, and that screen is mobile. As such, it does very little to block out unwanted sensory interference. If the phone rings while the game is active, the game pauses and the phone immediately switches to a menu screen so that the player can answer the call. There is no way to disable this function. The game does evoke mental concentration because it plays in real time and many of the modes like Marathon require the player to think and act faster and faster. As such, the game meets the requirements of psychological immersion but not perceptual immersion.

The Use of Social Actors in the Medium

This criterion depends on having NPCs in the game, which *Tetris* lacks.

Intelligent Environment

In terms of the computer's AI, the command options are very short, usually one word or two, which doesn't allow for much personality expression. The game does use emotes, or emotion icons, like the smiley face, to indicate who wins or loses. Otherwise, it does little to communicate with the player and merely reacts to player requests. Even when playing against the computer, the computer's actions are mechanical and predictable. The game therefore does not meet the requirements of an intelligent environment.

Conclusions

Analysis of *Tetris* under the presence model suggests that *Tetris* is not an immersive game. It does not fully meet any of the criteria of this model. The game's system is detrimental to the immersive experience in four components. This is primarily because the game lacks an avatar, has limited communication channels, and has a small interface.

Tetris partially meets a few of the immersive criteria. The game may evoke psychological immersion because it requires constant cognitive attention in real time. The game pieces behave consistently and in a manner that reflects real-world physics such as weight and substance. However, these qualities are only a part of two larger components.

According to the presence model, *Tetris* does not cultivate immersion primarily because it does not meet the requirements of a positive social environment. In *Tetris*, players cannot verbally communicate with one another and non-verbal communication is limited to gameplay. The computer AI has no personality nor are there any NPCs. This is detrimental to social interaction, use of social actors, and the intelligent environment components of this model.

The technology of the game is also a detriment to its immersive potential according to the criteria of this model. The screen is small and mobile, which negatively impacts perceptual and psychological immersion. A different version of *Tetris* may lead to different results since the game can be played on different equipment. Because of its size, the cell phone version of *Tetris* does not block outside sensory distractions. Since most cell phone

games are mobile and employ small screens, the findings of this analysis suggest that few of them could be considered immersive under the presence model.

The Incorporation Model

The incorporation model presents a contrasting view. According to the incorporation model, *Tetris* can immerse in the tactical, performative, and spatial frames because of its simple interface. However, the game does not possess the qualities needed to immerse through the narrative, shared, and affective frames because of the simple structure of its gameplay.

Tactical

As a puzzle game, *Tetris* requires cognitive strategy, planning, and very quick thinking. Such cognitive work immerse players in the tactical frame.

Performative

The performative frame is enhanced when the player internalizes a game's rules and controls. This is a relatively easy state for a player to achieve in *Tetris* because the gameplay is very simple. There are only seven different tetrominoes (see figure 5.) and there are only six possible actions a player can take. Four of those actions involve moving the tetrominoes around the well.

Shared

Although *Tetris* has a multiplayer function, the small screen and lack of communication channels poses a hindrance to the shared immersion frame of this model. The small screen constrains the public performance of the game. Apart from score comparisons,

players cannot easily see their opponent's actions (see figure 4.). In public, a passerby would need to get very close to the player to watch the game. The game also does not allow verbal communication between players. Players cannot establish social presence nor express identity through the game's communication channels.

Affective

In terms of the affective frame, *Tetris* encourages a basic sense of tension that results from the players' concentration. After each game, a screen appears with total points and designates either the computer or the player "winner" and puts a small smiley face icon next to their name. As such, there is the slight pleasure of success from having accomplished a mental challenge but the game itself does little to evoke any other kind of emotion. Thus, *Tetris* only partially meets the requirements of the affective frame.

Narrative

The narrative frame is strengthened by designed and emergent narratives. While *Tetris* offers the potential for personal narrative experiences because each game experience is unique, the game has absolutely no designed narrative. There are no characters, no story, no plot, and no theme, apart from what the player brings to the game experience. It doesn't use cut-scenes or film techniques to tell any kind of story. As such, *Tetris* does not immerse through the narrative frame.

Spatial

Tetris encourages immersion in the spatial frame because the digital space of the game is very simple and easy to memorize. There is only one screen to learn and movement in that space is heavily constrained.

Conclusions

Analysis of *Tetris* according to the criteria of the incorporation model indicate that *Tetris* has the potential to immerse a player through the tactical, performative, and spatial frames because it is easy to learn and to play. This is a crucial quality for immersion under the incorporation model. Because *Tetris* makes it easy for the player to focus on the gameplay as opposed to learning and navigating the interface, the game cultivates immersion by making the interface vanish from the player's field of attention.

The incorporation model also focuses on identity expression and shared performance as being necessary for evoking immersion through social means. Because of the limited communication channels between players, the shared frame is detrimental to the immersive experience according to this model. In *Tetris*, players cannot easily express individual identity and the small screen of the cell phone minimizes the value of the public performance by making it less apparent.

However, the most interesting aspect of this analysis is how the incorporation model approaches the narrative value of *Tetris*. The narrative frame has two main components and *Tetris* exhibits only one of them. The game does not possess a story structure and therefore lacks a designed narrative under the incorporation model. However, it has the potential, as do

all games, for emergent narratives because that is dependant on player experience. The immersive value of this game is thus situated in the ease of its gameplay and its cognitive challenge according to the incorporation model.

The Rhetorical Model

An analysis of *Tetris* through the rhetorical model reveals several means through which the game induces immersion. The game meets several of the criteria of the spatial, temporal, and memory means of immersion. Like the prior two models, application of the rhetorical model indicates that the social mechanics of this game are detrimental to an immersive experience.

Narrative

As the other two models have explicated, *Tetris* has no formal story. However, the game still possesses form. The desire that *Tetris* offers is an unproductive mental challenge to create order. Once the game ends, the player receives points and the option to play again. And yet there is a satisfaction from completing the tasks set forth in the game. In essence, the game is about order. Players use the tetrominoes to construct a simple pattern, in this case a straight line. The pieces are organized by color (see figure 4.). The goal is to avoid holes, the absence of color. This simple design builds on the player's desire for order. The narrative means are thus weak because the game lacks a story structure but the game's formal logic gives it some narrative form.

Spatial

The spatial means of immersion are complex because the game is played on mobile phones and must account for unpredictable physical spaces. The player can start the game anywhere. Outside stimulus could thus interfere with the player by invading the play space. This is probably why the game does not employ music as sound would distract those around the player and draw attention to the player. The game space itself is small. The player can really only affect those objects within the well, which accounts for about half of the screen.

And yet, the boundaries of these spaces are clearly marked. The player enters the space by clicking on the menu options to start a new game and it ends with a new screen that tells the player their score and gives the option to play again. Game objects are limited to the well. This helps constrain the game space and maintain it. Although the multiplayer capability extends the playspace somewhat, the limited communication between players keeps the space confined. Players are barely aware of each other. Presence is established by arrangement, color-coded squares and the design of the well. Thus, *Tetris* meets the requirement to immerse through this means.

Temporal

Tetris uses several techniques to establish a sense of kairos and thus exhibit strong temporal means of immersion. The game plays in real-time and the tetrominoes constantly appear and fall down the well. When one stops moving, a new one appears. These falling blocks require constant action and attention or the game quickly ends. Although some of the

modes, like 40 lines, use time as a game mechanic, it is this constant progression of event time and play time that creates a feeling of subjective time. *Social*

Tetris does not employ any of the social means of immersion. There are no NPCs, no avatars, no real opportunity for identity expression, and no sense of community. The multiplayer mode only affects the challenge of the opponent but doesn't really establish any sense of social communication between players. It is perhaps fun if two players, who know each other, use the game to play with each other but this situation allows for the players to communicate outside of the game to supplement their social interaction. Within the game itself, the players might as well play the computer as with a stranger.

Interface

Tetris induces immersion through the interface because the game uses a simple game board and mechanic. Although the screen is small and players must hold the screen close to their face in order to see it properly, *Tetris* does not require intense graphical representation to understand the game world. The game's use of simple shapes and colors make it easy for a player to quickly assess the setting and the needed actions. In addition, *Tetris* only requires a few buttons to play. However, *Tetris* does not take advantage of the mobile or social capabilities of the phone making this particular aspect of the interface less useful. There is no avatar so that component of this mean is missing. However, the tetrominoes serve the function of neutral proxies of the player in the game environment.

Memory

The memory means of immersion are primarily accomplished through personal and public memory. The game does not draw on cultural memory. In terms of personal memory, those familiar with the old Nintendo version are likely to compare it to this new instantiation. There are a few differences. The mobile version actually uses more colors and has a ghost feature, which shows a small transparent outline of the block if it continues its trajectory down. It does not have any music but the game starts with a 30 second remix of the old classic tune, which helps conjure up memories of the old game. *Tetris* has a unique place in popular memory. Although Russian in origin, the game quickly became a worldwide phenomenon. *Tetris* has been described as a reflection of modern work life (Coffin, 1990; Murray, 1997). We are given tasks that we must somehow fit into our busy schedule, finish them, and then we are given more. The tasks come faster and faster until we are overloaded, have a nervous breakdown, and then start the whole process all over again. The game is a play version of task management. Each piece reflects a different challenge that we must somehow work into our overloaded schedules. Thus, the memory means of immersion are strong because of how the game resonates with life experience and because it draws on the memory of past gameplay experiences.

Exigence

Tetris does not exhibit many of the qualities that this model identifies as important for the exigence means of immersion. Although the goal of the game nicely reflects desired outcomes of order and task management, failure has very little consequences or rewards. On

failure, the game ends and the player can start a new one immediately. However, the game does have clear goals and allow the player to adjust its difficulty. The sensation of success that comes from winning feels good because of the work required but the exigence means are generally weak because the game does little to emphasize the importance of the outcome even in multiplayer mode.

Conclusions

This analysis of *Tetris* with the rhetorical model suggests three key ways that *Tetris* can immerse a player. The game's simple spatial arrangement clearly establishes the player position and movement through that space. The temporal mechanics of real-time play encourages a sense of kairos especially since the game moves faster and faster thus heightening tension over the course of a gameplay session. However, the strongest mean of immersion for *Tetris* is memory because of the game's reflection of work life in today's task-centered world. The mental challenges of the game resonate with our cultural understanding of living. It induces immersion because we recognize the experience and the game offers us a safe outlet to try and achieve the order and peace we desire.

According to this model, *Tetris* has some gameplay elements that are potentially disruptive to the immersive experience. The social means of immersion in this model rely on effective communication and the goal of identification. Because the game does not allow players to establish a social presence or a sense of community, *Tetris* does not meet the requirements for this mean nor does it allow the kind of social action important for it to occur. The lack of a story structure negatively impacts *Tetris'* ability to immerse through

narrative means under the rhetorical model. According the rhetorical model, *Tetris* can function to immerse to a moderate extend because of its simple game mechanics and how it resonates with the cultural values of task management.

Comparisons

These analyses of *Tetris* reveal some of the strongest differences and similarities between the three immersion models. The game is not immersive at all according to the presence model. This seems problematic considering the popularity of the game and that this conclusion doesn't match the results of the other two. However, the rhetorical and incorporation models approach the immersive quality of the game differently. The incorporation model suggests that *Tetris* can immerse because it requires mental concentration and has an easy-to-learn interface. The rhetorical model also highlights the simple interface but also emphasizes how the gameplay meets the cultural values and beliefs of the players. When we examine those game mechanics that each model identifies as enhancing or disrupting the immersive experience, there are remarkable similarities between the models. However, the explanations for how these components affect the immersive experience are different.

All three models identify the narrative of *Tetris* as a weak part of an immersive experience. However, there are some differences. Narrative is not a criterion in the presence model. The only aspect of narrative this model uses is characters and it subsumes them under the use of social actors component. *Tetris* does not have any characters. The incorporation model devotes an entire frame to narrative and suggests that a game can immerse through

designed or emergent narratives. *Tetris* lacks a designed narrative. The rhetorical model includes narrative as a rhetorical means of immersion and argues that an immersive game possesses narrative form through story and discourse. *Tetris* has no story. Application of the models leads to the conclusion that *Tetris* does not immerse through its narrative, even though the narrative qualities identified in each are different.

These analyses also identified the social components of *Tetris* as being detrimental to its immersive potential. However, they differed on exactly what is wrong with these dimensions. For the presence model, the necessary quality of the game is to allow players to communicate verbally and non-verbally as if they were not using a communication medium. *Tetris* does not meet this requirement. The incorporation model considers it important for a game to allow the expression of identity and to make gameplay a public performance for social immersion. *Tetris* also doesn't meet this requirement. The rhetorical model emphasizes the ability of players to establish identification through roles, identity expression, and a sense of community. *Tetris* again fails to meet this requirement.

The interface was a site of contention between these analyses. The screen is tiny on this version of *Tetris*. For the presence model, this negatively impacted the immersive potential of the game in three of the six components. Under the incorporation model, the small size of the interface actually benefited the performative and spatial frames because the digital space could be easily memorized and navigated. Under the rhetorical model, the screen size was determined not to be disruptive to the immersive quality of the game because *Tetris* uses a simple game structure that can be conveyed through the small screen.

These differences reflect the foci of the models. The presence model values sensory experience as important for immersion so screen size matters. The bigger the screen, the more it acts on the eyes of the player. The incorporation model values player knowledge as important for immersion so how the screen presents the game world matters. The rhetorical model values player communication with the game as important so the screen's ability to convey information matters. Size is only important for these latter two models if it enables or restricts the game's ability to meet the models' interactive goals

However, applications of these models indicate that the gameplay of *Tetris* encourages immersive experiences because of how the game requires cognitive action. In the presence model, this mental work creates psychological immersion by keeping the player's mind focused on the game world. In the incorporation model, the logical challenge of the game encourages immersion through the tactical and performative frames because it requires the player to strategize and act. In the rhetorical model, this cognitive work evokes the memory means of immersion because it resonates with life experience and task management.

This analysis of *Tetris* shows several key differences in the logic behind each of the models but the similarities suggest areas of agreement. The analysis shows that all three models place value on the cognitive action in *Tetris* in determining how the game can serve to immerse a player. They also identify the narrative and communicative components of the game as being potentially detrimental to an immersive experience. The differences in how the models approach the interface of the cell phone reflect very specific expectations that the models have regarding the presentation and control of games. These expectations are framed

by the model's approach towards immersion. Moving on to the next game of Final Fantasy VII, we can examine how genre and age may impact the immersive value of a game.



Figure 1. Tetris for Mobile phones



Figure 2. Tetris Mobile Multiplayer

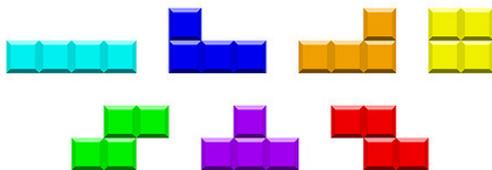


Figure 3. Tetrominoes

Final Fantasy VII

Description

The *Final Fantasy* series (1987-present) is one of the most popular and well-known role-playing franchises. It consists of over twenty different video games, two animated series, two movies, books, toys, and music compilations (Cesár, 2006). *Final Fantasy VII* (1997), or *FFVII*, was the seventh game in the series. It offered a unique gameplay experience with a deep narrative story, multiple mini-games, cut-scenes, and nine playable characters.

The *Final Fantasy* games tend to include flying ships, environmental themes about saving the world and protecting nature, pseudo-science and magic, and almost all of them have a character named Cid. In terms of game mechanics, each game uses avatars and employs a menu system (See figure 6.) for distributing skill points and equipping weapons and armor. The games also use a turn-based battle system in which each character and enemy take turns choosing their actions (Kolan, 2006). These traits have been around since the first *Final Fantasy* game and are staples of the series.

The game story of *FF VII* follows a character named Cloud Strife (see figure 7), a mercenary swordsman. Cloud joins a diverse group of characters to save the world from the Shinra Corporation, which is sucking the life force of the planet to produce electricity and Sephiroth (see figure 8), a military experiment gone insane that wants to cause world-wide destruction. The game world combines magic with pseudo-technology so it has motorcycles and guns alongside magical portals and fireballs. From dirty urban jungles to underwater laboratories, the characters traverse a diverse landscape and encounter numerous creatures,

friends, enemies, and challenges. Although later released for the computer and PSP, the version under study here is the original Playstation game.

Reception

Generally considered a commercial success, *FF VII* has sold over 9.8 million copies worldwide making it the best selling RPG to date (Guinness, 2009). When Sony made the game available for the Playstation Network, *FF VII* was downloaded over 100,000 times in just the first two weeks making it the fastest selling Playstation game on the Playstation Network (Burt, 2009). The game also received high praise from the gaming community. The media journal *GamePro* ranked *FF VII* as the fourteenth most influential game of all time (Boba Fatt, 2007). IGN (2007) ranked it #76 in the top 100 games writing that "FF VII is still considered by many to be a masterpiece."

The influence of *FF VII* on the industry was profound. According to the media journal *Gamespot* (2010), "Methods and scale of game production, levels of artistic excellence, marketing of key titles, even the evolution of entire genres and markets--*FF VII* left almost no facet of the industry unaltered by its earth-shattering arrival."

Age

Released in 1997, *FF VII* marked several significant changes in the *Final Fantasy* series. It was the first to employ 3D graphics, to be available for personal computers, to use the same numerical designation in all countries, and the first *Final Fantasy* game for the Playstation system.

Genre

Each *Final Fantasy* game is unique and takes place in its own world with its own story. However, the games share certain narrative elements and game mechanics that tie them all together. They fall under the role-playing game genre. Each game encourages players to take on the roles of characters who are represented through various statistics. Often these characters are described by jobs such as wizards and warriors and they are given traits such as strength and dexterity that are represented numerically.

Technology

Developed on a then unheard-of-budget of \$30 million dollars, *FF VII* employed cut-scenes of full-motion video sequences and 100 different musical tunes. It played on the Playstation console system, which connects to a standard television screen and uses handheld controllers. As one of the first games for the Sony Playstation, *FF VII*, really pushed the 32 bit graphics system to the limit and had to be stored on three separate discs. Bits refer to parts of a pixel and a 32 bit system could show 32 separate colors within one pixel on a screen.

The Presence Model

The presence model indicates that *FFVII* is not immersive. The game does not meet most of the criteria of this model except the criteria that reference the game's narrative.

Quality of the Social Interaction

The game's social interaction is limited by its single-player status and its communication channels. The game uses text-boxes that appear above character's heads

much like newspaper comics. The player can use Cloud to initiate dialog by going up to a character and pressing a button but Cloud does not speak and the dialog is generally one-sided. The text-box remains on the screen, theoretically forever, until the player pushes the dialog button again and either more text appears or the dialog ends. The NPCs merely repeat information if the player talks to them again. The characters sometimes use their polygon bodies to convey non-verbal information but the player has no control over them.

However, the game does encourage player immediacy with the avatar. The main character Cloud is essentially a place holder for the player. He begins the game with amnesia. He knows about as much of his past and the world around him as the player. The player also has the option to rename Cloud. This option is available for most of the playable cast characters, which encourages the player to personalize and individualize them. This increases the quality of the social interaction but this game's immersive potential is weak according to this criterion because of the limited and unnatural communication.

Perceptual and Social Realism

FF VII was graphically detailed for its time but that level of detail is still unrealistic. In terms of perceptual realism, this game pales in comparison to the 128 bit graphics of *Final Fantasy XIII* on the Playstation III (See figure 14). Almost 120 artists collaborated on *FF VII*, and the beautiful scenery reflects their effort (see figure 9). However, such detail only applies to the background and cut-scenes. Objects and characters that move possess polygon-shapes (see figure 10). In addition, many of the background objects cannot be moved or adjusted. The combat system of *Final Fantasy VII* is an example of unrealistic character

behavior. There is a wait bar in the bottom right side of the screen that slowly moves (see figure 12). Characters cannot act until their wait bar fills up and it is their turn. Combat looks a little strange with characters and monsters spending much of the time just staring at one another. The game has weak perceptual and social realism.

Telepresence, Teleoperation, and Teleportation

FF VII meets some of the components of this criterion. The game's use of multiple spatial structures does not invite telepresence. Normally, the player can move the character around the environment in 3rd person perspective using the joystick on the Playstation controller. When combat begins, the avatar freezes and the game loads a new 3D environment (see figure 8) in which the player can use three cast characters to fight against a monster that just appears. In combat, the player can only move each character on their turn and even then, the actions are limited by four menu choices. This shift of perspective and control make it difficult for the player to situate themselves in the environment and affect it.

In contrast, the degree of movement in the environment does help encourage the player's sense of telepresence. Characters move in a number of ways through the world of *FF VII*. They can walk, run, ride a motorcycle or chocobo, fly an airship, or ride a submarine. Certain landscapes such as mountains, rivers, and oceans limit the available type of movement. In this manner, players can explore the sky, the land, and the sea offering a strong sense of mobile presence in the world. The game does not employ teleoperation or teleportation. *FF VII* therefore meets some of the aspects of this criterion.

Perceptual & Psychological Immersion

FF VII plays on the Sony Playstation and benefits from a potentially large television screen and high quality sound system but the game does not translate well to newer televisions. On high-definition television and computer screens, objects in the game possess jagged and blurred edges, which were not noticeable on older televisions. This could negatively affect the game's sense of perceptual immersion.

However, the game encourages psychological immersion because of its deep narrative story and the sheer number of quests in the game. Playing all the way through the game to its narrative end can take anywhere from 30 to 60 hours.

The Use of Social Actors in the Medium

In terms of social actors, the game's AI is limited but the complexity of the story makes up for it. There are a large number of cast characters, some friends and some enemies, that have distinct personalities. The character Barret is loyal and temperamental. The character Vincent is sad and reserved. The character Yuffie is hyper and arrogant. This coupled with a story of betrayal, greed, and love helps to establish the social actors within the game. This is the only criterion of this model where *FF VII* meets all of the requirements.

Intelligent Environment

The computer AI in *FF VII* is virtually non-existent except as a series of menu choices and a random encounter generator. The monsters and many of the NPCs follow very specific patterns and do not reflect any kind of intelligent responses. In combat, injured creatures will sometimes run and sometimes heal themselves but such actions are rare and

predictable because only certain creatures can engage in them. The game does use natural language for the menu system but does not behave in a way that would encourage the player to give it a personality. As such, the game meets at least some of this criterion.

Conclusions

According to this analysis, *FF VII* meets a little bit of most of the criterion under this model but is judged to have few if any characteristics that are disruptive to an immersive experience. Those qualities in which the game meets the requirements for the presence model often come from the game's narrative. The characters encourage immediacy through strong personalities and how their relationships change over the course of the plot.

The presence model emphasizes graphical realism. The graphics of *FF VII* at the time of its release pushed the limits of technical detail but only in the backgrounds and cut-scenes. The game comes across as boxy and pixelated especially when compared to more recent games. As such, the perceptual realism is strong on televisions but not on computers and high-definition televisions due to aliasing issues. This also negatively impacts the game's sense of perceptual and psychological immersion.

According to the presence model, the immersive potential of *FF VII* is limited by unrealistic communication and battle systems, non-interactive objects, and weak computer intelligence. Under most of the criteria, the game is moderately immersive but apart from the narrative, the game's immersive qualities have not aged well.

The Incorporation Model

FF VII meets the criteria for several of the frames under the incorporation model. Apart from its single-player status and lack of public performance opportunities, the game has many qualities that evoke the different immersive frames. In particular, it has a deep designed narrative, fairly simple controls, and offers multiple map functions for increased spatial awareness.

Tactical

The game draws on planning and strategy in combat and character creation to reinforce immersion through the tactical frame. The combat system encouraged players to strategize attacks because not all creatures can be defeated the same way. Not only does the game require strategy in combat but also in character equipment and development. Players have the ability to customize character abilities, equipment, and jobs. Certain combinations increase player success in the game.

Performative

Made for the Sony Playstation, the game's controller has 12 buttons. *Final Fantasy VII* primarily used six. The controls are simple and straightforward. The menu options themselves were fairly easy to navigate as each menu option was defined every time the hand pointer scrolled over it (see figure 6.). The turn-based combat system was familiar to anyone who had played earlier *Final Fantasy* games and it moves at the pace of the player. New players can take their time, look over their options, and make choices slowly, while more

experienced players can quickly select their actions. All of this helps players internalize the controls and deepens immersion through the performative frame.

Affective

FF VII meets many of the qualities of a strong affective frame. The game employs numerous cut-scenes to strengthen the game's narrative and evoke player emotion. The successful use of these filmic elements helps heighten the affective frame of the game. The role-play genre encourages players to take on roles and act out desires, which is also important for this frame.

Shared

The criteria of the shared frame are not found in *Final Fantasy VII*. The game is a single-player standalone game. There is no social performance nor can players communicate with one another.

Narrative

FF VII only meets half of the components of the narrative frame. Although the game has an engaging designed narrative, there are only a limited number of ways to play the game making it less likely that players will create personal narratives.

Spatial

The game employs multiple spatial dimensions. The overview and combat scenes have 3D characters in 3D backgrounds. Players have control over the camera perspective in overview mode but no control in combat scenes. Dungeon and Town scenes have 2D backgrounds and 3D characters (see figure 13). The game uses maps to help the player

navigate the game space. Players can look at a world map at any time to establish character location in the world. Overview movement also allows the players to see a small mini-map in the bottom right corner of the screen so that players can determine their character's relative position. These maps strengthen the spatial frame by helping the player internalize locations. However, the sudden spatial shifts from overview to battle are disruptive to spatial memory. Because this happens a lot, the game's ability to immerse through spatial frame is limited.

Conclusions

In sum, *FF VII* has the traits of strong tactical, performative, and affective frames. It is immersive because the gameplay allows players to move at their own pace, it uses cut-scenes to heighten emotion, and because the role-play genre encourages players to act out desires. However, *FF VII* only partially meets the criteria for the narrative and spatial frames. Finally, it doesn't meet any of the desirable characteristics of the shared frame.

The game is not multi-player or networked. This trait negatively impacts the immersive qualities of both the narrative and shared frames. The game is not a public performance nor does it allow players to interact with one another, which is a crucial part of the shared frame. The narrative frame is weak because the game doesn't encourage personal narratives. It could have if the game was networked or if it allowed the players agency over the designed narrative but the game does neither.

What this analysis tells us about the incorporation model is that video game immersion is dependant on player action. The tactical frame requires cognitive action, the performative frame relies on physical action, and the affective frame calls on psychological

action. *FF VII* allows for all of these actions, which means that it is immersive in those frames. Under this model, immersion is not understood primarily as a reaction to the game but rather the player acting on the game itself. When the player lacks agency, the immersive potential of the frame weakens. When the game denies action such as social action, the frame is detrimental to the immersive experience.

The Rhetorical Model

FF VII employs several means to immerse when analyzed by the rhetorical model. In particular, the game induces immersion through an engaging and recognizable narrative, clear spatial arrangement, and how it invites the player to form relationships with the avatar Cloud and the game's NPCs.

Narrative

This game has form in both discourse and story and thus induces immersion through narrative means according to this model. The story has strong environmental, pro-green and save-the-world themes. It is a tale of discovery and renewal and each area introduces new elements of the world and its characters to the player. The story is immersive because it plays on a number of emotions. There is the sense of power the player gets as they make their characters stronger and use them to fight off hordes of enemies. There is a strong romantic subtext that emerges between Cloud and two female cast characters. There is sadness and loss from the tragedies that the characters witness including the sacrifice of a cast character. All of the playable characters are on the fringe of society and are being hunted by the authorities. This sense of vigilantism, common in the superhero genre, situates the player

characters as heroes who are fighting for the greater good without being confined to a political and judicial system.

In terms of form, the game's narrative uses music and film techniques with some interactive components. Like a novel, the story takes many hours to uncover. Cut-scenes serve the same function as chapter breaks and are well-paced in the game. The 2D backgrounds in the dungeons and towns help establish the tone of those backgrounds by drawing the player's attention to key elements of the scenery. That and the music help to build the story's form. The final battle with Sephiroth introduced the song "One Winged Angel," which is not only an impressive orchestral tune but is also the only song in the game that contains a chorus of singers. The song gives the end battle added ferocity and makes Sephiroth's final appearance memorable and threatening.

Spatial

The game possesses qualities to immerse through spatial means. The characters are always centered on the screen except in the 2D environments. The game uses arrows to draw the player's attention to important objects such as doors. This helps the player distinguish the game objects from the digital world. Changes in space are established through repetition and style. Movement from the overworld to battle sequences is marked by a swirling background and a change in music. Although the battle sequences play similarly to each other, the sheer number of monsters and player characters add a little diversity to them to keep them interesting.

Stylistically, the polygonal graphics are not a detriment to the immersive experience. Characters and objects are still discernable. The game uses polygon cut-scenes (see figure 9) for more simple story information and detailed cut-scenes (see figure 10) for key dramatic moments. In terms of arrangement, the different spaces are clearly marked. The game plays on a television screen and the player must sit nearby because the old Sony Playstation controllers were not wireless. The menu system of the game clearly establishes the game world from the digital space. Within battle sequences, the player controls the characters through the menu controls at the bottom of the screen (see figure 13). In overworld and dungeons, the player controls the avatar. The game encourages presence through repetition, detail, and style leading to strong spatial immersion under this model.

Temporal

The game utilizes limited temporal means of immersion particularly in the battle sequences. As a turn-based game, players choose actions from a menu list. There is usually a delay between player selection and character action. Enemies will continue to attack and take their turn even if the player doesn't respond. In general, the turn-based system requires the player to spend a lot of play time waiting. Switching from overworld to battle mode causes both play and event time to stop temporarily.

In addition, time has little meaning in the story or game world. The story employs a number of flashbacks to help tell past events. However, the plot doesn't progress unless the player acts. At one point in the game, the characters know that Sephiroth has gone to a giant crater to summon a meteor to destroy the world. The meteor doesn't arrive until the

characters go to the crater. A player can spend literally weeks exploring the world and ignoring that plot point because the events are completely dependent on player interaction. Thus, the turn-based system, the timeless story progression, and the seemingly unchanging world are all detrimental to the temporal means of immersion.

Social

Although many of the *Final Fantasy* games employ amnesia as a story trope, *FF VII* weaves it nicely into the player experience. Cloud is a placeholder for the player. He speaks very little and has a rather task-centered personality. He enters the game as a blank slate and discovers his past along with the player. Because of his amnesia he struggles to fit into the social network of the world. Identification with Cloud is fairly easy because he is a blank slate and his struggle to fit in helps the player establish rapport with the other characters in the world.

There are nine playable characters in the game, each with very simple personality types. Even if the player cannot establish identification with Cloud, they can choose one of the other cast characters to play. In addition, the game allows the player some ability of identity expression. Players can rename any of the nine playable characters and can customize these characters' different abilities using the materia and equipment system. The game employs a party battle mechanic in which the player controls three characters at once. This party play feature helps the player establish a connection to a cast of characters and even to put together teams of characters that work well together. This is particularly helpful to

spatially reinforce the romantic connections between characters. *FF VII* thus meets the criterion for this means of immersion.

Interface

FF VII possesses several of the interface means of immersion. The controls of the game are familiar to players of the Sony Playstation. Navigation of the environment is clearly established through the avatar. The avatars are all humanoid with the exception of the character Red XIII, who is a giant red wolf. Although the shift from avatar movement to menu controls does mean a change in the interface, this change is marked by spatial and audio cues that clearly convey the shift in interface to the player. The screen swirls and battle music accompanies marks the beginning of each combat sequence. The character's actions are labeled by the menu interface which comes with accompanying descriptive text. All of this comes together so that the player can use the interface to communicate effectively with the game.

Memory

FF VII employs several of the memory means of immersion. In terms of personal memory, *FF VII* introduced many players to the role-playing game genre. The characters are all adults as opposed to young teenage boys, which was a staple of most role-playing games at the time. The game follows a recognizable mythic story pattern of good versus evil with a number of adult themes such as environmental destruction, corrupt capitalism, military experimentation, sex, and death.

The public memory of the game was reinforced by the large marketing campaign employed by Squaresoft at the time. Not only did this bring the game to public attention, it also highlighted the technical capabilities of the Sony Playstation system. This game set the standard for many role-playing games to follow in terms of graphics and story.

The game also draws on a number of cultural memories. The dirty streets of Midgar conjure images of modern urban waste. The cottages of the nearby towns look very much like they came out of a Thomas Kinkade painting. The cast characters of the Turks are very much modeled after the gangsters in *Goodfellas* (1990). The game employs number of these cultural icons and memories to establish the story and memorability of the game world. *FF VII* thus evokes the memory means of immersion through its narrative components and historical situation.

Exigence

Under the exigence means, *FF VII* encourages immersion through narrative conflict, sidequests, and increased gameplay difficulty. The game's narrative problem takes some time to become apparent. Each new environment poses small challenges for the player to overcome, which become progressively more important to the story. The player must first help Barret and the Avalanche crew on a secret mission to fight Shinra. Then Cloud saves Tifa from a prostitution ring. Eventually, the characters must save the world from Sephiroth who plans on destroying everyone with a giant meteor. These narrative conflicts become increasingly more important to the game world thus heightening their value.

Rewards and penalties also serve to make player action more important. The game offers a number of rewards. After each battle, the characters gain items as well as experience that causes the characters to level and thus become more powerful. The main penalty is death, which takes the player back to their last save spot. This can be troublesome in dungeons because players can only save at designated spots.

The game difficulty increases as the player progresses through the game. In addition, there are a number of side-missions that are extremely difficult but are not necessary in order to beat the game. For instance, there are two monsters called Ruby Weapon and Emerald Weapon that are incredibly difficult to beat and require extremely high level and strongly equipped characters. All of this supports the exigence means of immersion by encouraging player involvement in the game over time.

Conclusions

In sum, *Final Fantasy VII* uses a number of techniques identified by the rhetorical mode to immerse players. The game's narrative positively impacts four of the means. The game's establishes boundaries and defining player movement in the game spaces consistent with the interface and spatial means of immersion. The game also employs a number of exigencies to keep the player engaged in the game.

This analysis of *FF VII* reveals the interplay of the different game mechanics on the immersive means of this model particularly in terms of narrative. The game's form plays an important role as indicated by the narrative means of immersion. The deep characters can enhance the social means by encouraging player identification. The engaging plot can

strengthen the exigence means by making player action more relevant. The setting and structure of the story can encourage the memory means of immersion by drawing on cultural and personal memory. Thus, narrative is interwoven into multiple means because it impacts a number of gameplay elements.

Comparisons

These analyses of *FF VII* suggest that the genre can and does impact the immersive potential of a game. All three models highlight characteristics that are part of the role-playing genre as being valuable for immersion. In particular, the game's strong designed narrative and its use of avatars encourages immersion under all three models. An examination of the age and genre of this game underscores the differences and similarities between the models.

A key component of the role-playing genre is that the story plays a central role in the gameplay. There are some similarities between the models in how they approach character. The ability of the player to empathize with the avatar Cloud because of his narrative situation encouraged immersion according to the criteria of all three models. The models differ slightly as to the immersive value of the NPCs. For the presence and rhetorical models, the NPC relationships count as a form of social interaction and thus they appear in the social means of immersion in the rhetorical model and the use of social actors in the presence model. The incorporation model only considers player to player communication in its social frame and so *FF VII* is not immersive socially according to this model whereas it can immerse through social communication under the other two.

However, the models differ in their approach to story plot, theme, and setting. According to the incorporation model, *FF VII* induces immersion through the narrative frame because it has a memorable designed story. The model does not explain what makes the story memorable. The rhetorical model also indicates that the designed narrative of *FF VII* has the potential to immerse because it has form in both story and discourse. The designed narrative is not part of the criteria of the presence model. These differences reflect the challenge that scholars have had in the application of narrative to assess and conceptualize games. The presence model avoids the issue by not including it while the incorporation and rhetorical models use narrative as one potential way for a game to encourage immersion.

The age of *FF VII* impacted the models analysis of the game in subtle ways. At the time of its release, *FF VII* featured state-of-the-art graphics. For the presence model, the game is not immersive because it lacks photo-realism. The artificial nature of the representations become even more obvious and when viewed with more recent high-definition screens. In addition, technical changes now allow games to have more graphical detail so in comparison *FF VII* no longer possesses the quality of graphical realism that it once had. This analysis of *FF VII* through the presence model indicates that the model will assess older games as less immersive than more recent ones.

In contrast, the rhetorical and incorporation models indicate that the age of *FF VII* is actually beneficial to its immersion potential. The age of the game makes it possible for players to reflect on past game experiences with it. This increases the possibility of the game to possess emergent/personal narratives. The incorporation model situates these experiences

in the narrative frame whereas the rhetorical model situates them in the memory means.

However, both models consider these experiences valuable to immersion in the same way.

In essence, this comparison again shows the foci of each model. The presence model values realism in behavior and appearance. The incorporation model values simplicity of controls and public performance. The rhetorical model values arrangement and style. The role-playing genre is most distinguished by its strong narrative and game mechanics both of which are connected to immersive experiences of the *FF VII* game and each model offers a different reason why. The age of the game impacts the ability of a game to immerse in subtle ways under the criteria of the models. Because of technological limitations, older games will not be immersive under the presence model. Older games have the potential to immerse under the incorporation and rhetorical model if they possess emergent/personal narratives. Thus, the models analyses of immersion are all impacted by the historical situation of a game but in different ways. In the next study of *Halo*, the interface becomes a much more prominent factor of the assessment of the immersive quality of the experience.



Figure 4. FFVII Menu System



Figure 5. Cloud Strife



Figure 6. Sephiroth



Figure 7. Backgrounds: Midgar - Golden Saucer - Cosmo Canyon



Figure 8. Polygon characters



Figure 9. Cut-scene



Figure 10. Maps: Overview - Combat - Dungeon



Figure 11. Combat Close



Figure 12. FF VII compared to FF XIII

Halo: Combat Evolved

Description

The video game *Halo: Combat Evolved* (2001) takes the player to the futuristic world of the 26th century in which humans are engaged in an interstellar war with a group of aliens called the Covenant. Produced by Bungie Studios exclusively for the Microsoft Xbox, *Halo* is a 3D first-person shooter that has spawned two sequels, a number of books and graphic novels, toys, an animated feature and an upcoming live-action movie. *Halo's* story follows a doomed group of soldiers that crash land on a strange space station called Halo. The station itself has planet-like surface with canyons, jungles, forests, and even snowy tundra.

In *Halo*, The player controls Master Chief (see figure 15), a faceless super soldier of very few words but an established reputation of strength. The game is broken into narrative segments in which the player must accomplish specific missions. Upon completion of each segment, the game plays a cut-scene and the next mission begins. Sometimes Master Chief is alone and sometimes NPC soldiers accompany him. He often travels with a cast character named Cortana (see figure 16), a virtual reality program that assists the Master Chief in his missions. The game uses a heads-up display to show enemies, gun targets, ammo resources, and Master Chief's health meter (see. figure 17). The game mostly uses first-person but shifts to third-person perspective when Master Chief rides in a vehicle (see figure 18).

Reception

Although *Halo* was not the first game of its genre, it is perhaps one of the most-widely played and influential. As of 2005, *Halo* had sold over five million copies (Bungie) making it the highest selling game on the Xbox system. It has even been credited for salvaging the Xbox's poor initial sales to make the system a viable competitor against Sony and Nintendo (Hill, 2004). The two sequels in the series are the highest selling games on the Xbox systems and the combined *Halo* series (2001-2007) have sold over 27 million copies worldwide (Guinness World Records, 2009).

The *Halo* series has received much praise and won multiple critical awards. In 2007, the IGN editors (Perry et. all) ranked *Halo* as the single best video game on the Xbox. Collin Oguro (2006) from *Gamespot* wrote, "Halo is not just one of the all-time best launch games for a game system; it's simply one of the best games ever made. The cinematic presentation and fantastic action made you feel like the star of a big-budget sci-fi movie--except it was really good, unlike most big-budget sci-fi movies."

Age

Halo came out in 2001 and was one of the first commercially successful games on the Xbox console system.

Genre

Halo represents the first-person shooter genre but it also draws on the narrative conventions of science-fiction. The first-person shooter series have not changed a lot since

Wolfenstein 3D (1992), which established the genre tropes of gun and projectile combat in 3D space through first-person perspective. *Halo* introduced several new game mechanics including regenerative hitpoints, a dynamic environment, and the use of vehicles as part of the gameplay. However, it is the game's story that often receives center stage since many prior first-person shooters had weak if non-existent narratives.

Technology

Halo plays on the XBox console game system. This 32 bit system was the first game console to contain a hard-drive so that data could be stored on the console and not on save cartridges. It was the first to incorporate Dolby Digital capabilities for surround sound systems. The XBox employs large handheld controllers with two analog sticks, a direction pad, and ten buttons.

The Presence Model

Halo meets five of the six criteria of the presence model. It is the most immersive game under analysis according to this model.

The Quality of the Social Interaction

Social interaction is the only criterion of this model that *Halo* does not quite meet. *Halo* was released before Microsoft initiated XBox Live, an online service that connects XBox players together over a network. *Halo* has multiplayer functionality and can connect up to 16 players together either through a LAN connection or ethernet Internet service. However, player communication through these features is extremely limited.

Players in the same room can talk verbally with one another. The game can even be played on the same television using split screen (see figure 19). Otherwise, players cannot communicate with one another in multiplayer mode except through avatar action such as jumping or crouching. Nonverbal communication is thus restricted to gameplay and verbal communication is absent. These are important components of this criterion and *Halo* is limited in its ability to meet them.

Perceptual and Social Realism

Halo possesses the qualities of perceptual and social realism. The outdoor settings are extremely photo-realistic from beachfronts to snowy landscapes. Coupled this with weather patterns of day and night, snow, and even rain, the landscape comes alive. Although the game uses instrumental music to heighten the mood, it also employs a variety of sound effects from birds chirping in the jungle to wind blowing through canyons to increase perceptual realism audibly.

The only example of poor perceptual realism is the indoor settings. Master Chief explores a number of human and alien space ships as well as some ancient stone temples. These indoor environments do not offer much variety and many of the walls, floors, rooms, and hallways repeat themselves, which draws attention to their constructed nature.

Social realism is enhanced by the game's physics engine. Explosions not only leave charred surfaces on the ground but also throw nearby allies and enemies. The vehicles, particularly the flying ones, are bounded by inertia. They can't just stop on a dime but must slow down first. Weapons are dropped and can be picked up later. Enemy bodies remain for a

little while but do eventually vanish. As such, the game has relatively strong perceptual and social realism.

Telepresence, Teleoperation, and Teleportation

Halo encourages presence through first-person perspective, which this model suggests is the ideal means of establishing immediacy between the player and the game avatar. Movement through the game space is also heightened by a diverse number of vehicles. Some scenes even involve teleportation as the player is transported between areas. However, it is the XBox's use of surround sound and the ability to play on a large screen television that enables the game to meet this criterion.

Perceptual and Psychological Immersion

Halo meets several key qualities of perceptual and psychological immersion. The game environment is very interactive. The first-person perspective directs player attention and the constant action of real-time combat demands player engagement.

The Use of Social Actors in the Medium

The characters in *Halo* have personality and behave intelligently making the game very immersive under this criterion. The enemies and allies that fight with Master Chief employ strategy by using the background for cover and calling for help when they need it. The allies shout out encouragement and offer praise when Master Chief does a difficult maneuver while the enemies call out taunts at the humans and speak alien gibberish to one another. Enemies and allies are even capable of picking up nearby weapons and vehicles and using them. This solid, intelligent behavior helps to establish strong social actors. Because

Master Chief is faceless and only occasionally speaks in a deep voice, male players can easily project their identity onto him.

Intelligent Environment

Halo uses a narrative trick to make the player associate the environment with a personality and thus fulfilling the requirements of this criterion. It accomplishes this through the character of Cortana. As a character, Cortana is a particularly interesting because she travels with Master Chief offering advice and occasionally flirting with him. In the first scene, Master Chief plugs her into his helmet and she essentially becomes part of the interface. She basically establishes herself as the role of the computer. Although she doesn't offer much opportunity for dialog, Cortana has a distinct personality, speaks in English and even gives Master Chief pet names. She simulates the behavior of a human and encourages the perception of an intelligent environment.

Conclusions

Halo meets five components of the presence model. Apart from the lack of strong communication possibilities in the multiplayer mode, the game possesses perceptual and behavioral realism, a first-person perspective, impressive AI for the enemies and fellow soldiers. The character Cortana provides the computer with personality and an appearance of intelligence. The game provides the player with a number of realistic environments to explore making the game very immersive under this model.

This analysis suggests that the presence model favors certain game genre conventions and technology. One of the most important elements of the first-person shooter is first person

perspective, which this model argues is important for directing player attention and establish player immediacy with the avatar. According to this model, the technology reinforces this sense of immersion because the game employs photo-realistic graphics, surround sound, and a computerized physics engine that creates realistic object behavior. In this model, *Halo* is immersive because the game simulates an unmediated environment.

The Incorporation Model

Halo strongly meets the requirements of five out of the six immersion frames that make up the incorporation model. The gameplay is ideally situated for the logic of incorporation because the real-time performance of the game is strengthened when players can navigate the environment and act in it without reflection.

Tactical

Halo requires real-time strategy, which is important for this frame. Players must think and move at the same time. There are a number of different play styles and some work better than others in some missions. More aggressive players may run towards enemies while strafing back and forth in a zigzag pattern to avoid counter-fire. This ability to strategize is also enhanced by the number of weapons available. More patient players can use the game's long-range weapons like the sniper rifle and rocket launcher. Players interested in up close melee combat can use knives or the Covenant energy blades. There are five different vehicles that a player can ride and a vast array of Covenant and human weaponry to use. Most missions involve the player getting from point A to point B. The player can choose their path

and either avoid or run from enemies or kill everything in their path. The diverse possibilities in the gameplay serve to increase player immersion in the tactical frame.

Performative

Halo is a game that illustrates all of the qualities of the performative frame. It uses first-person perspective except when traveling by vehicle, which alters the view to 3rd-person for enhanced performance. Successful gameplay results when the player can internalize the controls and navigate the game environment, which encourages immersion through the performative frame. In addition, the multiplayer functionality turns the game into a public performance.

Affective

Halo allows players to act out desires and uses film techniques to evoke mood. *Halo* uses music and camera angles during cut-scenes to heighten emotional tension and it allows players to engage in cathartic expressions of aggression. It should be noted that this is the only desire that *Halo* allows through gameplay but given the nature of the genre, it meets player expectations. First-person shooters, as a genre, revolve around combat and the emotions that emerge from fighting.

Shared

Halo only barely meets the requirements of the shared frame. This is the only frame where the immersive value of *Halo* is weak. Players do not have much opportunity for identity expression. All players use different color Master Chief sprites but they can give their avatars individual names. There is also no opportunity for communication between

players through the game. However, the game does announce specific actions to all players like if someone dies and who killed them. This feature, which appears on the top left of the screen encourages immersion through the shared frame by making player successes and failures public knowledge but this does not make up for *Halo's* lack of communication channels.

Narrative

Halo offers the potential for immersion through designed and emergent narratives. *Halo's* single player mode revolves around the designed narrative. Cut-scenes occur at specific points in the game. During this time, the game employs instrumental music, lighting, and camera angles to evoke a very dark mood to match the story. The multiplayer mode encourages emergent narratives because it makes the game experience unpredictable and a social action.

Spatial

According to the model, the spatial frame of immersion results when players memorize game maps. Since spatial knowledge improves player success in *Halo*, this game mechanic encourages immersion in the spatial frame. Although the game HUD does not come with a map, there is a small motion sensor in the bottom left of the screen that shows movement dots for enemies and allies (see figure 16). It works much like a sonar system and even has a circular shape with animated concentric rings to emphasize this effect. This helps the player establish spatial continuity and reinforces the spatial frame.

Conclusions

The game mechanics of *Halo* encourage immersion in all five of the six frames of the incorporation model. Performative and spatial frames are deepened when the player memorizes the controls and the level maps. The multiplayer functionality increases immersion in both the performative and shared frames. The real-time strategy and first-person perspective heightens the tactical and performative frames. The game's unique single-player mode and number of game tactics enhance the player's ability to become immersed in the game's narrative frame.

What this analysis reveals is how the incorporation model emphasizes certain gameplay goals. Games such as *Halo* make success in the game dependent on memorization of the controls and environment. Players need to react quickly in order to successfully accomplish the game goals. In this model, *Halo* is immersive because the controls are relatively simple and success in the game is determined by how the player quickly navigates an environment.

The Rhetorical Model

Under the rhetorical model, *Halo* employs six means of immersion. This model draws attention to the game narrative and the emotions evoked through the game experience as important for cultivating immersion.

Narrative

Halo's narrative meets the requirement of form under this model. The game draws on many narrative themes found in science fiction such as ray guns, space ships, intergalactic

war, alien races, unknown horror, and artificial intelligence. The main character, Master Chief, is the ultimate warrior. He is Achilles, an almost unstoppable fighting machine whose sole purpose is combat. Cortana is a spiritual guide. She gives advice and occasional commands to Master Chief.

The game plot follows a straight-forward three-act structure. It opens with action. The starship Pillar of Autumn crash lands on a strange space structure called Halo that has a terrain-like surface but is riddled with passageways underneath. Master Chief and the surviving crew must try to make their escape from this world while being hunted by a group of aliens called the Covenant. As they try to escape, the humans accidentally release a monstrous race of creatures called the Swarm, which threaten to destroy the galaxy. The game gears up towards a climax where Master Chief causes the remains of the Pillar of Autumn to self-destruct thus destroying Halo and the Swarm.

Each mission follows a fairly straightforward pattern. It starts with a short cut-scene that employs filmic elements, followed by player action, and then the mission ends with another cut-scene. In terms of emotions, the game evokes several. The story has the feeling of survival horror, particularly when the player fights the Swarm, which pop out of pipes or come screaming around corners to surprise the player. As a first-person shooter, the game creates the blood-pumping excitement of action. The music, which alternates between heavy metal beats to more somber eerie tunes, helps to reinforce these feelings. In many cases, Master Chief works alone. Gameplay is rather isolating. Most of the characters in each

mission are trying to kill Master Chief making the environment not only lonely but also threatening. The game has narrative form in discourse and story.

Spatial

Halo uses a number of techniques to establish presence which is important for the spatial means of immersion. The game alternates between first-person and third-person perspective. The first-person perspective heightens that feeling of being alone. The player doesn't even see Master Chief. This makes those moments when the player is in third-person perspective or during cut-scenes all the more rewarding. The HUD is an important part of the spatial arrangement because it directs player attention. The targeting display (see figures 17 and 18) is not only the dead center of the screen but it is where the bullets go. The sonar map in the bottom left helps warn the player of impending enemies but the information it provides is limited and further increases the sense of isolation.

The style of the game is photorealistic but enemies and allies are pretty much carbon copies of one another. This helps the player quickly distinguish what to shoot but it also works to establish this as a game space and not a simulation. The enemies scream, bleed, and die but their bodies vanish after a short time period. This further establishes this as a game by keeping out the horror of war. It's less traumatizing to see a single soldier die because there are dozens more just like him. In multiplayer mode this is further enhanced by the fact that all players use Master Chief suits of armor. The soldiers are more robots than human. Although the other models decried the repetitive nature of the indoor settings, this repetition

is actually a useful reinforcement of the digital space and helps direct player attention to fighting as opposed to taking in the scenery.

Temporality

In terms of temporality, the game evokes Kairos through its real-time gameplay. A few missions involve a timer to further enhance temporal importance. Otherwise, there is no distinction between play time and event time. The loading screen occurs between missions so there is no wait during the mission itself. There are a set number of enemies in every mission. Although players can take their time exploring most areas, if they attract the attention of an enemy soldier, they must react or the enemy kills them. This all serves to enhance the temporal means of immersion under this model.

Social

Analysis of *Halo* through the other two models suggested that the social mechanics of this game do not encourage immersion. This finding is reiterated when the rhetorical model is applied. Although the game has multiplayer functionality, players have limited communication and very little ability to express identity or perform roles.

Interface

Halo meets several components that are considered immersive under the interface means. The screen convey appropriate information, the controls are easy to learn, and the avatar is humanoid and responds well. *Halo* plays on Microsoft XBox and through a television screen. The opening scene in the game is actually a tutorial on the controls. Master Chief is unfrozen from cyrosleep, a sort of technologically enforced hibernation, and asked to

perform several tasks to ensure that his body is fully functioning. This clever technique weaves the act of learning the interface with game's narrative structure. The avatar of Master Chief is humanoid but the player rarely sees him. Instead, the player sees through his eyes, which helps the player establish a quick connection to the game world but isolates the player from the avatar. One thing that really helps the player become immersed through the interface are the extremely sensitive and responsive controls. Movement through the game space is fluid as Master Chief can jump, crouch, crawl, run, sneak, walk, and even swim.

Memory

Halo evokes cultural memory by drawing upon work in science fiction. The cryogenic chambers, the weapons, the vehicles, and the military uniforms are all remarkably reminiscent of similar objects in the film *Aliens* (1986). The Swarm, sometimes called the Flood, which conjures biblical connotations, bears a strong similarity to the facehugger aliens of the film. The game also employs the use of interstellar war between humans and a group of alien races, which pulls on cultural memories of the television series *Star Trek* and *Battlestar Galactica*.

The narrative structure of the game resonates with values of public memory. The humans are the good guys while the alien races are bad guys. It's a classic good-looking hero versus ugly villain theme. *Star Trek* and other science fiction stories have used this form of conflict to represent the kind of struggle found in the cold war with two equally dangerous and ideologically polemic sides engaged in silent warfare. In addition, the world of *Halo* resembles the Earth in terms of oceans, sandy beaches, snowy fields, and fetid jungles even

though it is supposedly a large space station. Such imagery helps *Halo* pull on public, cultural, and personal memory to immerse the player using the criterion of this model.

Exigence

The game meets several of the exigence means of immersion. It is multiplayer, offers decent narrative rewards, and has adjustable difficulty levels. In multiplayer combat, the goals are to acquire the most kills. Players gain social currency through successful competition with one another. In campaign mode, each individual mission poses very specific challenges for Master Chief. The player is rewarded with cut-scenes for a job well done or punished with having to start over. The difficulty of the game is adjustable with easy, normal, heroic, and legendary modes.

Conclusions

According to the rhetorical model, *Halo* offers a fairly immersive experience through a deep narrative, spatial arrangement, and references to popular and cultural memory. The game meets six of the means of immersion under the model. It does not meet the social means of immersion because the game lacks the communicative ability for the player to establish identification.

What is interesting about this analysis is that it demonstrates what the rhetorical model does not address. Technology does not play an important role in the immersive experience under this model. The surround sound and photo-realistic imagery are not part of any of the means of immersion except as a stylistic choice.

Comparisons

Halo: Combat Evolved is strongly immersive under all three models and for many of the same reasons. All three models indicate that the game is immersive because it encourages intense gameplay with a clear and responsive interface and all three highlight the social aspects of the game as being the weakest part of the immersive experience. And yet, a closer look at the technology and genre of the game reveals some of the biggest differences between the models.

Apart from the narrative, there is really not a lot that distinguishes *Halo* from any other first-person shooter in the genre. All first-person shooters have very well-established game mechanics including first person perspective and simulated combat. The presence and incorporation models consider the first-person perspective as encouraging to an immersive experience of *Halo* because it helps the player internalize the avatar. For the rhetorical model, this perspective has the opposite effect causing the player to disassociate themselves with the avatar because the avatar vanishes. The visibility of the avatar is a reflection of how the models approach the interface. For the incorporation and presence model, the interface must vanish in order to immerse. For the rhetorical model, the interface must be opaque so it can both immerse yet retain its status as a game.

Another interesting difference appears in how the different models approach the gameplay of simulated combat in *Halo*. The presence model draws on a virtual reality approach to immersion. As discussed in chapter 3, simulations are considered immersive in virtual reality because they represent a desire to duplicate referents through representations.

This perspective is reflected in the perceptual and social realism criteria of the presence model. In contrast, simulation does not appear in the analysis of the other two models, which indicates that they do not rely on this particular interpretation of immersion.

The analyses of *Halo* show how the different models integrate technology into their criteria. The Xbox introduced a number of technical changes to video games. The hard drive enabled the games to hold more data and thus present images with deeper graphical fidelity. The system's processor enabled games to handle faster data transfer allowing for quick response times and more complicated physics engines. The computer could take advantage of surround sound systems. These changes increased the immersive potential of the game according to the presence model because it allowed the game to present deeper graphical and behavioral fidelity and surround the player with sound and images, which are important qualities of immersion according to this model.

The incorporation and rhetorical models do not emphasize graphical or audio fidelity as central to how the technology induces immersion. The rhetorical model places these qualities under the interface means of immersion but suggests that the immersive value of the technology is based on how well it enables communication between the player and the game. Similarly, the incorporation model suggests that immersion increases when a player internalizes the interface. This internalization may result through clear communication between the player and the game. Thus, for these two models communication is a key component of how an interface can evoke immersion. The different model's emphasis on

communication becomes even more clear in the next game under analysis, *World of Warcraft*, which is a good example of a game that invites player to player communication.



Figure 13. Master Chief



Figure 14. Cortana



Figure 15. Halo HUD Outdoor



Figure 16. Halo HUD Indoor



Figure 17. Master Chief in Warthog



Figure 18. Halo Cutscene

World of Warcraft (2004)

Description

Produced by Blizzard Entertainment, *World of Warcraft*, or *WoW*, is the fourth installment of a popular *Warcraft* (1994-present) video game series. Like many mmos, *WoW* requires a monthly subscription to play. Players pay an initial cost for the game software, which includes one month of gameplay. After that time, players must continue to pay a monthly fee, usually about \$10-\$15, to continue to use the service.

The game takes place in the fantasy world of Azeroth. As with the first three games, players are encouraged to choose one of two sides which are racially divided. The Alliance is composed of humans, night elves, dwarves, dranei, and gnomes. The Horde includes orcs, blood elves, trolls, taurens, and the undead. Each faction controls specific areas of Azeroth and fight each other over its resources. Players can only talk, make groups, and work with other players in the same faction.

Reception

The largest and quite possibly most well-known massively multiplayer online role-playing game is *World of Warcraft* (2004) with an estimated 11.5 million subscribers worldwide (Blizzard, 2009). All four *Warcraft* games were commercial successes and highly praised by both players and game developers but *WoW* stands out as the most influential. IGN (2007) rated *WoW* #83 in the top 100 games, which doesn't sound like much but it was the only mmorpg to make this list. The Guinness Book of World Records (2009) ranks *WoW*

as the most popular mmorpg since it has four times the number of players as the closest contender (MMOdata, 2009). *WoW* has received immense praise for its creative narrative, beautiful artwork, and interface design (Rauch, 2004).

Age

Because the game uses a service commodity model as opposed to product, the game changes. It receives regular updates and constant supervision from the game developers. The information on *WoW* presented here reflects the game structure as it existed in the Fall of 2009, although the game was first released in 2004.

Genre

Wow is an mmo, or massively multiplayer online game. This means that thousands of players log onto it through a network connection and play together. *WoW* also falls under the rpg genre in that players create individual avatars and are encouraged to act out game roles through them. Players choose a race and class and then seek to strengthen the abilities of their avatar by acquiring equipment and experience points. Older mmo models required players to do this through *grinding*, which is a term for killing monsters over and over again. *WoW* introduced a questing system in which players accept quests from NPCs and then receive experience, treasure, and reputation from accomplishing those tasks. Quests include such actions as killing a specific number of monsters, retrieving items, traveling from one point to another, protecting a moving NPC from monsters, or navigating through a dungeon.

Technology

WoW is played exclusively on personal computers. It uses the mouse and keyboard and plays via the Internet. Players can join any of the 200 server realms for the game. These realms are divided into four different play types: player versus player (pvp), player versus environment (pve), role-play (where players pretend they are the characters they play in an improvisational drama) and role-play pvp. Players create avatars from ten races and ten different classes allowing seemingly limitless combinations of play experiences (See figure 22.). The game is persistent in that it is always running even when any one player is not in the game.

The Presence Model

This analysis of *WoW* illustrates the social theory behind several of the criterion in the presence model. *WoW* meets five of the presence model's criteria primarily through the game's communicative and highly interactive interface.

The Quality of the Social Interaction

Above all else, *WoW* is a social game. Although it can be played alone, many of the quests and dungeons require a group to successfully navigate. The game uses text-based communication in the form of the chat-box (See figure 23) which allows whispers, private communication to individuals, as well as dialog within a party, guild, or any nearby avatars through the public chat. Players can also employ a wide variety of animated emotions from dancing and kissing to clapping and booing in order to communicate non-verbally. As such,

the game meets the first part of this criterion in that it allows real-time verbal and nonverbal communication.

WoW also meets the second part of this criterion because of the extent to which it encourages player immediacy with their avatars. The avatar generation is individualized allowing a player to create a unique character for the expression of personal identity. The game has its own culture of players with a specific language of terms, behavior expectations, and established friend lists and guild lists. The game creates a satisfying social environment that meets the requirements of this first criterion.

Realism

WoW does not meet the requirements of perceptual realism because it is more aesthetic than photo-realistic and the objects of the world do not always behave appropriately. The game world has been highly praised for its artistic beauty (see figure 24) but much of the imagery is fantasy-themed and has a hyper-realistic quality to it. Most of the objects in the world are merely part of the scenery. Doors can't be opened. Windows are not transparent. The trees do not drip water during rain.

The game meets some of the requirements for social realism. NPC characters have personalities and act. There are children, elderly, men, women, lovers, school teachers, knights, merchants, and a slew of others. By appearance and their text, NPCs reflect specific personalities and generally follow social patterns. However, communication between players and NPCs is limited to quests, purchasing equipment, and getting information from guards.

They behave in a very mechanical fashion. Some walk in circles while others are continually chopping firewood.

Telepresence, Teleoperation, and Teleportation

WoW meets the components of this criterion. The game plays on a computer and can take advantage of large screens and surround sound audio. *WoW* also feature a number of different transportation modes. Avatars can walk or run, which is extremely slow considering the size of the world. They can ride mounts of which there are dozens to choose among. They can take a trip on a boat, ride a flying mount through the air, and mage class characters get the ability to teleport characters instantly through magical portals. Through teleportation, players can move from one place in the game world to another in an instant by using an avatar ability. Players can use their avatars to affect the game world in ways that other players can see.

Perceptual and Psychological Immersion

WoW fulfills many of the requirements of perceptual and psychological immersion. The presentation technology again depends on player equipment by the controls of the game keep the player focused because they are so complicated. The player assumes a third-person perspective over the avatar, although it is possible to shift this to a first-person perspective. The interface itself (see figure 23) primarily uses menus and icons all of which can be turned into hotkeys, assigning an action to a particular keystroke sequence. The game can store over 60 hotkeys. Due to this expansive interface, the game has a high learning curve but this

achieves perceptual and psychological immersion by demanding much of the players' attention and body.

The Use of Social Actors in the Medium

This criterion requires that the NPCs possess both personality and behave within social expectations in order for players to build relationships with them. The NPCs in *WoW* have personality through language, appearance, and behavior. Through the quest system, players are encouraged to develop relationships with the NPCs thus fulfilling the requirement of this criterion.

Intelligent Environment

The computer program of *WoW* meets the requirements of an intelligent environment. The menu and icons of the interface mimic the pictorial form of communication of most computer operating systems. It has a WYSIWIG interface, what-you-see-is-what-you-get. The player controls both the avatar as well as a mouse pointer that changes color and shape when it moves over specific objects. This encourages the player to perceive the game AI of the game as an extension of their computer system.

Conclusions

In conclusion, *WoW* meets five of the criterion for this model. According to the presence model, *WoW* uses social communication with other players and NPCs to immerse a player. The game meets the perceptual immersion, telepresence, and intelligent environment components because of its large visual interface. The game's painted imagery and limited NPC social behavior limit the realism of the game according to this model.

The presence model draws from virtual reality background but it has a strong communicative emphasis. Under this model, *WoW* induces immersion because it allows for communicative action that mimics out of game social scenes. Of particular interest is how the model highlights nonverbal communication. The other models do not address nonverbal interaction even though it is extremely important in everyday communication.

The Incorporation Model

Under the incorporation model *WoW* can function to immerse through four of the six frames. It is a social game and allows players to engage in identity expression while performing in front of one another. Such performance encourages immersion according to the criteria of this model.

Tactical

WoW induces immersion players in the tactical frame through character creation and combat strategy. All avatars in *WoW* have certain powers. These are called abilities. Within each class, a player may choose among three talent skill trees (see figure 26). Once a player selects a skill tree, they gain access to the abilities there. Players can combine trees or focus on one tree allowing the player to customize their character builds. There are also thousands of possible equipment from armor and weapons, which the player can find or buy. The combining and usage of skills and equipment require strategy and planning. A poorly constructed character will have trouble completing quests while a well-designed character will have an easier time. Combat strategy is another facet of the game that requires planning and strategy. Group play also impacts this dynamic. Players must work together in small

teams, called parties, or larger teams, called raids, in order to successfully complete some missions.

Performative

Under the incorporation model, *WoW* has the potential to immerse through the performative frame once the player has internalized the controls. However, this can take some time. Because there are so many player actions, the controls in *WoW* are complex. The player controls both an avatar and a mouse pointer to navigate the game's menu system and perform game actions such as attacking, picking up objects, or accepting quests. That would mean that older players who have mastered these controls are therefore more likely to become immersed in the game than new players.

Affective

Although *WoW* is primarily social, it provides a number of outlets for different player desires, which establishes a deep affective frame. Players who enjoy exploration will find that *WoW* is an enormous world with a number of different places to visit and quests to accomplish. Players who like achievements will enjoy *WoW*'s achievement system that sets forth a huge list of possible tasks and gives achievement points for players who succeed at them (see figure 27). Players seeking an interesting story will find that the quests offer a number of well-designed narratives. Because of the diversity of player options, *WoW* meets a number of different player desires and fulfills the elements of this frame.

Shared

WoW meets and exceeds the requirements to immerse through the shared frame. The game allows for identity expression through avatars and makes most player actions public performance. In party play this is particularly important. If players do not properly perform their roles, they may garner the displeasure of their guild members or team-mates. Although the avatars are pre-constructed designs, players can give their avatars unique names and use the expansive communication system of the game to establish and perform an identity. With the exception of instances, which are specific areas for a single player or party, all other actions in *WoW* can be seen by all players. It is a persistent game, so there are people playing in the world at all times. All actions therefore are public performances. Players can speak, through typed text, which appears as text-bubbles above an avatar's head and appears in the chat channel (see figure 24).

Narrative

WoW possesses both emergent and designed narratives to immerse a player in the narrative frame. No two game experiences are the same in *WoW* because players create their own stories together. The game's designed narrative comes in the form of quests.

Spatial

The spatial frame suggests that immersion occurs when players internalize the game world. This is problematic in *WoW* because the world is huge and a big part of the gameplay involves exploration. The game offsets this potential negative by providing a number of maps for player reference. A small mini-map appears in the top right corner of the screen. Players

can click on it for more detail. These maps not only provide spatial information but also let the player know when they are near quest NPCs and a guard will temporarily mark the map if the player asks for the location of a point of interest or specific NPCs. However, *WoW* only partially meets the immersive requirements for this frame because internalization of the game space is difficult and does not reflect an important part of *WoW*'s gameplay.

Conclusions

In sum, *WoW*'s formal game structure encourages immersion in the tactical, affective, shared and narrative frames. The incorporation model suggests that *WoW*'s immense world and complicated interface negatively impact the game's immersive different value. The social mechanics of the game impact a number of the incorporation model's frames. The avatar system requires planning and strategy, which are important for important the tactical frame, but avatars also plays a role in the shared frame because of how it allows players to express individual identity. The social relationships that form between players in group play achieves the requirements of the affective frame by meeting social desires as well as the narrative frame by encouraging emergent narratives.

This model identifies two drawbacks to immersion in *WoW*. Because the game has a complicated and extensive interface, it has a high learning curve. This makes it harder for the player to incorporate the controls and makes the game less likely to immerse through the performative frame. While exploration is important for the gameplay, *WoW* does not immerse through the spatial frame of immersion because the enormity of the digital world

makes it difficult for players to memorize it all. Thus, the size and agency in *WoW* are drawbacks to immersion according to this model.

The Rhetorical Model

Under the rhetorical model, *WoW* meets the requirements of six means of immersion. The game encourages a number of different gameplay options that fulfill these means.

Narrative

The embedded narratives of *WoW* and the backstory have form and thus encourage immersion through the narrative means of this model. The narrative is primarily exhibited through the quest system. Each mini-quest is its own story but they boil down to really five or six basic themes such as collect X items, kill X number of monsters, or go from point A to point B. They follow clear patterns and all create a desire in the player to accomplish a set task. These stories present a conflict, a reward, and many quests build on each other to create intriguing stories. The game uses music and sound effects to establish the tone of the unique areas but this music is subtle and generally plays in the background like musak in a shopping mall. The player controls the camera so the game doesn't employ visual film techniques.

However, in terms of form, the game constructs a very engaging setting that appeals to a variety of desires. The game encourages a number of player motivations. The desire to gain experience and complete quests fulfills a basic need to improve oneself and to earn the social recognition of other player characters. The desire to harm or hurt is fulfilled through the combat system, player challenges, and raids which are large-scale player versus player conflict. The desire for social interaction is facilitated by the game's extensive

communication system. Players can talk to each other through various channels and even employ a series of animated avatar emotions for non-verbal communication. The narrative reinforces these desires but mostly through the setting as opposed to any kind of game plot.

Spatial

WoW meets the requirements for spatial means of immersion. It creates presence through bounded space, controlled movement, and evocative details. The different areas are carefully labeled and framed on the world map. Important NPCs are easily identified by the symbols that appear above their heads. This enables the player to distinguish those characters as game elements from the vast stage characters that comprise the background. The game employs the use of roads, signs, maps, and NPC guards to help the player navigate the game world by following recognizable paths. All of this works to establish the unique spaces within the game environment.

Temporal

WoW employs numerous temporal means to evoke immersion. The game world actually has a night and day system, which initially matches the time zone of the player. There is a small clock in top right corner of the screen and the option to set a timer so that the player can remind themselves of when to stop. If the player is in a town, a clock will chime on the hour. There are a number of abilities called "buffs" that provide short-term boosts in powers. All buffs appear as small icons next to the avatar information in the top right corner of the screen with a timer counting down to when they will end.

As a persistent game, *WoW* never stops. It's playing right now. Players can enter or leave the game at will. However, this also means that the game can employ a number of time-based events. Certain quests like the Headless Horseman quest are only available during specific days in October. Other quests are timed as to how often the player can do them. These are sometimes called "dailies" because they can be done once per day. Other quests are timed events in which the player must accomplish a specific task within a specific time period.

Social

The social means of immersion are also present in *WoW*. The avatar system allows players to construct and perform identity but similar body shapes help to establish uniformity. The party system allows players to take on specific roles and perform them but a lot is dependent on the player learning the community lingo and joining community groups. A healthy meta-community also reinforces the player's involvement and social work. Interestingly, these communities are racially shaped. Players in the Horde cannot communicate with players in the Alliance and vice versa. Attempts at communication through the game's standard channels result in gibberish. Regardless of faction, all avatars are vaguely humanoid. All of these social features encourage immersion under this mean.

Interface

WoW allows the player to thoroughly communicate with the game environment with numerous options to change the game's settings. Within the game itself the HUD appears around the screen's edges with the exception of the chat box which is transparent. Most

interface features can be adjusted and moved around by the player allowing for customization. However, the complexity of this interface has a high learning curve. The base instruction manual that comes with the game is over 200 pages in length and most of that is devoted to the game's backstory and understanding the interface. This may detract some players who don't have the patience to learn it but others find that this degree of detail helps enhance *WoW's* world. As such, *WoW* only partially meets the interface means of immersion. The interface may enhance immersion for more experienced players but newer players will find it difficult to process all of the game's information.

Memory

WoW can function to immerse through the memory means of immersion because it draws heavily from cultural memory and has the potential for numerous personal memories. The strongest cultural reference in the game is racial. As mentioned earlier, the game is racially divided. In fact, each fantasy race is modeled on a specific real-world culture. The humans are a weird cross between old-school British and American cultures. The dwarves are Scottish and talk incessantly about beer with deep Scottish accents. The Dreenai speak with thick Eastern European accents. Interestingly, the Horde's racial make-up are what we might call disenfranchised and even demonized cultural groups. The orcs are generic African, the trolls Jamaican, the tauran are based on native Americans, and the blood elves sound like Californians. The buildings and behavior of these different racial groups reflect the cultural stereotypes that inspired them.

The game is filled with pop cultural references. For instance, the achievement *I Love the Smell of Saronite in the Morning* is a tribute to the famous quote "I love the smell of napalm in the morning" from the film *Apocalypse Now* (1969). The Guildmaster of Undercity, realm of the dead, is called Christopher Drakul, which is a subtle reference to Christopher Lee who has played Dracula in a number of films. In Silverpine Forest there are two undead characters named Rane and Quinn Yorick, which is a quick nod to Shakespeare's Hamlet. The game draws on thousands of names and concepts from books, movies, television series, video games, and other pop cultural sources. Each race even has its own unique dance style modeled after existing and recognizable moves. The male humans dance like John Travolta in *Saturday Night Fever* (1977). The male night elves dance like Michael Jackson. The female gnomes Riverdance. All of this works to evoke cultural memory and to establish the game within pop culture.

Personal memories of the game emerge through the player's experience and *WoW* constructs an environment ripe for unique group play. Many of the game quests require players to join parties and the guild system invites players to form longer-lasting relationships. These shared experiences are likely to encourage personal narratives according to this model.

Exigencies

WoW meets the requirements of the exigencies means of immersion because it presents a large number of game goals and uses rewards and punishments to encourage the player to want to accomplish game goals. *WoW* is a politically unstable world. The quest

system creates a number of problems for players to overcome in their overall journey to explore the world and to make strong characters. The social rewards for good gameplay come in the form of friendships and notoriety. The difficulty of the game increases as the player's explore the world. The first twenty levels are actually rather easy and only take a few days of gameplay but by the end it takes much, much longer to get a level. An avatar can only reach a maximum level of 80. It can take weeks of gameplay to acquire those last five levels.

The quest system creates a number of mini-goals that can be accomplished in one or two game sessions and allow the player to see progress. The rewards for these quests are increased treasure and experience. The penalty for failure is death or the player must find another quest. Death always damages equipment and players must spend gold to repair their equipment or it loses strength and eventually breaks. Death hurts but players can rebound from it quickly.

Conclusions

According to this analysis, *WoW* can immerse through the narrative, spatial, temporal, social, memory, and exigence means of immersion. The interface means of immersion are weakened by the complicated controls. However, more experienced players are more likely to become immersed after having mastered the controls and learning how to effectively communicate with the game.

Application of the rhetorical model suggests that *WoW*'s immersive nature is heavily tied into its social structures and the sheer number of gameplay options available through it.

The avatar system encourages identity construction and player roles, which is important for the social means of immersion. The group play is influential to the social and exigence means of immersion by encouraging the player to garner social status. The social stereotypes built into the racial systems evoke cultural memories, which enhance the memory means of immersion.

The gameplay of the quest system is also important for a number of the different means. The quest system creates form, which is important for both the narrative means and exigence means. The quests also evoke kairos when they are timed or limited thus encouraging temporal means of immersion. The rewards from the quests and their increased difficulty encourage exigence means of immersion. All of this comes together under this model to suggest that *WoW*'s system induces immersion on a number of levels.

Comparisons

The results of all three analyses suggest that *WoW* is an immersive game mainly because of its social communication mechanics. The game is only a few years old and therefore its age does not impact the immersive experience. The biggest differences between the models emerge by how they address *WoW*'s interface, avatar system, and communication channels. These differences reflect the model's basic assumptions regarding immersion through social interaction. The presence model places value on face-to-face communication. The incorporation model emphasizes social performance. The rhetorical model highlights player relationships.

WoW's expansive interface allows for a lot of player agency particularly in terms of communication but the complexity of the controls makes it difficult for new players to pick it up and play. Application of the presence model suggests that these controls enhance the game's immersive potential because they enable player agency. In contrast, application of the incorporation and rhetorical model suggests that *WoW*'s complex controls of *WoW* may create a barrier to immersion but for different reasons. Under the incorporation model, the controls are not easy to internalize. Under the rhetorical model, the controls make communication difficult. The challenge of using the controls does not become a problem once the player has spent time learning them. As such, *WoW* may become more immersive according to these models once a player has spent enough time through gameplay to learn the controls.

Another communication mechanic of *WoW* that the models highlighted as important for its immersive potential was the game's avatar creation system. Through the avatar, players are able to communicate with one another, express identity, and perform actions in the game. These qualities were identified by all three models as being important to the game's immersive potential. The models' assume that the avatar is an extension of the player in the digital world. As such, communication through the avatar helps to fulfill some of the key communication goals that each model suggests encourage immersion. *WoW*'s ability to communicate in the game space as one would communicate outside of it to meet the presence model's goal of simulation. The avatar allows the player to engage in identity performance,

which meets the presence model's goal of social action. The avatar allows the player to engage in identification, which meets the rhetorical model's goal of social relationships.

One last social mechanics of *WoW* that all three models identified as important to immersion was the communication channels. In *WoW*, players can communicate through text by typing on the keyboard or non-verbally through avatar animations. The different models emphasize this mechanic as important for immersion for the same reasons. It increases player's emotional investment and involvement in the game by encouraging social relationships between players. The similarity between the models here suggests that communication is an area where the model's underlying logic overlaps. However, this only applied to communication within the game system. The next analyses of *Wii Sports* show that the models differ on how to approach communication outside of the game.



Figure 19. WoW Avatar creation screen



Figure 20. WoW interface



Figure 21. WoW Gameworld Stormwind - Undercity - Nightelf Village



Figure 22. WoW World Map



Figure 23. WoW Skill Tree



Figure 24. WoW achievement System

Wii Sports

Description

Wii sports comes bundled with five simulated sports games: tennis, baseball, bowling, golf, and boxing. Each game is patterned after an existing sports game and follows the general rules established for these games. *Wii Sports* can be played single-player or with groups but not online or networked. *Wii Sports* uses cartoon-style graphics and very simple character representations in 3D environments (see figure 31). To play the game, players are encouraged to create their own Mii in the Wii's control panel (see figure 28). The Miis are the equivalent to avatars and are used in a number of Wii games including *Wii Sports*. Although Miis can only have three letter names, they can have a number of body shapes, facial expressions, and hairstyles.

Popularity

Although bundled with the Nintendo Wii system, *Wii Sports* has been extremely well-received. Marketed towards the casual gamer including families, women, and the elderly, the Nintendo Wii system has consistently outsold its competition, the Playstation 3 and the Xbox 360 (White, 2008). As such, the game has sold over 45.7 million copies worldwide as of 2009 (Ivan). *Wii Sports* has proven to be immensely popular and received rave reviews both in the popular press and among gaming communities.

IGN gave it the best sports game award in 2006 writing "*Wii sports* has a tendency to attract those who usually don't play games." *Time* magazine ranked it the #1 videogame of

the year in 2006. Reviewer John Dvorak (2007) from *PC Magazine* praised the game for its system and how much he enjoyed playing it. The game has won numerous gaming awards including five from the British Academy of Fine Arts (BBC News, 2007) and the Best Sports Award at E3 (TeamBox, 2006).

In terms of public reception, *Wii Sports* has proven popular even among communities not normally associated with gaming. Senior citizens have gotten together in large groups for *Wii Sports* tournaments (Collins, 2007). Parents have used the game to bond with their children (Stagle, 2007). Medical doctors suggest that the game could help kids lose weight (Boyes, 2007) and hospitals have used the game to aid in the physical therapy of soldiers (Meurer, 2008).

Age

Nintendo released their seventh generation video game console the Nintendo Wii in 2006. *Wii Sports* came bundled with it.

Genre

Wii Sports falls under the sports game genre because it is modeled after existing sports. It is unusual in the sense that it includes five different sports games on one game disk. However, this still counts as one game with five different gameplay permutations. Sports games emphasize physical action as important to the gameplay. They are all competitive and require players to score points by physically meeting certain challenges.

Technology

The Nintendo Wii has an internal hard drive, stereo surround sound capabilities, and a large processor. The controllers, called Wii remotes, are wireless and connect to the system via Bluetooth. The remotes are the system's most unique feature. They communicate with a motion sensor bar so that movement of the remote is recognized by the system. They resemble standard television remotes in that they are long and rectangular. The remote comes with an attachment called the nunchuck (See Figure 29). *Wii Sports* takes advantage of the Wii motion-sensitive system to use player motion as part of the gameplay. In Tennis, for instance, the player swings the remote like a tennis racket as opposed to pushing a button. Only the boxing game uses the nunchuck.

The Presence Model

Wii Sports only fully meets two and partially meets three other criteria of the presence model because of the game's mode of presentation and limited communication capabilities.

The Quality of the Social Interaction

Wii Sports does possess some qualities of social interaction. In the Wii, players are encouraged to create avatars in the form of Miis (see figure 30). A player can use a Mii in all five of the sports games. This allows the player the opportunity to establish immediacy with the avatar because it is a personalized expression of identity. However the Mii does not encourage social presence, which is the second part of this criterion. The Mii cannot communicate in the game. Its' facial expression do not change during gameplay nor can it speak. The NPCs generally behave like robots even if their unique faces construct a

semblance of personality. The game's primary mode of communication must occur outside of the game.

Realism

The game does not possess perceptual realism because the artwork is cartoonish. The Miis are basically a couple of polygon shapes with a single-color mapped onto them (see figure 27). They are by no-means photo realistic. In tennis and baseball, the crowd in the background are nothing more than multi-colored circles. The game objects have a polished shine to them as if they were all made of plastic. They do behave appropriately though. In golf, the ball bounces after it is struck and will slow down in sand or rough terrain. It even sinks in water traps. In bowling, the ball will roll and twist down the lane based on how the player twists the controller. In contrast, the game's NPCs do not always behave in a socially appropriate manner. They perform the game actions such as hitting the baseball but do not show any excitement when they hit a homerun. Such behavior discourages social realism under this model.

Telepresence, Teleoperation, Teleportation

Wii Sports meets this criterion primarily through the Wii Remote. Players use the remote to bodily engage the interface. When the player swings, or wiggles the remote in baseball, the digital bat on the screen duplicates the motions. With the exception of boxing, which is a little slow to respond, the controls and the actions on the screen are generally in sync. Perceptual immersion is heightened by this clear communication between the remote

and the digital environment. Telepresence is also enhanced by the sound capabilities of the Wii and the system's ability to utilize wide-screen televisions.

Perceptual and Psychological Immersion

Wii Sports partially meets the requirements of this criterion again because of the Wii Remote. This control system requires physical involvement of the player and encourages perceptual immersion. However, these actions require very little mental attention. They are mostly just simple swings of the arm at key moments of the game. As such, *Wii Sports* does not possess the requirements of psychological immersion.

Use of Social Actors in the Medium

The social actors in the game are limited to very specific actions. They have personalities in terms of appearance but there is absolutely no communication between the player and these NPCs. This is detrimental to the traits of this criterion.

Intelligent Environment

Wii Sports possesses an intelligent environment through narration. A male narrator speaks up frequently to congratulate the player on a good move or offer encouragement when the player performs poorly. Text bounces across the screen in an animated display and the controls respond quickly to player requests such as pausing or exiting a game.

Conclusions

This analysis of *Wii Sports* points to the technological focus of the presence model. The lack of communication with the NPCs and through the avatar is detrimental to the game's use of social actors, perceptual and psychological immersion and the social

interaction components of this model. Overall, it is the game's controller that enables the game to meet a number of this model's requirements. The controller requires physical action in the gameplay and it is very responsive to player movements.

According to requirements of the presence model, the game's graphics and communication channels are the biggest drawback to the immersive experience. The graphics are cartoonish, which potentially draws attention to their constructed nature. The communication channels do not allow verbal communication and non-verbal communication is limited to appearance. Although the game allows for multiplayer functionality on the same screen, the presence model does not address this mechanic as part of the social experience of the game.

The analysis is surprising. *Wii Sports* is a simulation game and uses physical action as part of the gameplay. Since the presence model draws on virtual reality theory, these two elements should enhance the immersive quality of the game. Virtual reality emphasizes the physical immersion definition with the goal of simulation and bodily involvement. However, the game does not meet the visual requirements of the presence model because the game uses cartoon images as opposed to photo-realism. In addition the controller does not act on the player. When the player swings it to hit a baseball, the controller doesn't shake to simulate the bat striking the ball. As such, the physical action of the gameplay does not simulate reality according to the criteria of this model. The presence model follows a very narrow definition of simulation that *Wii Sports* does not quite meet.

The Incorporation Model

Analysis of *Wii Sports* through the incorporation models shows that the game has the potential to immerse in four different frames. Interestingly, it is the only game analyzed in this study that does not meet the requirements for immerse through the tactical frame. The game's simple structure does not lend itself to the kind of planning and strategy that this model suggests is important for an immersive experience.

Tactical

Wii Sports does not meet the requirements of the tactical frame. There is very little planning or strategy involved in any of the five sports games. Most of the games have very simple rules and a limited number of player actions. Players perform actions such as swinging a golf club or a tennis racket. The only choice is when to act. Wii boxing and baseball offer players a little agency. Players can choose among a few different punches in boxing and between a fastball or screwball in baseball. This lack of cognitive action is detrimental to immersion in the tactical frame.

Performative

Wii Sports meets the requirements of the performative frame through the ergodic controls of the Wii system. Players hold the controller and swing it like a bat in baseball. Players hold the controller and nunchuck and punch with them in boxing. These controls encourage the player to feel closer to the actions on the screen because they are less abstract than pressing buttons. Such actions work well in simulation games like *Wii Sports*, which

already draw upon real-world referents. This makes the controls extremely simple to learn and encourages the player to internalize them.

Affective

Wii Sports has the potential to immerse through the affective frame because of how it uses film techniques to evoke mood. The player cannot control the camera, which moves to highlight the action. In tennis, players get slow motion replays of winning shots. The game also uses music and a voice over narration to heighten the tension of the action. The game also induces immersion through the emotional desire of competition evoked by sports games. The game meets these desires to mimic the excitement of sports play.

Shared

Wii Sports meets the requirements to immerse through the shared frame since it is multiplayer, allows expression of identity and makes performance public.

Narrative

Wii Sports partially meets the requirements to immerse through this frame. The game lacks a designed narratives but the multiplayer options of the game provide the potential for numerous personal narratives.

Spatial

Memorization of the game space is easy in *Wii Sports*. Players do not control the avatar nor move it. The game employs a menu system (see figure 31.) to move around the different mini-games and to change settings such as the number of players. Memorization of the game space becomes unnecessary. Apart from golf, the games all employ digital

representations of familiar game spaces like a boxing ring, bowling alley, and baseball field. This makes it easy for the player to understand these spaces leading to an immersive spatial frame.

Conclusions

Wii Sports meets the requirements to immerse through the performative, affective, shared, and spatial frames. Unlike the multiplayer options in all of the other games studied here, *Wii Sports* requires players to be in the same room as one another and play on the same screen. This encourages emergent narratives and turns the game into a public performance, both of which heighten immersion according to the shared and performative frames.

The incorporation model emphasizes the immersive value of the simple controls of this game. The gameplay is easy to learn and internalize. This does detract from the immersive value of the tactical frame by reducing the need for the player to choose actions. However, it is beneficial to the performative and spatial frames because players can more readily pick up the game and understand its interface. In sum, this model suggests that *Wii Sports* is potentially an immersive game but a lot depends on whether there are multiple players involved and whether these players enjoy watching and participating in sports games.

The Rhetorical Model

Wii Sports meets the requirements of six means of the rhetorical model. The unique gameplay of *Wii Sports* is featured through this analysis as an important mechanic.

Narrative

Wii Sports has form but no story structure so it only partially uses narrative means of immersion. The game uses film techniques to establish form even if there is no story. The game completely controls the camera thus directing player attention and action. Happy upbeat music plays in the background. A faceless male announcer calls out the results of actions. The background of baseball and tennis even show advertisement billboards.

Spatial

Wii Sports possesses the qualities to immerse through this mean. The game uses cartoon graphics, which are not photo-realistic, but still provide the player with a clear understanding of the digital objects. Players cannot move their avatars through the game space but have extremely good control over the equipment used by the avatars. The baseball bat and tennis racket are extremely versatile and responsive. With the exception of golf, all three games have very clearly defined game spaces modeled after their real-world counterparts. Because the controls are motion-sensitive and wireless, the physical environment becomes an important part of the game experience. The game evokes presence through carefully positioning of the player to the game space and the cartoon images establish the playful game quality of the experience.

Temporal

Like real sports, there is a significant amount of down-time in play. There are moments of action followed by several seconds where the action is evaluated, points are calculated, and the next action begins. In bowling, when the ball is thrown, the player waits

to see how the ball rolls down the alley and how many pins it knocks down. Then the ball returns to the player and they throw again. This process of act, wait, act repeats itself in all of the games. As such, the temporal means of immersion are met by the player waiting for the right moment to act.

Social

Wii Sports employs several social means of immersion. There are very clear roles in each game. There is the batter and pitcher in baseball, the current player in golf, and so forth. The Mii feature allows players to individualize their avatars in terms of identity expression. The Mii can be fat or thin, bald or hairy, male or female, and varying shades of skin color. Although the game itself does not allow communication between Miis, it helps players in the room establish their particular character and encourages a sense of identification because all Miis effectively behave the same. The only real difference is player performance. The multiplayer action in the game requires players to be in the same room. Since each player is working towards similar goals and the game relies on many sports tropes and lingo, the game encourages player community.

Interface

The interface means of immersion are established by the game's controller and the avatar system. The game benefits from the large screen capability of television because all players must use the same screen. Images are clearly presented because of the cartoon animation style. The controls help encourage immersion because they are easy to learn. They

simulate physical actions that are familiar to most people. The avatars, while mostly just stick figures, are humanoid in shape and these avatars respond well to player commands.

Memory

Wii Sports uses cultural and public memory of sports enthusiasm and a large marketing campaign to encourage immersion through the means of memory. Simulated sports games have been a popular form of video games for years. While a few have combined two or more sports into one game, *Wii Sports* brings together five. If players don't like boxing, they might like tennis or baseball. Sports in general are an important cultural and social activity. They are a source of pride, entertainment, and even gambling. Sports talk is a common topic used in the everyday communication of the world for people to share like-minded interests and feelings. Sports bring people together and gives them a safe outlet for aggression and competition. They have been around for thousands of years. As such, there is a rich cultural heritage regarding sports. And while professional sports have been plagued with a number of scandals, issues, and problems, the public memory of sports is generally a positive image.

In addition, Nintendo embarked on a huge multimillion dollar marketing campaign for the Nintendo Wii specifically targeting young women, moms, and older adults (Chmielewski, 2006). The goal was to change the image of the people who played video games and why. Sports, which are enjoyed by all ages, was a good place to begin because interest in sports is socially acceptable for most demographic groups. Fantasy games like *World of Warcraft* attract a very specific crowd but sports are more accessible to a larger

audience. It is for this reason that *Wii Sports* is popular among non-gaming crowds. Because players socially interact outside of the game, it provides a more comfortable social atmosphere for people who do not engage in much digital communication.

Exigence

Although the goals of *Wii Sports* are fairly straightforward, the game fulfills the requirements of the exigence means of immersion. Sports games calculate player performance in terms of points, which are easily understood. The social rewards of the game are fairly strong when played with others. The difficulty of the game is adjustable and because of the enclosed game system, players cannot easily cheat or have an advantage over each other. In normal sports, physical strength is an important bonus for players. In *Wii Sports* fast reactions have more value. These are skills that players can work to improve. The game even comes with a fitness option (see figure 31.) to help players hone their skills in the game.

Conclusions

In conclusion, *Wii Sports* features a number of immersive means identified in the rhetorical model. It meets the qualities of the spatial, temporal, social, interface, memory, and exigence means. This is primarily because of the game's presentation and unique gameplay. The presentation establishes the game's boundaries and directs player action. The gameplay encourages the player to associate the game with spectator sports.

What this analysis reveals is how the rhetorical model constructs the meaning of gameplay. The gameplay influences the spatial and temporal means of immersion by setting

it apart from normal life experience. This separation must be recognizable to the player otherwise the action loses the immersive qualities of this model because it assumes a game structure is necessary for immersion. As such, this model may be less valuable for media texts that do not include a game structure.

Comparisons

This final analysis reveals some of the strongest differences and limitations of the three models. The traits that enhance or detract from the immersive experience are different among the models. The game only met two of the six criteria under the presence model. This is surprising considering the game's innovative use of motion sensitive technology fulfills several developmental goals of virtual reality, which is the theoretical source of this model. Under the incorporation model, *Wii Sports* has the potential to immerse in four different frames. This is mainly due to the simple game structure and interface, which helps meet the easy-to-learn requirement of the incorporation model. The game employs six different means of immersion under the rhetorical model mainly through the game's multiplayer capabilities and how it draws on the genre conventions of professional sports.

The differences in how the models assessed the immersive value of the game play and player communication in *Wii Sports* are profound. In the game, the player takes on very specific roles with singular tasks. The bowler in bowling tries to roll a ball down a lane to knock down pins. The golfer in golf tries to hit a small golfball into a hole. There are constraints to these actions. The golfer must accomplish his task with as few swings as possible. The bowler has two chances to knock down as many pins as possible. The player

accomplishes these tasks through the simple physical actions of swinging the Wii remote and pressing a button. The game rules are simple and the goals narrow.

These game mechanics define the game's formal structure. They are detrimental to the immersive experience according to the criteria of the presence model. The gameplay of *Wii Sports* draws attention to the constructed quality of the interaction. The mechanics are beneficial to the immersive experience when analyzed with the incorporation model because the mechanics gives clear actions for the player to perform. The mechanics are also beneficial to the immersive experience under the criteria of the rhetorical model because of how they separate the action of the game from normal life experience. These differences represent how the models position the player in terms of the game when they are immersed.

In the presence model, an immersed player has complete agency over the game world. They should be able to act in it like they would the normal world. *Wii Sports* does not offer this kind of agency and we can see that reflected in the presence model's analysis of the game. In the incorporation model, an immersed player is an actor performing for the benefit of themselves and others. *Wii Sports* employs a physical form of gameplay but because players must engage the same screen, their performance is public. As such, analysis of the game through the incorporation model suggests that it is immersive. In the rhetorical model, an immersed player is engaged in play. They are engaged in an activity with spatial and temporal components that follows its own set of behavioral rules and is established through communication. *Wii Sports* encourages such an activity, which is one of the reasons why analysis of the game through the rhetorical model suggests that the game is immersive.

However, the biggest difference between these analyses can be seen in how the different models assessed the multiplayer functionality of *Wii Sports*. As seen in the last analysis of *WoW*, all three models place heavy emphasis on the social and communication qualities of games. But unlike *WoW*, players of *Wii Sports* are spatially close to one another and do not communicate through the game technology but rather in person. The presence model does not recognize physical communication as a form of social interaction because it focuses entirely on the communication channels of the game itself. This is reflected in its analysis of *Wii Sports*. The other two models recognize out-of-game communication but the focus is different. The incorporation model emphasizes player performance and identity expression. Since *Wii Sports* has these components, the incorporation model's analysis of the game is favorable. The rhetorical model considers identification important to the immersive experience but does not specify whether this has to happen in the digital world of the game. As such, analysis of the social qualities of *Wii Sports* with the rhetorical model also suggests that it is immersive.

In sum, *Wii Sports* reveals how the different models value player behavior. The controls of the Wii require players to become physically involved in the gameplay by simulating the required actions of sports games. This simulated behavior is immersive according to the different models if it achieves the desired player to game relationship of the model. For the presence model, this means that the player must be able to act in the game as they would outside of it. For the incorporation model, this means that the player must have very specific goals in order to turn that behavior into a performance. For the rhetorical

model, this means that the player should recognize their behavior as play. Such differences are reflected in the analyses of *Wii Sports*.



Figure 25. Mii Creation



Figure 26. Wii Remote and Nunchuck

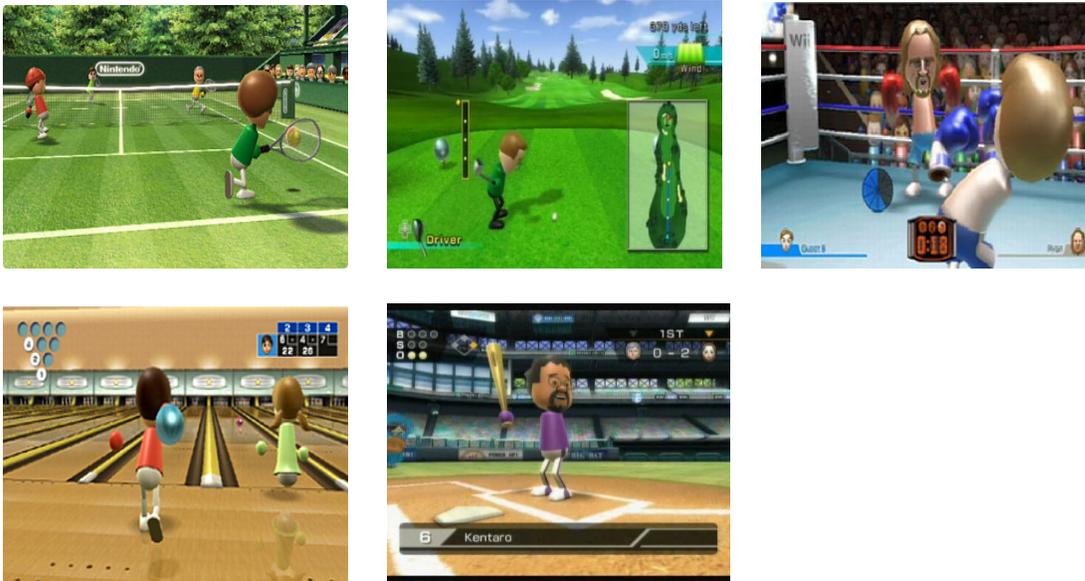


Figure 27. Wii Sports Tennis - Golf - Boxing - Bowling - Baseball



Figure 28. Wii Sports Menu

Conclusions

This study has examined five different games using three models of immersion. The goal has been to see what these models tell us about the immersive quality of each game in order to test the model's viability and flexibility. Through these analyses we can explicate game mechanics that each model identifies as either valuable or a hindrance to player immersion and how they appear in the different games. The real test of this study was to see if the rhetorical model offered anything new to our understanding of immersion in video games. Often the models identified the same game mechanics as being valuable to an immersive experience. They differed on their justification as to why these mechanics are or are not immersive.

The next and final chapter of this dissertation will summarize the results of these analyses to suggest two key ideas. First, the trends where the models overlap in their results suggest that the rhetorical model is viable because it identifies many of the same game mechanics as the other two as enhancing or disrupting the immersive experience. Second, the rhetorical model offers a valuable addition to the study of immersion because it is less likely to fall into genre traps, can adapt to technological change, can identify the immersive potential of older games, recognizes the qualities of the video game medium, and offers more detailed explanation as to why specific game mechanics are likely to encourage immersion.

CHAPTER 6. RHETORIC AND IMMERSION

"Immersion, therefore, is the single most important factor as to why people play certain genres of video games." - Faisal Qureshi *Immersion, the Greatest Hook*

Introduction

Video games are a young medium. However, in just forty years they have pervaded the homes and lives of countless people worldwide. They have become an influential entertainment medium that pushes the potential of interactivity and agency through digital technology. The study of this medium is also in its infancy but quickly growing. According to media scholars Bolter and Grusin (1999), we tend to understand new media through our knowledge of older media. This is certainly true when we examine the concept of immersion in video game technology.

This chapter examines the results of the analyses in chapter 5 to determine the extent to which the rhetorical model offers both a viable methodology for the study of immersion and an expanded understanding of the experience. I will then review the steps taken to introduce rhetoric as a methodology for the study of video game technologies and conclude with an evaluation of immersion as a rhetorical function.

Viability of the Rhetorical Model

In the last chapter, I applied the presence, incorporation, and rhetorical models to study the immersive potential of five different video games. The results of these analyses suggest that the games under study have characteristics that may immerse players. Although

the three models rely on different logic to pinpoint game attributes that may influence immersive experiences, the results show that the models are all looking at the same game mechanics as affecting the experience of immersion. The results also show that the models often evaluate those characteristics in the same way. If these other models are viable then the rhetorical model is at least consistent with them. The models do differ in their explanations for how and why these mechanics enhance or hinder a game's ability to immerse a player but much of these differences result from each of the models' underlying logic regarding the nature of the immersive experience.

The similarities in the results can be seen through five basic game attributes. The first mechanic is social, which includes the game's avatar and communication channels. All three models assessed the social components of *WoW*, *Tetris*, and *Halo* consistently. They differed slightly on *Wii Sports* because the presence model does not account for out of game communication and *FF VII* because the incorporation model does not consider NPCs as social agents.

The second mechanic is narrative and it consists of the game's story and its mode of discourse. The presence model does not account for this mechanic so it must remain out of this discussion but the incorporation and rhetorical model were consistent in their analysis of the narrative of all five games. They only differed in regards to emergent narratives but only in regards to placement in the models. The rhetorical model placed emergent narratives under its' the memory means of immersion while the incorporation model placed them under its' narrative frame.

The third mechanic is the interface, which involves the controller, the screen, and the actions that the player can perform in the game space. All three models identified the complexity of *WoW*'s controls and the tiny screen of *Tetris*'s as being influential to the immersive experience of the games, although the models differed on how. The models suggested that the interface of *FF VII* was potentially disruptive to the immersive experience while the interface of *Halo* and *Wii Sports* generally encouraged immersion.

The fourth mechanic is whether the game is multiplayer or not. The models were consistent in how they analyzed the multiplayer functions of every game except *Wii Sports* because the presence model does not recognize multiplayer games that are not networked.

The fifth mechanic is the ludic elements of the game, which is essentially the kind of gameplay it allows. This includes the game goals and actions of the game. The presence model also doesn't address this mechanic but the rhetorical and incorporation models were consistent in how they addressed the gameplay of *Tetris*, *FF VII*, *Halo*, and *WoW*. They differed on *Wii Sports* because the incorporation model does not consider twitch games that require little cognitive action as encouraging immersion.

In most cases the models differed on the reason why these different mechanics encouraged or discouraged immersion. The only exception to this was the avatar. All three models highlighted the avatar as being a key immersive factor. These models all suggest that the avatar creates a bridge between the player and the game world and that the avatar invite immersion by encouraging immediacy with the player. This can be accomplished by allow the player to express identity through the avatar according to all three models. In addition,

the models also emphasize the importance of communication through the avatar. Although the models differ on what type of communication invites player immersion and whether it is necessary, they all suggest that the players' ability to express themselves is important to the player's sense of immersion in the game world.

The differences between the models involve the specific traits that an immersive game should or should not possess. These traits often overlap with one another. Under the incorporation and rhetorical model, an immersive game has an easy-to-learn interface, fulfills player desires, possesses a designed narrative, and the player can successfully navigate the game space. Under the presence and rhetorical model, an immersive game possesses engaging NPCs and a large world to explore. Under the presence and incorporation models, an immersive game has first-person perspective and requires cognitive action. The justification for how and why these traits matter to the immersive experience differ based on the model's understanding of the meaning of immersion.

Some immersive traits are unique to different models. The presence model identifies graphics, artificial intelligence, and agency as important qualities of immersive games. The model recognizes the multiple meanings for immersion in terms of psychological and physical. It consists of six criteria and an immersive game meets all of them. This is a very narrow and specific approach towards immersion. However, this strength is also its greatest weakness. Because the model is justified through virtual reality theory, the components it highlights do not recognize the differences between the media. Gameplay doesn't even come into the picture nor does the physical play space outside of the game.

The results of these analyses in chapter 5 suggest that the rhetorical model is viable by comparison. There are differences but in general the models are consistent in their results. The rhetorical model rarely stands alone but in such cases it is because the game does not meet the immersive goals identified by the model particularly in the exigencies and memory means which are uniquely rhetorical.

The Contributions of the Rhetorical Model

To understand how the rhetorical model adds to our understanding of immersion, it is helpful here to reflect on the results of chapter 5 to see the limitations and opportunities in each model's analyses. The presence model identified *Halo* and *WoW* as possessing the qualities of an immersive game. The other games did not meet many, and in the case of *Tetris* any, of the model's criterion. This shows a limitation of the model regarding different game genres and structures. This model defines immersion as a sensory experience that requires the player to forget that they are interacting with a medium. The model's understanding of immersion works well for simulation games like *Halo* but not for simulation games like *Wii Sports* because the model is not flexible enough to account for differences in presentation style. This model understands immersion as a sensory experience heightened by player agency. In other words, the more the player can act, speak, and affect the game world, the more likely they are to become immersed in it. This works well for games like *WoW* that encourage multiple modes of gameplay but not for puzzle games like *Tetris*, which constrains player behavior to a few simple actions.

The incorporation model identifies public performance as valuable to the immersive experience. This is something that the other two models do not address. The incorporation model suggests that there are different types of immersive experiences and that a game can immerse through a number of different ways. It separates these elements into frames so that there are different types of immersion. A player can become immersed in the game story and not the game goals. The incorporation model is not an itemized list of technical attributes. The immersive value of each frame relies heavily on the player's disposition and motivation and the model itself is intended for qualitative analysis of players. All of the games in the study had the potential to immerse through at least one frame with *Halo* and *WoW* meeting the most.

Although the incorporation goal of internalizing the game works well for the interface, it seems ill-equipped to explain immersion in the other frames. Knowing the tactics and narrative of a game like *FF VII* takes away the surprise and discovery that are important parts of the initial gameplay experience. Incorporating the spatial layout of a game works well for first-person shooters like *Halo* where the goal is to kill but in games like *WoW* where one of the game goals is to explore and experience new areas, already possessing that knowledge could lessen the value of the experience. The incorporation model recognizes that players become immersed in narrative or tactics but doesn't give a good explanation as to how or even why it happens apart from player desire. It too cannot account for interactions in the physical play space apart from reflecting on those experiences in personal narratives.

The rhetorical model identifies the traits of game goals, temporal structure, and game meaning as important to the immersive experience. These are unique to this model and reflect an understanding of immersion as a multifaceted relationship formed between a game and a person and it is experienced through gameplay. Like the presence model, it seeks to answer the question what makes an immersive game but like the incorporation model, it offers a list of different ways a game may immerse as opposed to a set criterion. This gives the model flexibility to address the immersive value of multiple game structures. The rhetorical model identifies several means of every game under analysis. The game *Halo*, *WoW*, and *Wii Sports* met the most of these means while the game *Tetris* met the least.

The limitations of the rhetorical model result from this complex understanding of immersion. Each mean seems to value specific forms of gameplay. A game with multiple gameplay options like *WoW* will possess more of the immersive means whereas games with narrow gameplay options like *Tetris* or *FF VII* will have fewer. None of the games under analysis failed to meet the criteria of the spatial and memory means of immersion. It is questionable therefore if all games will meet them and that these means are indeed valuable to the study of immersion. In addition, rhetoric is not exactly a narrow field of study but is rather scattered across disciplines with different scholars appropriating a diverse selection of theoretical approaches. This is both a weakness because it makes it hard to firmly ground analysis but it is also a strength because new media is also highly diversified (Manovich, 2001) and is flexible enough to allow for integrate theories to emerge (Zappan, 2005). As such, the rhetorical model offers a strong theoretical base for analysis of video games.

First of all, it is less likely to fall into a genre traps. The diversity of the means ensures that it may identify a variety of different gameplay mechanics and genres. Secondly, the rhetorical model can adapt to technological change. It does not hold up a technological ideal such as virtual reality as necessary for immersion. It also doesn't ignore those features as can be seen in its analyses of *Tetris* and *Wii Sports*. Thirdly, the rhetorical model can identify the immersive potential of older games because it recognizes the historical situation of the game under the memory means of immersion. This is clearly seen in its analyses of *Tetris* and *FF VII*. Fourthly, the rhetorical model recognizes the qualities of the video game medium. The different means focus on the gameplay interaction between player and game and recognize the value of both in the experience of immersion. The gameplay structure is clearly maintained by how the model emphasizes an opaque interface as opposed to an invisible one. The game must be recognizable as a game. Lastly, the rhetorical model offers more detailed explanation as to why specific game mechanics are likely to encourage immersion. This can be seen particularly in how the rhetorical model expands on how the narrative of *FF VII* and *Halo* invite immersive experiences.

Although each model has its strengths and weaknesses as illustrated in this study, they all teach us very different information about the nature of the immersive experience. This refers to how immersion feels, how it positions the player in relation to the game, what cultivates and hinders the experience, what it does to the interface, and what immersion ultimately means. Under the presence model, immersion feels like an unmediated experience, the player no longer recognizes that they are playing a game, the interface vanishes, and the

player is physically and psychologically transported to a new world. None of the games entirely create this type of experience and thus none of them are entirely immersive according to this model, although *Halo* and *WoW* come the closest. Under the incorporation model, immersion feels like a performance, the player is acting on a stage, the player knows how to perform although not entirely what to do, the interface becomes an extension of the player's body and mind, and the player becomes part of the game. For this reason, games with very simple interfaces like *Tetris*, *Halo*, and *Wii Sports* are immersive because players can more readily use them to accomplish game goals. Under the rhetorical model, immersion feels like a dialog, the player and game are working together, the player and game can effectively communicate, the interface is opaque, and the player and game form a relationship.

The presence model holds up realism as the ultimate path to immersion. Images and behavior need to be as realistic as possible in order to immerse a player. The incorporation model focuses on understanding. When the game and player understand one another, they are in sync and immersion will eventually result. The rhetorical model's primary focus is communication. When the player and game can clearly interact with one another, the game can draw the player into an immersive experience through specific persuasive techniques. Although each model has a different perspective, they are all helpful tools to understand the experience of immersion. So what has this dissertation taught us? It reveals several key ideas on what is immersion, how video game technologies immerse, and why rhetoric is a viable theory for the study of immersion.

What is Immersion?

The concept of immersion is multi-faceted. As discussed in chapter 3, there are three main trends regarding the meanings of immersion within the literature of media communication. There is *psychological immersion*, which defines immersion as an emotional experience. This comes mostly from narrative theory and is most often applied to literature. The second type of immersion is *physical immersion*, which argues that immersion is a physical state of being. This meaning can be traced to art and is very popular in virtual reality scholarship. And finally, there is *attention immersion*, which considers immersion to be a cognitive action. This meaning comes from cognitive science and is perhaps the least used. All three meanings of immersion come from different media traditions and have been applied to video games. However, immersion cannot be understood through just one of them. The discourse analysis described in chapter 3 found that video game players, designers, and producers consider all three meanings of immersion as part of the overall experience.

Immersion is a complicated concept and certainly not exclusive to any one medium or activity. However, we can identify some key qualities of the experience. Immersion distorts spatial and temporal perception. In media, an immersed individual loses track of time and becomes so engaged in the content of a mediated message that they are less aware of things outside of the message. This creates the perception of immersive depth. The more deeply immersed a person becomes, the greater the temporal and spatial distortion. The experience also has width. It is possible to become immersed in one part of a message and not another.

This is particularly relevant for mediated messages with multiple components such as art, audio, and narrative.

We should understand immersion as a unique relationship that forms between a human and mediated text. This relationship shapes how humans understand and experience mediated messages. In essence, immersion reflects a desire to feel close or part of the content of a message. Through this closeness, a person experiences the sensation of pleasure particularly when immersed in an entertainment medium designed for that purpose. As such, immersion can transform a message and the listener by making the message more important and more personally relevant to the listener. It is for this reason that immersion is often held up as the ideal mediated experience and why many game designers create games with the intention of purposefully evoking it (Qureshi, 2009). The challenge is determining how and what technical elements of a video game will evoke an immersive experience.

How Do Video Games Immerse?

Our prior understanding of video game immersion has been to use the principles of immersion from other media. A deeply engaging character induces immersion a person in a book's narrative. The simulation of artwork and photography create a sensation of realism that can create spatial distortion and thus immersion. Virtual reality induces immersion by surrounding the user's body with a computer interface. When we apply these approaches of immersion to video games, we must assume the immersive experience and entertainment functions of these diverse media are the same. It is important therefore to recognize what comprises the video game as a medium in order to understand how it can immerse.

As described in chapter 2, there are four components of the video game medium and each impacts the techniques that can be used to immerse a player. All video games have a game structure. This means that they have rules, artificial conflict, players, and a quantifiable outcome. They are constructs that are distinct from the natural world around them. Within these constructs, people engage in play. To lose the game structure does not make a game any more or less immersive but it risks destroying its status as a game. As such, video games do not need to simulate unmediated space like virtual reality. They are allowed by their game nature to be distinct both in appearance and behavior.

Secondly, all video games use the presentation method of the screen. This means that it has boundaries. It can use visual techniques borrowed from film and television to present information and to elicit emotional responses. The screen is an important part of video games because it is the primary means of communication between the computer to the player. The computer is the third element of the medium. All video games are digital and interactive. This means that a computer is necessary to translate digital information from the game text and to recognize player input. The player essentially plays with the computer and communicates with it through the last component, the interface. The kind of communication action that occurs is gameplay. All four of these ingredients and the applied action are necessary for the video game medium and are thus crucial to understanding how video games immerse. Each shapes and informs the immersive experience through the content of the message and the structure through which it is conveyed.

Video games are designed experiences. Someone writes and creates them with clear messages in mind. And according to game designers like Rouse (2001) and Laramée (2002), video games are designed to evoke player immersion. It is an intended function of the game. Much like comedians want people to laugh at their jokes and horror film-makers want their audiences to squirm in terror, video game designers want their players to feel immersed in their games. This is an act of persuasion. Because players experience video games through gameplay which is a communication act between a player and game, and because immersion is an intentional function of the games, the experience can be understood through a rhetorical lens.

This dissertation identified seven rhetorical means through which a video game can encourage an immersive experience in a player. Each of these means refers to a specific attribute of the medium and uses rhetorical principles to understand how to structure that attribute to immerse a player. All of them come together into the rhetorical model of immersion. Chapter 4 outlines each of the means in detail. The rhetorical model of immersion blends together multiple theories from a variety of different scholars. It includes everything from narrative to visual rhetoric. This is slightly problematic in that these different theories are intended for different applications. Burke (1968) applied rhetoric to the study of narrative literature. Sonya Foss (2004) applies rhetoric to communication action. Aristotle (1991) used rhetoric to describe persuasion through public address. Each of these authors wrote at very different times and for very different audiences. However, if we assume the argument of Alan Gross (2005), that new rhetorical scholarship doesn't replace the old

with new knowledge and instead builds on older concepts, it is possible to accept a broader understanding of rhetoric as the study of purpose in language. The rhetorical model of immersion, while theoretically diverse, is held together by the desire to understand how video game technologies communicate an immersive experience. Given this goal, we must then ask whether or not such experiences are really a good thing?

The Value of Immersion

The rhetorical model is built on the theory for visual rhetoric designed by Sonya Foss (1994). The first two parts of this schema were addressed in Chapter 4. I began by identifying the rhetorical function of the media as immersion and then seven techniques used to fulfill this function through style and form. However, there is one more part of Foss' schema and that is to determine the viability of the function. Is immersion really a good thing? Does it contribute positively to a gameplay experience and does it benefit the audience in some way?

According to the discourse analysis described in chapter 3, those communities that engage, create, and distribute the video game medium consider immersion a positive experience. They generally associate the concept with feelings of fun and pleasure. Players use immersion as a tool for judging the overall entertainment value or quality of a video game. The more immersive, the better the game. This desire is reflected in game designers who consider immersion an important design component (Qureshi, 2009). Some designers (Salen & Zimmerman, 2004) have challenged the idea that all good video games must be immersive but do not dismiss the value of immersion.

However, not all things that are desirable or pleasurable are good for us. Video games serve a number of useful functions from cathartic escape to education but they are by and large designed for unproductive play. Immersion, which causes spatial and temporal distortion, could potentially cause a player to miss something important outside of the game. It is also possible that this experience could lead a player to become addicted to a game.

Although much of the literature highlights the enjoyment felt through immersion, the experience is also sometimes associated with feelings of guilt and has encouraged a number of cultural hopes and fears. This is particularly true for media texts designed for the purpose of entertainment and play. There is a distinct understanding of play as being unproductive (Caillois, 2001) and in some cases a waste of time and energy (Weber, 1958). Under this logic, time spent in play can later generate feelings of regret particularly if a participant feels like that time could have been spent for "better," more productive, activities. Since immersion can distort the perception of time, it may result in a person playing longer than he or she intended. Guilt and sometimes anger may result after the experience.

Because of its association with pleasure, the cultural reactions to immersion have followed either two extreme paths. On one hand is a utopian view of technology that considers immersion an invaluable part of a heightened experience that will enable humans to transcend normal communication through immersive media. On the other is a dystopian view of technology that sees immersion as a parasitic trap that will draw people into a dependant and unfulfilling relationship with media (Murray, 1997). The utopian view values

immersion as the means to establish better communication and understanding. The dystopian view suggests that immersion may become addictive and even permanent.

The fear of addiction is perhaps the most compelling. Aristotle (1991) argued that people, as a general rule, seek out pleasure and avoid pain. Because they evoke sensations of pleasure and an altered state of being and thinking, media texts are sometimes associated with drugs. Certainly, immersion and drugs can both cause positive feelings as well as distort the senses. However, these fears of immersion are largely unsupported. Addiction in media remains a questionable proposition (Griffiths & Davies, 1998) and with only rare exceptions of mental illnesses, immersion is, by and large, a temporary experience (Murray, 1997).

The second fear is that the representational media text will become more real than the objects or ideas it represents. In other words, people will be unable to distinguish the fantasy, or represented images, from reality, the referents. The simulation replaces the simulated creating what Jean Baudrillard (1994) called simulcra. Not only would this reshape people's understanding of the universe but it could also cause them to remain in that immersed state of being and become ignorant of the world outside of it. They would essentially become trapped in Plato's cave. If the immersion becomes too deep, then the subject may not even recognize the world outside of the media text and behave not only inappropriately but potentially in a violent and destructive manner. Such deep immersion is actually a detriment to the immersive experience of video games because it would mean the disintegration of the game structure.

The fears of addiction and permanence are often applied to children. For instance, the immersive quality of role-playing games like *Dungeons & Dragons* have evoked a number of concerns. Films like *Mazes in Monsters* (1982) vocalize this fear that impressionable children and teens will become lost in a mediated world. In the film, a young Tom Hanks becomes so immersed in a fantasy role-playing game that he can't leave it and ends up killing a homeless man whom he thinks is a troll before trying to magically fly off of a building. Hank's character has become so deeply immersed that he can no longer return to reality.

The discourses of the communities who create and play video games suggest that immersion is a desirable experience. There are some concerns regarding addiction and permanence but such fears are either unsupported or would mean a disintegration of the gameplay into some new experience. More research as to the effects of immersion, both long-term and short term, on player behavior and their mental states is needed before these negative fears can either be confirmed or laid to rest.

Future Implications

The rhetorical model is perhaps not the best tool to answer questions regarding the impact immersion has on a person's well-being. However, it can be used to study the immersive quality of a video game. This is useful for game players, game designers, and game scholars. Game players could use this model to more fully describe their experiences. It would give them a vocabulary of concepts with which to understand why and how a game is immersive. While it is unlikely that players would have the background in rhetoric to be able

to justify their claims in any depth, this basics of this model would offer them a list of categories with which they could break down the immersive value of a game.

Game designers would be able to use this model to construct new games with the intention of immersion. Since the model avoids the genre traps found in older models, this would free video game designers to explore new types of gameplay and stories while retaining a basic structure to encourage immersive experiences. It would perhaps be most useful as a tool for justifying new game development. Designers could use the concepts presented here to argue how and why their game ideas would be more likely to succeed. Given the cut-throat nature of this commercial business, any tool that could assist game designers in making better games is highly valuable.

Game scholars perhaps would benefit the most from the rhetorical model because they could use it as a spring-board with which to more thoroughly apply rhetorical theory to game texts and experiences. Not only does it provide the tools for a rhetorical criticism of a game text but it also opens the doorway for other types of rhetorical analysis. It helps the scholar more completely understand the gameplay experience and to be able to explore in depth the impact of interaction on player interpretation of video game texts and their meaning. All in all, the model itself offers a new theoretical approach to game studies.

The rhetorical model offers a new way of thinking about how we experience video game messages. In particular, it introduces the concepts of memory and exigence to our understanding of how video game technologies induce the sensation of immersion. Memory historically situates the video game not only as a cultural object released at a particular point

in time but also a personal experience. Exigence reflects an important component of the game structure, which has been often forgotten in prior analysis of immersion in video games. Both of these qualities are unique to the rhetorical model and show the real strengths of this approach. It recognizes the importance of the player and the message to our understanding of the experience. It accounts for the unique qualities of the video game medium. And it situates immersion as a communicative goal of the technology, which enables designers to better construct immersive messages.

Future Areas for Research

Where can we go from here? Chapter 5, applied the model to five games that were generally considered commercial successes. The assumption being that these games are popular and are therefore enjoyable. As such, they are likely to encourage immersive experiences. It would be interesting to compare the results of this analysis to player responses to determine if these games really are immersive and if the model has clearly identified the characteristics that players consider immersive.

It would also be good to apply the rhetorical model to games that were commercial failures in order to see if those games were immersive or not. This may reveal whether or not immersive potential impacts video game reception. It might also reveal a weakness in the model if it cannot clearly identify games that are not immersive. If all video games are immersive under the model then the model serves no purpose.

One last area for future study is to examine the immersive potential of non-traditional video games that utilize multimedia or push the boundaries of game space. Taylor and Kolko

(2003) argued that pervasive video games like *Majestic* are immersive because they bring the game into the non-game space making it more real for participants. I have argued that such an approach may be immersive but it risks destroying the game structure. But how would the rhetorical model handle this type of game? Would it recognize the loss of the game structure or would that have no affect on the immersive potential of the game? *Majestic* also employed many non-traditional game interfaces such as faxes, emails, and instant messaging. Would the rhetorical model maintain its integrity with these multimodal interfaces.

In addition, how would the rhetorical model handle games that broaden the game space? Some location-based mobile games like *Mogi Mogi* are played using cell phones and GPS technology. They are played in physical spaces with digital spaces overlapping one another. This adds complexity to the spatial means of immersion. Is the rhetorical model still applicable given these unique game mechanics? If so, could we apply this model to media other than video games? What would it take to adapt the model to study the immersive potential of film and literature? What about other digital technologies with interactive components? I believe that the rhetorical model would be able to recognize these changes because it offers a comprehensive approach to how people interact with video games and would thus be able to identify unique changes to the game structure and spaces and how these qualities would impact the technical interplay of the video game components and what that will do the immersive experience of a video game.

Conclusions

The concept of immersion is indeed the cornerstone of a communication theory of new digital media (Ryan, 1994). The immersive experience helps us to study how people interact and understand mediated messages. It is not just the study of significance but rather a study of experience. New digital media invites people to interact with a mediated message. They aren't just passive observers but rather engaged participants. Digital technologies such as video games capitalize on this form of communication. However, we are still struggling to understand how people construct meaning through their interactions. Immersion offers us a gateway to describe the relationship that forms between humans and digital media and the communication potential that exists there.

The storytellers of old used language to transport us to faraway lands and places. They excited our imagination and immersed us into exciting new worlds. The aesthetics of art sought a similar experience by transporting us to a heightened sense of existence. Immersion in film and television was both thrilling and fearful. New digital media has followed these trends but with the added component of interaction, it promises to immerse the audience like never before. You aren't just watching or listening but are part of the experience. You are contributing to it.

Immersion is a complicated, multifaceted relationship formed through communication. It is not just action but a combination of movement and meaning. It bridges thought with image. As such, we must tread carefully when designing and describing immersive experiences. When we understand it fully, we will be able to communicate in

ways that have the potential to transform people. Like the power of baptism, immersive mediated messages have the potential of changing who we are and our understanding of the world around us.

The rhetorical model offers an effective tool for the analysis and development of immersive experiences in video games. The model allows for a rhetorical approach to video game analysis and it is not intended to be all-inclusive. There are perhaps other rhetorical means that video games could employ to induce immersion especially as video game technologies develop and change. The goal of this dissertation has been to explore the concept of immersion in video game technologies through a rhetorical lens and to provide a theoretical structure with which to understand the process by which we interact, interpret, and experience the unique entertainment messages of the video game.

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APPENDIX

GLOSSARY

Agôn - Competitive, skill-based games like Chess and boxing.

Alea - Chance-based games like Blackjack.

Attention Immersion - Immersion as a cognitive act, an epistemology, a way of thinking and understanding.

Avatar - Digital representation of a player in a digital space.

Cast character - Character who serves a role in a video game narrative.

Chronos - Ancient Greek conception of clock time.

Constitutive Rules - The underlying formal logic behind a game such as the number of squares on a chessboard.

Cultural memory - Shared knowledge that reflects a particular worldview, values, and beliefs of a specific culture

Cyclical Time - Conception of time in video games in which actions are repeated in a very simple pattern.

Designed narrative - Constructed narrative elements of a video game designed by the creators of the game.

Emergent narrative - Narrative experiences of a video game that are personal and emerge through gameplay.

Event Time - Conception of time in video games in which the game state changes.

Exigence means - A rhetorical means of immersion. It involves the game's conflict and includes goals, game rules, and the reward/punishments within the game and how they act to immerse an individual.

Exigence - Lloyd Bitzer's concept of a problem that demands rhetorical action to solve.

Form - Kenneth Burke's theory of the psychology of the audience; the creation of an appetite in the mind of an audience and the satisfying of the appetite

Functional character - A character who serves a game mechanic either hindering or helping the player accomplish game goals.

Game - "A game is a system in which players engage in artificial conflict defined by rules that result in a quantifiable outcome" (Salen & Zimmerman, 2004; p. 80)

Gameplay - The activity of a player within a game structure.

Game roles - Positions with defined tasks and responsibilities that function towards the accomplishment of game goals

Goldfarming - The act of acquiring in game goods to sell outside of the game for cash.

Identity Performance - The act of expressing an image of self through dress and behavior.

Identity Play - Sherry Turkle's description of how people experiment with different identities through digital communication technology.

Identification - Theory of Kenneth Burke. "Identification is the process of symbolically joining with other human beings at the level of social rules, roles, and strategies" (Ambrester & Strauss; p. 30)

Ilinx - Thrill-seeking games centered on perception-manipulation like spinning around dizzily or rock climbing

Implicit Rules - The unwritten rules of a game usually concerned with etiquette and proper behavior.

Incorporation Model - Theoretical model of Gordon Calleja used to describe the experience of players when immersed in video games.

Interface means - A rhetorical means of immersion. It describes how the presentation method, usually a screen, audio, the controls, player representations, and player representations in the form of avatars can immerse a player.

Kairos - Ancient Greek concept of subjective time. Sometimes defined as the "opportune moment."

Memory means - A rhetorical means of immersion. It describes how individual, popular, and cultural memory influence immersive experience in video games.

Mimicry - Role-play games that involve simulating some other activity like House.

Modernism realism - Don Slater's theory that photography introduced a new criteria for representational realism, which follows perspective laws, only allows existing referents, and encourages a detached mechanical objectivity.

Narrative means - A rhetorical means of immersion. It details how the story and discourse of a video game can immerse a player.

NPC - Non-player character. Any character in a video game that isn't controlled by the player.

Opaque interface - Lev Manovich's description of a media interface that allows people to see through it to get at the content but the interface is remains visible enough to allow a person to use it to navigate the media content.

Operational rules - Explicit directions usually found in game manuals that define the recognized guidelines of how to play a game.

Persistent games - Video games that are always playing regardless of whether one player is engaged in the game.

Personal memory - Individual experiences that occurred in the past.

Personal narrative - See emergent narrative.

Physical Immersion - Immersion as a physical state or ontology. It is cultivated by the senses and identified as a feeling of transportation, of being, in another place.

Pixelated - A digital image with blocky lined edges whose pixels are individually distinguishable from one another.

Play - An activity governed by its own set of behavioral rules and established through communication that is voluntary, fun/interesting, and temporal.

Player - A person who acts within a game to achieve the desired outcome of the game.

Play Time - Moments of time during gameplay in which a player is actively affecting the game state.

Presence - A player's sensation of immersion as defined by virtual reality theory. A bringing forth of a message to the eyes of the listener as defined by rhetorical theory.

Presence Model - Theoretical model of Alison McMahan that can be used to describe the immersive potential of a video game.

Player character - The character controlled by the player in a video game. This is also called the avatar.

Psychological Immersion - Immersion an emotional experience, a phenomenology, a way of feeling and experiencing.

Public memory - "A shared sense of the past, fashioned from the symbolic resources of a community and subject to its particular history, heirarchies, and aspirations" (Brown, 1995; p. 248).

Real time - A temporal structure in which play and event time act in tandem

Response time - The amount of time it takes for a computer to process a request or action of a person through an interface.

Rhetorical Model - A theoretical model designed by Shaun Cashman that can be used to describe the immersive potential of a video game text.

Save cartridge - A device used to record video game data and store information regarding past gameplay sessions.

Social Roles - Positions that serve community-oriented goals such as conflict management and leadership.

Spatial means - A rhetorical means of immersion. It details how construction of physical space, game space, play space, and digital space in video games can be used to immerse a player.

Split screen - A multiplayer function of some video games in which the screen is split usually in half with different images appearing on each part of the screen.

Stage character - A character in a video game who merely serves to give depth to the background.

Stasis - Ancient Greek conception of a pause or inactivity of rhetorical action. The modern interpretation considers this a moment of inactivity in time.

Teleoperation - The ability to use tools through a medium to physically affect something distant from the body.

Teleportation - Instantaneous movement from one space to another.

Telepresence - The sensation of bringing something distant to user's physical presence and establishing a rapport between the two.

Temporal means - A rhetorical means of immersion. It explains how include video games temporal mechanics can be used to immerse a player.

Trivial realism - Don Slater's theory that an artist could use some interpretation to create a representation and it would be considered acceptable before the advent of photography.

Twitch game - A video game that requires only physical reaction to play.

Video game - A medium composed of a game, a screen, a computer, and an interface. It is experience through the interaction of gameplay.