BREAKING OUT OF THE INDUSTRY: THE INDEPENDENT

GAMES MOVEMENT AS RESISTANCE TO

HEGEMONIC VIDEOGAME DISCOURSE

by

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ABSTRACT

        The aim of this thesis is to examine the way that the videogame industry

has evolved as a complex sociotechnological system and how the discourse

surrounding the industry, as well as videogames as a medium of expression, has

shaped that development. This shift in the nature of videogame creation from

individual authors and small studios to the monolithic entity known as "the

Industry" was accompanied by the creation of an ideology that defines the

identity of a community and places constraints on videogames as a medium.

This is the ideology of the "hardcore" gamer. In order to understand this

ideology, its impact and its significance, I will focus on the discourse surrounding

the videogame industry and particularly on the limits of this discourse. One such

area of discourse where antagonisms arise is in the growing community of

independent game developers.

        The independent games movement can be looked at as a direct result of

what Laclau and Mouffe refer to as articulation – the process by which

relationships are established in such a way as to alter the identities of the

elements themselves. As the videogame industry became increasingly

articulated, the identities of games, gamers and game makers became more and

more narrowly defined. This increased areas of antagonism within the discourse,

allowing for resistance and the possibility of disarticulation.

Though the independent games movement has grown substantially in recent years, the degree to which this movement resists the ideology of the videogame industry is unclear, as is the role of the technology in this process. This paper will examine these relationships through the discourse of both the mainstream videogame industry as well as that of the independent games community.

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CHAPTER 1

INTRODUCTION

From its humble beginnings in the latter half of the twentieth century, the

medium of videogames has become a massive multinational industry. Where

game designers once had to acquire the prerequisite skills to bring their visions

to life themselves, large development studios now command resources

comparable to the motion picture industry (Nichols, Farrand, Rowley & Avery,

2006, p. 5; Williams, 2009, p. 41). However, with the development of any large

sociotechnical system, the flow of information and resources is accompanied by

a flow of power toward certain groups and away from others. In the United

States, there is one ideology that is commonly associated with videogames. It is

embodied in the concept of the "hardcore gamer." The hardcore gamer is a

White male in his twenties or thirties. He invests a great deal of time and money

into playing games (Juul, 2010a, p. 29). He plays fast, action-packed games like

Halo (Kubik, 2010, p. 58) and places his videogames before all else, often

forgoing social conventions and hygiene (Kushner, 2000b; Nichols et al., 2006,

pp. 44-45). This is the figure that many people see when they think of

videogames. He is the one seen by most of the game industry, as well as by

many videogame researchers (Bogost, 2006a, p. 4).

While the term hardcore gamer appears frequently in videogame discourse and is often used interchangeably with the term "real gamer," it is important to note that this hardcore ideology is not the natural state of videogame culture, nor is it necessarily representative of videogame culture as a whole. On the contrary, the "common sense" attitude toward this view of gamer culture is, itself, an indicator of strength of the ideological coloring that is occurring. This does not imply that all videogame culture is a manifestation of this ideology, only that it cannot be completely separated from it (G. King & Krzywinska, 2006, p. 188). Indeed, it is difficult to escape from this view of videogame culture, as many of the most influential members of the videogame industry operate as if these hardcore gamers do, in fact, constitute the whole body of videogame players.

When compared to the target audiences of other media, such as television or newspapers, this demographic seems strangely narrow. Indeed, the exclusionary nature of hardcore gamer ideology marginalizes the vast majority of people (Fron, et al., 2007). Although the rise of the videogame industry has provided the resources for great technological advances for realizing creative expression, it has also created daunting barriers to creative input from outside the mainstream. Whereas videogames used to be a medium for nonconformists to find new ways of expressing their ideas, there are now few individuals who hold enough sway in the industry to actually bring their visions to fruition. As these voices are silenced, their potential audiences are left without any content designed to meet their needs. It is only in the last few years that these

technological barriers have been lowered to the point that independent developers can enter the market, let alone compete. Though many of the logistical barriers can be overcome through the steady march of technological development, the social barriers that have been erected are not so easily circumvented.

In recent years, an independent games movement has arisen in response to many of the deficiencies of the mainstream videogame industry. Consisting primarily of small studios and solo developers, the movement continues to grow, fueled by up-and-coming amateurs, as well as disillusioned industry pros (Kohler, 2010). Despite its growth and growing popularity, its place in the modern media landscape and its relationship to the videogame industry are still unclear. Some scholars consider independent development to be part of the "greater games industry" (Martin & Deuze, 2009, p. 278), while others claim that independent games are not really "independent" at all (Jahn-Sudmann, 2008). This text will attempt to give perspective to the debate over the nature of the independent games movement by analyzing the relationships of power between independent developers and the industry, the ideologies expressed by these two groups in their discourse, and the ways in which these relationships and ideologies are shaped by the technology itself.

The key to understanding these relationships is understanding how the hardcore gamer ideology developed alongside the fledgling industry. As this ideology became more and more narrow, it marginalized a greater and greater number of social groups. Eventually, even developers began to call for a

revolution, attempting through discourse to distance themselves from the current videogame culture and associate themselves with the traditions of past developers (Designer X, et al., 2000). Though calls for change came from a number of sources, it would take new technological developments in order for the movement to experience real growth. Thus, it makes sense to try to understand the videogame industry and the opposing independent game movement as two parts of a large and complex sociotechnical system.

The Birth of an Industry

In order to address the hegemonic forces at play within the videogame industry, it is important to understand the history of videogames as a medium of expression and, more importantly, how the power structures related to videogame production have changed throughout this process, creating the current discourse surrounding the industry. While a complete history of videogames is beyond the scope of this paper (and, indeed, many excellent books have already been written on the subject), I would like to highlight several key phases in this process, each of which is characterized by unique economic, political, and social relationships. A more detailed description is provided in Chapter 2. It is also important to note that this paper tends to focus on the history of videogames in the United States and North America (and to a lesser extent, Europe), rather than in Japan and East Asia. Although the "gamer" paradigm in the Japanese market is substantially different from its American counterpart, many of the circumstances surrounding the American videogame

industry parallel similar situations in Asia. In both cases, a discourse has

emerged around the videogame industry, defining who is meant to play

videogames and what videogames are supposed to be like. Although the

complex relationship between these two foci of videogame production and

culture, that is, the United States and Japan, could easily warrant its own study, I

will not attempt one in this paper.

The history of videogames can arguably be traced back to the late 1950s,

when William Higinbotham, an American physicist, made *Tennis for Two*, an

electronic tennis game played on an oscilloscope (See Figure 1.1). The game

was not made commercially available to the public, but rather was designed

specifically for a visitors' day at Brookhaven National Laboratory. It was a novelty

item. Indeed, Higinbotham made no attempts to capitalize off of his creation. He

was, after all, still a physicist and he saw his creation as little more than an

example of the simulation capabilities of the existing oscilloscope (Bakie, 2005).

At this point in time, this was the field of videogames—a small network of

people and technologies surrounding a single technological artifact. The artifact

itself had still not fully acquired its new identity as an entertainment device. It

was first and foremost an oscilloscope, a scientific tool. Its intended audience did

not go beyond laboratory visitors and its financial support came, technically

speaking, from the US Department of Energy, which funded the lab (Bakie, 2005)

A few years later, a major step forward took place at MIT. Steve Russel, a

graduate student, created *Spacewar*. Initially, the game was simple, with two

ships each trying to shoot down the other. As the game grew in popularity,
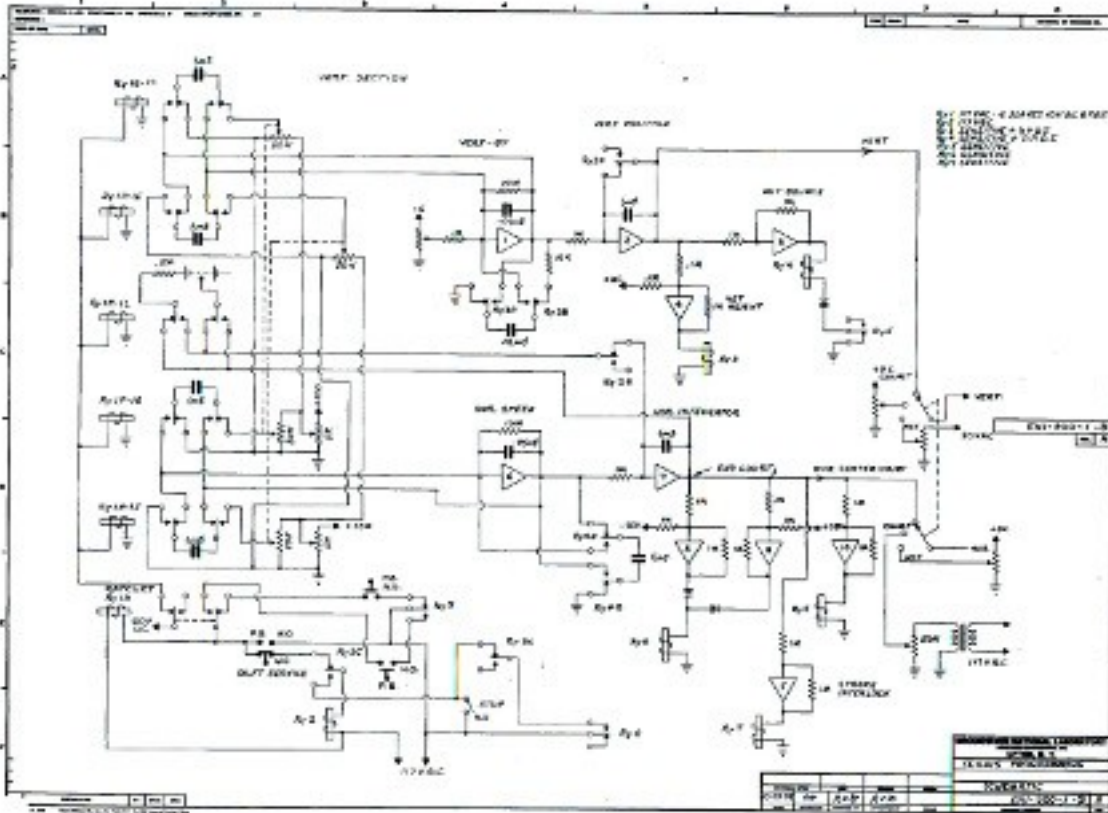
Figure 1.1: *William Higinbothom's Schematics for* Tennis for Two*. (Brookhaven National Laboratories, 1958)*

additional programmers added to the project, creating a star field in the background, gravity, and the "hyperspace" ability. Though *Spacewar* gained a great deal of popularity among university students, the cost of the computer system to run it, about $120,000, was prohibitive to any practical commercial venture (Bakie, 2005; Kent, 2001, p. 26). Nevertheless, *Spacewar* was a game. Its programmers and players had articulated it as such. For the first time, videogames had their own sphere of public discourse.

The advent of the personal computer (PC) and dedicated videogame consoles made possible an entirely new paradigm of videogame development possible. For once, not only did a large population have access to the tools to

create videogames, but there was also a large potential audience. Videogames were no longer just a novelty, they were a business.

Despite the rapid growth of videogames, many of the most successful games were created not by large companies, but by independent developers, often individual designers making games by themselves. One of the first videogame designers to rise to prominence by means of the PC was Richard Garriott. In 1980, at the age of 19, he created *Akalabeth: World of Doom* for the Apple II computer. The game itself was a role-playing game, greatly inspired by the game *Dungeons and Dragons*. Garriott began by selling copies of the game in Ziploc bags, until it was picked up by a publisher (B. King & Borland, 2003, p. 38). Sales of the game managed to put Garriott through college and the game later became the basis for Garriott's highly influential *Ultima* series (Bakie, 2005).

With games as a commercially viable enterprise, small game development studios began to emerge. With more programmers at their disposal and ever-increasing computer performance, game designers were able to create larger, more complicated and more visually appealing games. Many of these studios grew up around existing figures in the industry, such as Richard Garriott and Origin Systems (Bakie, 2005). For the most part, this allowed designers to make use of the greater resources of the studio, removing many technical barriers, while still allowing them to maintain creative control over the content of the games.

As computing technology continued to improve and videogames gained more widespread popularity throughout the 1990s, many studios began to find

incredible success. Games like *Doom* and *Warcraft* sold millions of copies, turning obscure companies into household names overnight (Bakie, 2005). Videogames had become a part of Western culture, as well as a lucrative new industry.

At this time, advances in graphics technology and computing speed enabled game developers to begin creating three-dimensional (3D) games. Though somewhat crude and blocky at first, in a matter of a few years, 3D went from being a neat gimmick to being the standard among games on both the PC and console systems. However, these advances were not without their price. By making the jump into 3D, the amount of work required to create a game increased dramatically. Game studios went from a few dozen people to teams as big as 350 people (Schoback, 2005). These dramatic shifts in technology, organizational structure and game content had a great impact upon the relationships and power structures that existed between members of the videogame community. It also helped to solidify a certain image of videogames in the public mind.

By the beginning of the twenty-first century, videogames had become big budget projects. Gone were the days of a teenage kid making a game and selling it at the comic book store. Hundreds of people worked on single titles, often outsourcing art and music to still other companies. The videogame industry was now a social and economic force that rivaled Hollywood, although the medium itself had only existed a few decades.

Move for Independence

It was at this time that the first calls for opposition began to appear. One of the earliest of these was the *Scratchware Manifesto*, a document created in the summer of 2000 by a number of anonymous game developers led by Greg Costikyan, who was known in the Manifesto only as "Designer X." In it, they accused the videogame industry of suppressing creative vision and innovation in favor of merely imitating existing games. They also highlighted many of the business practices that they rejected as unfair and detrimental to the quality of the finished games, including the concept of "crunch time." It was a call to arms directed at those working in the industry, filled with cries of "Death to EA and Vivendi!" (Designer X, et al., 2000).

The revolution that Designer X and his coconspirators hoped for did not occur. The work practices of the videogame industry in the US at this time tended to be shrouded in secrecy (O'Donnell, 2008, p. 2), so the bold accusations of the *Manifesto* were lost on all but those working in the industry. However, many of the injustices of which they accused the videogame industry would be made public in just a few short years, thanks to a new communication tool – blogging.

In 2004, an anonymous blogger known only as "EA Spouse" (later revealed to be a woman by the name of Erin Hoffman) posted an entry on her LiveJournal page describing the working conditions that her then fiancée endured working for Electronic Arts (EA). According to her, EA employees were consistently and deliberately overworked during crunch time, often over 85 hours

in a single week. She went on to claim that they were denied overtime pay in violation of California state law. This abuse was able to continue unnoticed for a long period of time by virtue of the unique nature of the videogame industry. Because potential employees were so eager for a chance to make videogames, they were generally very dedicated to the project, despite the poor working conditions. Additionally, if an employee was unable to endure the harsh conditions, there were plenty more people eager for their chance (Hoffman, 2004).

Hoffman's blog incited a wave of public outrage against EA. Hundreds of exploited workers and their partners began to speak out against the software company and its employment practices. The scandal ultimately ended in two class action lawsuits, with EA paying out a $14.9 million settlement to its software engineers and a $15.6 million settlement to its graphic artists (Gamasutra, 2006). In addition to exposing the organizational and administrative problems that Designer X had condemned 4 years earlier, the EA Spouse case illustrates the vast disconnect that had emerged between those with creative control over the content of a game and those who actually create it.

As quality of living for videogame developers was reaching all-time lows, alternatives were also disappearing as smaller developers were bought out by larger corporations. Electronic Arts became notorious for absorbing smaller studios including Westwood Studios, Maxis, Bullfrog and even Richard Garriott's Origin Studios (Bakie, 2005). Eventually, this would lead to almost all creative control in the videogame industry being held by four companies, Electronic Arts,

Activision, THQ, and Ubisoft (Martin & Deuze, 2009, p. 290). Despite being a creative industry that thrives on new titles, the increasingly conservative mega-conglomerates choked off their supply of new content, preferring to invest in "proven" titles (p. 284). As the videogame industry became an increasingly stagnant and hostile environment for developers, the radical point of view of the *Manifesto* writers became more and more widespread. Developers were no longer providing creative input to the titles on which they worked. Their roles had become more akin to that of an auto worker on an assembly line (Shumacher, 2006).

At the same time as these changes in videogame development culture were taking place, major technological changes were taking place as well. Though digital distribution had occurred in one form or another since the earliest days of videogames, it was not until 2005, with the introduction of the Xbox Live Marketplace that there was a means of providing downloadable content to consoles. This created a way to bypass costly manufacturing and retail costs, thereby allowing lower budget titles to enter the highly competitive "mainstream" market (Williams, 2002, p. 44). Digital distribution has since become one of the most important technologies for independent developers, even shaping the structure and identity of the independent development (Martin & Deuze, 2009, p. 280).

The boundaries to entering the videogame industry were further lowered by the widespread availability of development tools such as Adobe (formerly Marcomedia) Flash (Irwin, 2008). Traditionally, acquiring the necessary

development tools to begin creating games was difficult, particularly on consoles. Developing for a console required a specialized software development kid (SDK) that could only be obtained from the company that created the console (O'Donnell, 2008, p. 2). This meant that a start-up company needed a certain amount of starting capital, which in turn demanded that their final product have a higher financial return. Affordable alternatives made it possible for small or one-man teams to make small games without the promise of large sales.

This combination of social unrest and technological opportunity created spaces within the global cultural system in which the independent game movement could grow to become a significant influence, both culturally and economically. As developers move into these spaces, they are proving the financial viability of markets that had long been overlooked by the industry (Martin & Deuze, 2009, p. 292).

Additionally, many of these developers are challenging existing economic models and basic industry assumptions. In May of 2010, the Humble Indie Bundle, a collection of five previously released independent games (with a sixth added later on), earned over a million dollars in the course of a single week by offering their games on a donation basis, free of digital rights management, donating nearly a third of the earnings to charity (Wolfire, 2010a). While the success of Humble Bundle by in no way proved the reliability of this distribution model (Vogel, 2010), it challenged preconceived notions about the financial viability of independent games, the necessity of digital rights management (DRMs) and the nature of the gamer community. A second Humble Bundle

would follow in December, becoming even more successful than the first (Wolfire, 2010b). As the independent movement grows, it opens up new questions as to the relationship between independent game developers and the videogame industry, as well as questions as to the nature of the independent game movement itself.

Genesis of Research Problem

Though videogames, as a medium, have become increasingly commonplace, even to the displacement of other media (Williams, 2009, p. 41), they still lack the sense of validity that more established media enjoy. They have been questioned as art forms (Ebert, 2010; Jenkins, 2005), as narratives (Eskelinen, 2001), and even as protected speech (Gamasutra, 2010). This is due, in part, to the inaccessibility of videogames to lay audiences. Videogame culture, particularly that of developers, tends to be somewhat isolationist, operating in what O'Donnell calls "imaginative secrecy networks" (O'Donnell, 2008, p. 38). Many aspects of this culture, such as "game talk" (p. 45), carry over into the wider gamer culture, performing the dual function of uniting members of the culture and excluding others. This makes the goal of widespread videogame literacy nigh unattainable and further complicates the cultural clash between gamers and other social groups.

In academic discourse, videogames do not fare much better. As Williams (2002) points out, videogames often find themselves as the subject of media effects studies, though the methodologies employed by such studies are

problematic at best (Ferguson & Kilburn, 2010; United States Senate, 2001).

The relatively young field of game studies has arisen to fill many of the

theoretical gaps, yet is itself part of a culture with an ideology; one not immune to

the influence of gamer culture. Real hardcore games researchers focus on

functionalist questions, not humanistic ones (Bogost, 2006a, p. 5). Thus, there

remains a great need for videogame research grounded in the humanities.

The purpose of this text is to examine the ways in which the ideology of

the videogame industry has shaped technological development, as well as how

technology has shaped this ideology. I intend to do this by looking at the

discourse associated with videogames, particularly at the limits of this discourse

where antagonisms become apparent. This approach suggests an obvious

question: What is the dominant ideology of the videogame industry? I propose

that this ideology is embodied in the concept of the hardcore gamer. This term

also provides a useful lens through which to view players, developers and even

scholars.

Once the ideology of the videogame industry has been sufficiently

described, the next step is to find the points of antagonism where the hegemonic

discourse of the industry breaks down. Though there could be many potential

points of antagonism, I have chosen to focus on the independent games

movement as a point of antagonism where resistance and rearticulation are

possible. This poses another question: To what extent are independent

developers actually independent? If the independent games movement is to be

considered a point of antagonism in videogame industry discourse, it is important

to understand how the movement's rhetoric actually compares with its role in the greater videogame ecology.

This brings me to my final question: What is the role of technology in this system? Is technology the deterministic force that is driving these social movements, or is current videogame technology a reflection of the power struggles that exist and have existed since the birth of the medium? I find it unlikely that either scenario is an all-inclusive answer to this question. Rather, I intend to suggest a theoretical layout of the sociotechnical system that encompasses the videogame industry and independent videogame movement.

As I consider my approach to be critical rhetorical in nature, this work also carries an inherent commitment to not only analysis and self-reflection, but also to furthering specific practical ends, or *telos* (Ono & Sloop, 1992, p. 48). Thus, I see my research as having practical applications for the videogame industry and for independent developers, as well as for videogame players. As the audience for videogames expands beyond its traditional demographics, the current discourse surrounding the medium will increasingly begin to break down, or encounter antagonisms. Industry members who cling to these discourses will encounter resistance at these points of contention. The subsequent rearticulation, or restructuring of these discourses, has the potential to redefine the nature of the videogame industry, leaving behind those who fail to adapt. Alternatively, these same points of resistance serve as opportunities for independent developers, not only to challenge oppressive discursive structures, but to redefine the underlying sociotechnical structures that have long been

detrimental to their ability to effectively use their medium of expression. Finally, and perhaps most importantly, these points of resistance allow marginalized players to challenge the dominant hardcore videogame ideology that has come to dominate the medium for the last 2 decades. By seeing the independent games movement as resistance to hegemonic videogame ideology, players can use these competing structures as a way to combat the oppressive discourse and monolithic industry system that maintains these power structures.

Survey of Literature

In order to answer these questions, I will draw on three primary bodies of literature. It should be noted that these categories are broad and by no means mutually exclusive. In fact, due to the interdisciplinary nature of videogames (Aarseth, 2005, p. 4) and videogame development, which is comprised of artists, engineers, musicians and business people (to name a few), I feel that videogame scholarship must necessarily be somewhat interdisciplinary in order to provide perspective on the subject matter.

The first of these broad categories of scholarship that I draw on is the field of critical rhetoric, particularly the theory of articulation. Articulation theory, which arose as a means of separating deterministic relationship between Marxist concepts of culture and the economic base, has become a way of understanding struggle in a postmodern world (DeLuca, 1999, p. 335). Articulation is the process of establishing relationships between elements in such a way that their identities are altered (Laclau & Mouffe, 1985, p. 88). It is based on the

assumption that there is no transcendental signifier, no universal truth that can be objectively observed. Therefore, the relationships between signifier and signified are not inherent, but must be spoken forth into existence by some agent. This concept gives us a deeper understanding of ideology, which Stuart Hall refers to as the process of constantly "fixing" or "articulating" meaning (Hall, 1985, p. 95).

It should be noted that many rhetorical scholars, DeLuca included, find the use of the term "ideology" problematic. Indeed, ideology is a very loaded term, invoking concepts such as objective truth, which is obfuscated by the false consciousness of ideology, and an essential subject that constructs this ideology, as well as the concept that ideology is merely an epiphenomenon of material reality (DeLuca, 1999, pp. 338-341). In their book, *Hegemony and Socialist Strategy* (1985), Laclau and Mouff displace the term ideology with "discourse," addressing these problems and acknowledging the complexity of the underlying forces that create hegemony.

Although I find the concept of ideology to be quite useful in explicating power dynamics in society and use the term extensively throughout this document, I would like to qualify my use of the term. Rather than referring to ideology in the traditional Marxist sense of being a reflection of some hidden truth, I take a more Foucauldian approach to ideology, treating ideology (discourse) as being fundamentally linked with social practices and institutions (Foucault 1984, pp. 9-10). Throughout this paper, I refer to both linguistic and behavioral social practices as constituting discourse (See Laclau & Mouff, 1985, pp. 107-108). I will also make use of the concept of ideology, as it is understood

in the context of articulation theory, in the sense that ideology functions more like language, being constructed collectively within a group through general consensus (Johnson-Eilola, 2004, pp. 203-204). When referring directly to the process of articulation, however, I prefer to use DeLuca's vocabulary, referring to the process as articulation and the product of this process as discourse (DeLuca, 1999, p. 347).

One of the key concepts in articulation theory is that of antagonism. Antagonisms point out the limits of discourse. As all discourse must be articulated by an actor, there is no discourse that is universal. For every discourse, there are boundaries at which the discourse no longer applies. These antagonisms then provide a basis for other actors within the network to begin the process of disarticulation or rearticulation. DeLuca gives the example of the discourse of the "American Dream" facing the antagonisms of slavery, segregation, and the oppression of women. Each of these antagonisms point out the limits of the discourse of the American Dream, thereby making struggle against this discourse possible in the form of the Civil War, the Civil Rights Movement and the Women's Suffrage Movement (DeLuca, 1999, p. 336). Whereas articulation gives us the means to address the formation of the discourse surrounding the hardcore gamer, the concepts of antagonisms and disarticulation provide a way in which marginalized groups can resist hegemonic discourse.

The second body of literature that informs this work is that of game studies. Although the primary focus of this text is not on individual games as

subject matter, videogames as cultural artifacts are very much a part of the sociotechnological system on which it does focus. As such, a deeper understanding of videogames informs our understanding of the people who create them and the people who play them. Game studies is, itself, an interdisciplinary field, which contains elements of media studies, aesthetics, sociology and many others (Aarseth, 2001). Though there is no clear methodology for conducting research in game studies (Lammes, 2007, p. 25), the actual playing of games is essential (Aarseth, 2003, p. 7). In order to understand gamer culture, one must understand games. The centrality of games to gamer culture goes beyond simply possessing social capital. Games become the *lingua franca* for members of this community, allowing the communication of complex, abstract concepts between individuals of otherwise disparate backgrounds (O'Donnell, 2008, p. 42). Thus, this study will examine videogames in their capacity as cultural artifacts that both create a discursive foundation for gamer culture and reflect the culture of their creators.

If, as games researchers, in which category I would place myself, we consider "play" to be the central focus of game studies (Lammes, 2007, p. 26), we must also concede the fact that we are members of gamer culture, if not a very specialized subset thereof. Therefore, reflexivity becomes an important part of any methodology for understanding videogames (Bogost, 2006a, p. 2; Lammes, 2007, p. 28) or videogame culture. In writing this thesis, I make no claims of academic objectivity, but rather acknowledge my own participation within my object of study.

As my research questions deal primarily with videogame culture and discourse, I approach game studies from a perspective firmly grounded in the humanities. Many of the theories I draw on deal with the way in which videogames embody rhetoric and ideology. Chief among these is Ian Bogost's concept of procedural rhetoric. Procedural rhetoric is the way in which ideology is embodied by the very rules that make up a game (Bogost et al., 2005) or the authoring of arguments through processes (Bogost, Ferrari & Schweizer, 2010, p. 130). By playing a game, the player accepts certain rules as given, whether it be the ability to jump a certain height, the importance of acquiring wealth or the necessity of killing certain characters in order to progress. These rules are created by humans – game designers and programmers. As such, these rules are a product of the culture and ideology of their creators.

When players enter the game world, they enter a world that is steeped in ideology. In the case of games created with a specific agenda in mind, such as advergames (games created for the purpose of advertisement), these frames are often easily identifiable. However, the ideological frames present in commercial games, which can reach a much greater audience, are often implicit and in need of critique (Bogost, 2006b, p. 175). By looking at the way in which ideology is embodied in the procedural structure of videogames, I hope to be able to more thoroughly analyze the ideology of the videogame industry itself.

Also of pertinence to this study is the literature within game studies that pertains directly to the independent game movement. Particularly relevant is the question posed by Zimmerman (2002) as to whether or not independent games

are independent at all. In his comparison to independent film, Jahn-Sudmann (2008) argues that independent games lack an oppositional logic that challenges the mainstream industry (p. 9). In response to this claim, Martin and Deuze (2009) argue that the definition of independent games in this discourse is too narrow and that a developer's status as independent depends on a number of variables (p. 291). Indeed, Jahn-Sudmann's definition of independence is even narrower than the definition originally proposed by Zimmerman (Zimmerman, 2002, p. 121).

In order to address this question of whether or not independent developers are truly independent, it becomes necessary to clarify to which groups the term "independent developers" is referring. The term itself is applied to a wide range of groups, from large third-party development studios working with licensed intellectual property (O'Donnell, 2008, p. 1), to large and successful privately owned studios (Jenkins, 2006) to lone "hobbyist" game developers creating free games they distribute themselves. Given the complex structure of game development outside the game industry, Martin and Deuze suggest that rather than asking "what is indie?" we should ask "how indie is it?" (Martin & Deuze, 2009, p. 291).

The third body of scholarship from which I draw is the field of science and technology studies (STS). This literature allows me to discuss not only the relationships between human agents, but the relationships that people have with the technology itself and how these technological relationships can influence interpersonal relationships.

Within STS, one of my foci is research into technology-oriented and product-oriented movements. In the public discourse about independent game development, the recent growth is often referred to as a "movement" (Gamasutra, 2007; IGF, 2010; Indiegames, 2010; Jahn-Sudmann, 2008, p. 5; Jenkins, 2006). Although the independent game movement does not conform to the typical definition of a social movement, it could be considered a technology-oriented movement, also potentially falling under the category of "new" social movements (Hess, 2005, p. 517).

Rather than having broad social changes as their goal, as in traditional social movements, technology- or product-oriented movements (TPMs) have as their end goal a change in products, technology or technology use (Hess, 2005, p. 518). This builds upon the theoretical foundation laid by Langdon Winner (1986), who stated that objects themselves have political qualities (p. 19). This assumption makes it possible to look at material culture not simply as a resource to be mobilized, but as an area of contestation (Hess, 2005, 518). Hess cites the open source software movement as an example of this phenomenon. Though the movement began in the 1970s and 1980s, it was later fueled by concern over Microsoft's market dominance of the computer industry. Though protests in the traditional sense were rare, members of the movement fought back against Microsoft through coding. In other words, the movement achieved its goals by creating an alternative product/technology (p. 528).

The independent game movement parallels the open source software movement in a number of ways. In both cases, the movement is a reaction to

the dominance of a single entity or small group of entities that creates high barriers to entry into the market. In both cases, traditional forms of protest are nearly absent, yet resistance is still present in the form of product development and technological innovation.

Another STS theory that I will make extensive use of in this text is actor-network theory. Actor-network theory grew out of the backlash against the social construction of technology as an attempt to bridge the gap between the two extremes of social constructivism and technological determinism. One of the most influential steps toward this end was John Law's concept of heterogeneous engineering. In this theory, technological systems can be understood as a network of heterogeneous elements including technical and scientific factors, as well factors that are social, economic, political or even natural (Law, 1987). This theory creates an all-inclusive method of analysis that neither denies the influence of objects, nor creates artificial distinctions between "objects" and "beliefs about objects" (Latour, 1999).

This metaphor of technology as a "network" is the core concept of actor-network theory. A technology is not simply an artifact or a blueprint. It is a complicated network of innovators, artifacts, ideas and users. When applied to videogames as a technology, it allows us to look at the technology not as a console or a sequence of code, but as a complex network between game developers, platforms, controllers, players, retailers and so forth. The technology is not made up solely of inanimate objects, nor is it simply a social construction. In this way, I intend to explore the central concept of this text, that is, to analyze

the evolution of the videogame industry as a complex sociotechnological system, focusing on the importance of discourse in this process.

The concept of the network is further refined by Law and Callon (1994) in their study of the British "TSR.2" project. In this study they divide the actor network into two distinct parts, the global network and the local network. The local network consists of the elements that are considered to be part of the project, while the global elements are external forces, such as government agencies, special interest groups and so forth. In this model, the success or failure of a technology is based upon three things. First, the creation of a global network to supply resources for the project, second, the creation of a local network to take these resources and create a product that meets the global network's goals, and third, the establishment of an obligatory point of passage between the two networks (Law & Callon, 1994). The idea of establishing a particular actor as an obligatory point of passage is similar in many ways to Law's concept of the "heterogeneous engineer" who attempts to associate the heterogeneous elements within the local network and attempts to dissociate hostile elements that interfere with the network stability (Law, 1987). If an obligatory point of passage is not established during the development of a technology, the local network can lose control of the flow of resources, or the global network may not acknowledge its accomplishments (Law & Callon, 1994).

Another concept of actor-network theory that I find useful is that of the "script" or "scenario." This idea suggests that within a given actor-network, different actors will see the overall network differently. While developers and

engineers may see a technology as fulfilling a certain need, end users may consider the technology an ineffective solution to their problem (Akrich, 1994). These different perspectives on the same actor-network are referred to as scripts. This is a very appropriate term, not simply because it makes for a good extension of the theatrical metaphor already present in actor-network theory, but because it illustrates the value of analyzing multiple networks or scripts for any single technology. A theater company usually keeps a fairly consistent lineup of actors, but will put on many different plays. Between plays, the actors themselves change little (other than makeup and costumes), but their interactions and specific roles on stage will be completely different based on the script that the actors are using. Therefore, even after the relevant actors in the actor-network of a particular technology have been identified, there are multiple ways in which the network or script can be perceived.

To those who are unfamiliar with actor-network theory (and its historical idiosyncrasies), my use of the term network throughout the rest of this study may seem somewhat unconventional. Strict adherents of actor-network theory, on the other hand, may find my use of the term *too* conventional for their tastes. Without entering into a lengthy discussion of academic debates over semantics and naming conventions, it suffices to say that the use of the network metaphor in actor-network theory does not refer specifically to a technical network-like the Internet, nor to a social network-like al-Qaida (Latour, 2005, p. 131). In fact, the object of study need not be overtly network-like at all (Latour, 2004, p. 63). When I refer to technology as a network, I do not mean to imply that "technology" is

simply the physical connections between a number of mechanical or electronic components (although that might be part of it). Rather, I mean that "technology" is made up of connections between people, ideas, physical mechanisms, organizations, laws and much more. These connections are not permanent, nor are they stable. They are performative – created and sustained by the interaction between the various nodes of the network (Latour, 2005, p. 132; Law, 1999, pp. 3-4). A node that ceases to act and influence the rest of the network becomes irrelevant and can no longer be considered part of the network at all (Latour, 2004, p. 70).

Even though the network metaphor in actor-network theory is often misunderstood as being literal, that does not preclude actor-network studies of traditional networks. In fact, Latour notes that many of the earliest examples of actor-network studies focused on technical networks like subways and telephones (Latour, 2005, p. 131). It is in this vein of research that I base my own study, looking at the connections between technical artifacts as well as the connections between other actors. While my approach to actor-network theory may differ dramatically from some others, such divergence should not be unexpected. As Law notes, "actor-network theory is diasporic" (Law, 1999, p. 10). Like its objects of study, it is heterogeneous and fluid. The approach I use is certainly not the only way to conduct an actor-network study, but I find it well-suited for the task of analyzing a large sociotechnical system such as the videogame industry.

Though videogame studies has grown significantly in the past 10 years,

the bulk of the research being done continues to be focused on the mainstream videogame industry. Much of this probably can be attributed, as Jesper Juul suggests, to the fact that the people most likely to go into game studies are the people who are most dedicated to videogame culture (Juul, 2010a). This trend, however, leaves the relationships and power structures between this mainstream gamer culture and other marginalized groups in need of critique. The focus of this study is using various theories from science and technology studies to make these relationships explicit and then critiquing them, thus filling in some of the gaps in game studies research.

Research Methodology

I characterize my work not as coding texts, but as constructing them from the fragments of discourse I encountered throughout my analysis. Therefore, I see the games, blogs, forum posts and scholarly articles I analyzed in this project not merely as texts to be coded, but as being "simultaneously structures of fragments, finished texts, and fragments themselves to be accounted for in subsequent discourse" (McGee, 1990, p. 279).

With the theoretical framework provided by these three bodies of academic literature in place, the first step in my project was to gather together materials on the culture of the videogame industry and the culture of videogame players, as well as information on the technological and organizational history of the videogame industry. As previously mentioned, there already exists a sizable body of academic work on the culture of the videogame industry. Of particular

relevance is the anthropological research conducted by Casey O'Donnell (2008) on the culture of videogame developers, which focuses on the construction of developer culture and the inherent conflicts within that culture. These sources also included other scholarly writing on developer culture, such as the work of Mark Deuze and Chase Bowen Martin, accounts of industry professionals, such as postmortem articles posted on Gamasutra, a leading industry website, and statements of protest, such as the *Scratchware Manifesto* and the EA Spouse letter.

Most of the sources I compiled to analyze contemporary videogame culture consist of websites, blogs and other online sources dedicated to videogames and gamers. Since this project is focused on marginalized groups, some of the sources I chose to describe gamer culture came from sources that deal specifically with minority interactions with mainstream gamer culture, such as *The Border House*, a blog dedicated to videogame culture and marginalized groups. I also included many popular mainstream videogame websites, such as *Kotaku*, *1up* and *Joystiq*. This was further supplemented by articles on videogames   written by major media sites not directly associated with videogame culture. These include sources such as *Wired*, *Forbes* and *Salon*. In addition to analyzing these popular media sources, I again made use of the substantial amount of academic work written on videogame culture, looking at the work of scholars such as Erica Kubik, Jesper Juul and Henry Jenkins.

My information on the history of the videogame industry comes from books such as Stephen Kent's (2001) *The Ultimate History of Videogames* and Tristan

Donovan's (2010) *Replay: The History of Videogames*. The majority of these histories, including those of Kent and Donovan, are written from a perspective within videogame culture, or at the least, a provideogame stance. Others, however, such as David Sheff's (1993) book, *Game Over: How Nintendo Zapped an American Industry, Captured Your Dollars and Enslaved Your Children*, are much more critical of the industry, its business practices, and its culture. Part of the work of compiling these texts included examining the authors' relationship to the culture they were describing.

The second step in this project was analyzing these sources to find common discursive structures, with particular attention on antagonisms – the points at which the discourse being articulated by one group fails to mesh with the discursive reality of another group. Many of the discursive structures I encountered while reading these texts were expected. Few people who have had any experience with videogame culture would be surprised to find highly gendered constructions of player identity. Other common discursive structures, such as the importance of secrecy within developer culture, were less expected, but no less important to creating a useful understanding of videogame discourse. By identifying these discursive structures and how they relate to one another, it is possible to see how different groups are perpetuating or resisting the hegemonic discourse of the videogame industry.

The final step necessary for exploring my research questions was to look at the technology itself and its relationship to the discursive structures previously identified. Since I take an actor-network approach to technology in this paper, I

was not only interested in technological artifacts like consoles and game cartridges, but in technology as a system, encompassing artifacts, people, organizational structures and more. In practice, this step overlapped considerably with the previous. Many of the people who are most actively involved in articulating videogame discourse are also integral members of the sociotechnical system that is the videogame industry. In a sense, discourse and technology not just connected, they are two sides of the same coin – a relationship which I hope to demonstrate in this paper.

There are a number of constraints with which I was faced in this project. First, my source materials were limited almost entirely to those written in English. Although English is often a common language among programmers, journalists and media critics, even in non-English speaking countries, this still limits my ability to consider the technical and rhetorical contributions to videogame culture outside of North America, particularly those by people in Japan, India and parts of Europe.

Despite this methodology's similarities to some qualitative research methods, particularly Adele Clarke's situational analysis, I do not consider my methods to be qualitative, but rather rhetorical. Although my work shares with situational analysis inductive logic, materialist approaches, and postmodern perspectives (Clarke, 2005, pp. 5-7), referring to my methodology as such implies a commitment to certain standard approaches to qualitative inquiry, such as the coding of texts and transcripts, followed by the grouping and analysis of these codes. Nevertheless, since both Clarke's project and my own involve the

erasing of boundaries between disciplines (p. xxiv), perhaps such similarities

should not be unexpected.

Organization of the Thesis

This thesis consists of this introduction and five additional chapters.

Chapter 2 deals with the history of videogames as a medium and how, over the

course of time, it coalesced into the sociotechnological system that we now refer

to as the Videogame Industry. I will examine the way in which videogame

discourse shifted in response to technological changes, as well as how cultural

influences shaped the path of technological development. Using approaches

derived from both actor-network theory and articulation theory, I intend to show

how the relationships between people, artifacts, ideas and discourse within this

system played off each other, associating some elements while disassociating

others. I will show how certain actors within the network were able to set

themselves up as obligatory points of passage, thus enabling themselves to

shape the identity of videogame discourse. Ultimately, the goal of this section is

to show the articulation of an ideology within the videogame industry.

Chapter 3 looks at this hardcore ideology in greater detail, describing how

it is manifest by both players and developers. I intend to look at how this

ideology marginalizes nonhardcore players by creating artificial distinctions

between players who are real gamers and players who are not. The artificiality of

these distinctions becomes apparent at the limits of this discourse, where

antagonisms become apparent. I will also examine how these antagonisms

become points of resistance, both for marginalized players who want to be able to participate more fully in videogame culture, and for aspiring developers who want to take videogames in new directions. I will do so by looking at two forms of resistance that are attempting to rearticulate videogame discourse, the turn toward casual gaming that Jesper Juul (2010b) has called a "casual revolution," and videogame modding. The discussion of these two forms of resistance will then lead into a third form of resistance and the focus of this paper, the independent games movement.

The independent games movement is the primary focus of Chapter 4. Using the model of the videogame industry developed in the first portion of the text, I will attempt to define what independence means in the context of videogame production. Rather than taking a traditional Marxist approach at analyzing the discrepancies between the producers, consumers and owners of videogame technology and content, after the manner of Martin and Deuze, I intend to take an approach grounded in science and technology studies, specifically, the concept of technology- and product-oriented movements. By looking at the indie game phenomenon as a technology-oriented movement, I will show how the practices of these rogue developers present a challenge to the hardcore ideology of the videogame industry by pointing out the antagonisms present in its articulation. Through this process, I hope to create a new perspective on indie game culture, defining its values, goals and practices in relationship to the discourse of its members, rather than solely on the basis of comparison with existing alternative media.

Chapter 5 of this thesis will attempt to integrate these two sociotechnological systems into a larger videogame ecology, showing the structure of the constituent systems and the ways in which different groups and discourses relate to each other. This will allow me to look at videogame development through the lens of a number of different actor-network scripts, thus making possible new critiques of the videogame industry and its relationship with other communities of developers and players. I will also attempt to integrate the discursive models discussed in Chapters 3 and 4 into these models in order to see the relationships between social, technological and discursive elements.

The final portion of this thesis will discuss the theoretical implications of this study, as well as the more practical implications that it has for game developers and for videogame culture in general. I will also discuss other possible areas of research in which it might be valuable to extend this line of study.

CHAPTER 2

ARTICULATING THE INDUSTRY

It is significant that there is some debate as to what is considered to be the

first videogame. While Higginbotham's *Tennis for Two* is often given this

distinction (see Bakie, 2005), there are a number of other possible contenders for

the title, including A. S. Douglas' *Noughts and Crosses* and Steve Russell's

Spacewar! While Douglas' game predates Higginbotham's by several years, it

was created merely as an experiment in artificial intelligence on the University of

Cambridge's EDSAC computer (Bogost, 2009, p xii) and was therefore never

seen by as many people as *Tennis for Two*. *Spacewar!*, on the other hand, came

several years later than either of the other two games, yet it can boast as being

the only one of the three that was designed specifically to be a game, rather than

simply a novel demonstration of technical wizardry (Kent, 2001, p. 15).

Which one of these cultural artifacts (not to mention several others that are

often included in this list) is given the title of "first videogame" is not particularly

relevant to this text. What *is* significant is that a debate exists in the first place.

All three of these games were created with different tools, for different purposes.

None of them are particularly close to what we think of as a videogame today.

None of them were ever placed on a disk, played at home or even sold. At the

time that these and other early videogames were being created, there was no discourse about videogames as a technology or a medium. They would not even be grouped together in the same category for years to come. At this time, the concept of the videogame had yet to be defined.

Although this roughly 10-year period of early experimentation can be thought of as the zero point on the timeline of videogame discourse, it would be misleading to say that nothing relevant happened before this point. To truly understand any sociotechnical system, the social cannot be considered without the technical. As Langdon Winner argued in his book, *The Whale and the Reactor* (1986), technology can embody specific forms of power and authority (p. 19). It is no coincidence, nor is it inconsequential, that all three of these early videogames were created in institutions with close ties to the military. This association would affect the technological development of these games as much as it would influence the early developers who would take them from engineering novelties to a part of modern culture.

In the years following these innovations, the concept of the videogame would begin to coalesce in the public mind, beginning with the player-developers of *Spacewar!* and slowly expanding outward. One of the first and most influential discourse events was the "Intergalactic Spacewar Olympics," an event organized and reported on by Stewart Brand for *Rolling Stone Magazine*. In his article, Brand attempted to articulate his version of videogames as a countercultural force, with *Spacewar!* matches taking the place of acid trips and computers as the new drug for the masses (Turner, 2006, p. 116). Though at the time,

computers were most often viewed as tools of oppression and dehumanization
(p. 2), this discourse was not so strongly articulated that Brand was not able to
rearticulate it to suit his own views. Even today, we can see the influence of
Brand's rhetoric in our discourse of digital technology, attributing much of it to the
efforts of a few rebellious entrepreneurs (Halter, 2006, p. 79).

In order to make sense of this new technology, many people would make
discursive links between videogames and similar entertainment technologies
such as pinball machines, which had themselves become associated with slot
machines, gambling and organized crime (Kent, 2001, p. 5). Though the
technological contributions of these early games would go unnoticed by the
general public, they would be the seeds of a new sociotechnical system and their
influence, though subtle, would help to shape the discourse that would form
around that system.

Out of the Lab

Although there is much disagreement over the first videogame, there is
little debate over who is considered to be the father of the videogame industry
(Kent 2001, p. 48). That man is Nolan Bushnell, the founder of Atari, perhaps the
most successful early videogame company (Bakie, 2005, p. 6).

While attending the University of Utah, Bushnell became acquainted with
Spacewar! (Kent, 2001, p. 30), which had spread from MIT to research
universities around the country by means of the primitive Internet. Ever the
entrepreneur, Bushnell's first attempt to turn videogames, which until then were

only available to those who had access to huge computer labs, into a business

was a version of *Spacewar!* built into a sleek fiberglass cabinet. This version of

the game, which he titled *Computer Space*, was a commercial failure (p. 34).

This was due both to the game's prohibitive complexity and to the lack of a

discursive structure that would allow players and distributors to relate to it. No

one knew what Bushnell's strange machine was, nor how it fit in with their

existing notions of entertainment. As a result, few people played it and few

companies bought it. Undaunted, Bushnell decided to leave his job to strike out

on his own. In 1972, he founded Atari (p. 38).

While Bushnell focused his efforts on ways to improve *Computer Space,*

he set Al Alcorn, one of his new employees, on the task of creating a simple

electronic version of ping-pong (Kent, 2001, p. 40). Alcorn's game, *Pong*, was an

instant success. Unfortunately for Atari, Bushnell got the idea for the game from

Ralph Baer, and his new home videogame system, the Magnavox Odyssey.

Bushnell had seen a demonstration of the Odyssey and its simple table tennis

videogame.   He even signed the guest book (Baer, 2005, p. 5). When

Magnavox sued Atari for infringing on Baer's patents, Bushnell knew that he

could not fight them. Instead, he agreed to settle the case and sign a license

agreement with Magnavox, making Atari the only company that could legally use

Baer's idea (Kent, 2001, pp. 46-48). Based on this agreement, *Pong* and Atari

would go on to turn videogames from a novelty into an industry.

Following the success of *Pong*, entrepreneurs and established companies

all rushed to enter the newly formed videogame industry. The background of

these companies ranged from electronic manufacturers, like National

Semiconductor, to toy makers, like Mattel, to leather crafts, in the case of Coleco

(which originally stood for the Connecticut Leather Company). In a matter of just

a decade, the market went from a single *Pong* cabinet in Andy Capp's Tavern to

more than 1.5 million machines in the United States alone (Kent, 2001, p. 152).

Despite its success, problems were already beginning to appear in the

fledgeling industry. Under Bushnell's leadership, Atari was known for being

disorganized and undisciplined. Despite his laid-back policies, however, his

game designers were well-educated and tech-savvy enough to keep producing

hit games one after another (Dyer-Witheford, 2009, p. 12). At this time, drug use

was running rampant both among the assembly line workers (Kent, 2001, p. 52)

and even among the executives (p. 58). Bushnell, as well as many of those

entering the field of game design, was an alumnus of the university research labs

where *Spacewar!* was played. Although these labs worked primarily on military

projects, the students were long-haired drug enthusiasts who worked by day and

played *Spacewar!* by night (Halter, 2006, p. 106). Though this culture functioned

well enough in the research labs, the laid-back party atmosphere of hot tubs,

drugs and booze began causing problems for Atari. An important business

meeting after one such party that ended up causing a rift between Atari and their

Japanese distributor, Namco, turning the latter into a new competitor (Kent, 2001,

pp. 76-77).

While some aspects of the hacker culture of the university labs persisted

in the early arcade industry, other aspects were abandoned as game making

became a business. One of the defining characteristics of the hacker community

is the idea of the "hacker ethic," an unspoken set of values that places great

importance on the sharing of information. In his book *Hackers*, Steven Levy

describes this value system:

> Access to computers – and anything that might teach you
> something about the way the world works – should be unlimited
> and total. Always yield to the Hands-On Imperative!
> (Levy, 2010, p. 28)

Spacewar! embodied this ethic. Though it was Steve Russell who created the

original program, it was constantly tweaked and improved by other programmers.

The code was shared from lab to lab, with no strings attached. For this reason,

no one questioned Bushnell when he created *Computer Space*, which was

nothing more than *Spacewar!* in an arcade cabinet. After his encounter with

Magnavox, however, Bushnell began trying to emulate the tighter control that

Ralph Baer had shown with his meticulous notes and valuable patents (Kent,

2001, p. 58). Though his attempts to patent his *Pong* hardware were relatively

ineffective, it set a precedent for the game industry. To get ahead in the industry,

you had to be a businessman, not a hacker.

Outside the industry, public discourse was beginning to form around

videogame technology, though perhaps not the kind that Atari might have hoped

for. While arcades were at first seen in a positive frame, as places where

children and adults from diverse backgrounds could come together, the more

conservative turn in public opinion that accompanied the beginning of the

Reagan administration began to frame arcades much more negatively. Adults

who frequented arcades were portrayed as deviants (Williams, 2003, p. 544).

Arcades became associated with sleazy pool halls and juvenile delinquency.
Parent activists, such as Ronnie Lamb, denounced videogames for their violence
and for the questionable locations that kids would frequent to play them (Kent,
2001, p. 119). For years to come, arcades would be seen by parents as paths
leading their children to failure (Kushner, 2003, p. 3).

With the ever-increasing competition in the coin-op market and the
negative associations made with arcades, Bushnell wanted to move into the
home console market. Though Atari had already created *Home Pong*, he had
something much more ambitious in mind. In order to fulfill his vision, however, he
would need much more money than Atari had at the time. To acquire the funds
for his home system, Bushnell would sell Atari to Warner Communications for 28
million dollars (Dyer-Witheford, 2009, p. 12).

After being sold to Warner, Atari had the money it needed to create its
revolutionary home console. This console, the Atari Video Computer System
(also known as the Atari VCS or the Atari 2600), would change the home console
industry as dramatically as *Pong* changed the arcade market. It would set
precedents in the industry such as the practice of selling consoles at a low profit
margin (later manufacturers would sell them at a loss) in order to later make
greater profits with the sale of games (Kent, 2001, p. 107); an approach that ran
contrary to the way most computer developers operated, by giving away software
to drive the sale of hardware (Evans, Hagiu & Schmalensee, 2006, p. 122).
Likewise, the acquisition by Warner would set precedents for the relationship
between developers and their employers.

From the beginning, relations with the new Warner executives were tenuous. Ray Kassar, the consultant that Warner brought in to shape up the company disapproved of Bushnell's laid-back management style and was bothered by the drinking and drug use. (Kent, 2001, p. 110). Their goals for the company also came into conflict. Bushnell wanted to innovate. Kassar and the Warner executives wanted reliable profits. When Bushnell proposed abandoning the VCS and moving on to a new project, they dismissed him and placed Kassar as Atari's new CEO (Kent, 2001, pp. 111-113).

After the removal of Bushnell, the culture of the developers was suddenly thrown into conflict with the corporate culture of Warner Communications. As Kassar took control of Atari, major changes took place. Their focus was shifted away from innovation and toward squeezing as much profit out of existing ideas as they could (Kent, 2001, p. 124). Developers were forbidden from taking credit for the games they created and were generally hidden from the media (pp. 152-153). Though the official reason was to prevent jealousy between developers, others suspected that the real reason was to prevent other companies from stealing away their designers (Cohen, 1984, p. 71).

Warner had good reason to fear their designers going elsewhere. As conditions worsened for developers, many of Atari's oldest employees began leaving the company. Some followed Bushnell to join in his new ventures, while others formed their own companies, such as Activision. When Activision began selling their own game cartridges for the VCS, games that were considered graphically superior to Atari's own games (Cohen, 1984, p. 92), Warner saw

Atari's entire business model threatened. They sued Activision a number of times, but were unable to shut them down (Kent, 2001, pp. 192-194). In a few short years, Activision's growth would exceed that of Atari (p. 227).

It was also during this time that the military's interest in videogames was once again piqued. Though many of the early experiments into videogames had started with the premise of being some sort of military simulation, the flow of innovation and ideas rarely flowed the other direction. This changed when Atari created *Battlezone*, a first person tank game that used crisp vector graphics. Several retired army generals were so impressed that they contacted Atari about making a version of the game for military training purposes. Atari put the original game's creator, Ed Rotberg, in charge of the project. Rotberg, who identified more with the counterculture than with the military-industrial complex, objected to the project. In the end, he relented, and created *Military Battlezone*, a more realistic version of his popular arcade game (Kent, 2001, pp. 153-154).

Although the years under Kassar's leadership were the most profitable in Atari's history, it was also a time in which the game developers' culture clashed dramatically with the culture of the executives (Kent, 2001, p. 184). During this time, Atari went from being a symbol of the free spirited hacker culture to being a large corporate entity known for its strict hierarchy (Turner, 2006, p. 134). Developers went from being treated like stars to being treated like children (Cohen, 1984, p. 71). Though other companies like Activision would initially fight against this vision of the industry, the influence of Atari would long outlast the company itself.

Homebrewers

Arcades and home consoles brought videogames to a wide audience at a time when access to computers was extremely limited. Though many of these games were inspired by games originally programmed on the mainframes on college campuses, these new media, the arcade machine and the home console, had different constraints than the old mainframes, both technological and cultural. Arcade machines lacked the power of the university computers and each could run just a single program. Consoles could play multiple games, but were even more technologically limited than their arcade counterparts. Arcades and consoles were much more accessible for the general public than general purpose computers. Not only were there more of them around, they were designed to be used by those with no technical skills whatsoever. Computers, at this time, were still only operated by those who had spent considerable time and effort learning to operate them, often referred to as the "computer priesthood" (Levy, 2010, p. 5; Nelson, 2003, p. 304). With arcades and consoles, however, everything came at a price, and games were designed to take as much money from their players as they could. Computers demanded nothing more than effort and a willingness to learn.

Though arcade games were often the first videogames that people encountered, the arcade experience prompted some to dig deeper to find out more about how they worked. Those who looked hard enough would eventually find their way to the university labs where videogames got their start. Since the hackers who managed the labs only cared about skill, they would let almost

anyone in, even an 11-year-old John Romero, the future cofounder of Id Software (Kushner, 2003, p. 6).

While Nolan Bushnell's entrepreneurial flair inspired him to take videogames out of the labs and turn them into a billion-dollar industry (Kent, 2001, p. 185), others would bring videogames to the public in more subtle ways. Marc LeBrun was a member of Stanford's *Spacewar!*-obsessed artificial intelligence (AI) lab. After leaving the university, LeBrun would help start Dymax, a company founded to write instructional books on the BASIC programming language that became a hub of countercultural techno-evangelism (Levy, 1984, p. 171). As part of their goal to bring computers to the masses, Dymax would open the People's Computing Center (PCC) in Menlo Park. The Computing Center was designed to be a place that any person could come in and use their computers on a time share basis to learn how to program or simply to play games. Though their computers were of the type that had previously been found only in labs, they were not nearly as powerful as the ones needed to play *Spacewar!* They also lacked monitors, using a typewriter-like terminal to communicate with the computer. The lack of processor power to calculate real-time physics and the lack of monitors to display any graphics forced them to move into a new genre of videogame, the text-based adventure (Markoff, 2005, p. 184).

Text games became a hit at the PCC. On Fridays, they would host game nights, to which local teenagers would flock with enthusiasm. There were a number of games on their computer, including games about *Star Trek*. With no

monitors, players read paper printouts that were reprinted after every move (Markoff, 2005, p. 266). In 1973, Gregory Yob unveiled *Hunt the Wumpus*, a game that rather than drawing a crude maze of dashes and dots showing the player's position, described the scene in words, giving a sense of immersion that had never before existed in the text-onlygames of the PCC. This new style of text adventure games would be refined and improved in later games like *Adventure* and *Zork*. It would even find its champion in a game company that made nothing but text-based games, Infocom (Seegert, 2009).

Like their forebearers on university mainframes, these games were very open. Aspiring developers would create games and share them with their friends. Even those games that were "published" were rarely put on discs or cartridges. More often, their code was printed out in a print publication, such as a magazine, line by line (Kushner, 2003, p. 13). Those who wanted to play the game would have to painstakingly type in the code for the whole game before being able to play.

After a while, several of the regulars at the PCC wanted to learn more about computer hardware, not just software. They decided to form their own group, the Homebrew Computer Club (Levy, 1984, pp. 199-200). The most famous member of this club was Steve "Woz" Wozniak, with his computer, the Apple (and later Apple II). Though he built the computer to satisfy his own hacker needs, it would go on to become a billion-dollar company in the space of just 5 years (p. 271).

For the first time, computers were available to those outside the hacker

elite. Though they were praised for their business uses and marketed as machines for managing finances and storing recipes, the use that truly drove computer sales was gaming (Holmquist et al., 1999, Rehak, 2008, p. 76). Indeed, with color graphics, advanced audio and even game paddles, the Apple II was designed for games (Kushner, 2003, p. 11). This new level of accessibility attracted a new and diverse crowd of entrepreneurs to game development, including Roberta Williams, the shy, daydreaming daughter of an agricultural inspector. She was introduced to videogames when her husband showed her a copy of Crowther and Woods' text-based game *Adventure*. Though she was no hacker, nor was she interested in computers to begin with, she would find in the Apple II a new outlet for expressing her imagination. Together with her husband, Ken, a programmer, she would found On-Line Systems (Levy, 1984, pp. 295-302).

Another newcomer to game design was Richard Garriott, the somewhat eccentric, swashbuckling son of an American astronaut. Under the pseudonym of "Lord British," Garriott had created the games *Akalabeth* and *Ultima* (Levy, 1984, pp. 379-380). Unlike the entrepreneurial Bushnell, who saw videogames as lucrative business opportunity, Garriott began creating games primarily for himself and his friends, with no intention to actually sell them (Donovan, 2010, p. 62). Nevertheless, these games would be some of the first and most influential examples of computer role-playing games (Barton, 2008, pp. 48-49). They were so successful that in the span of a few short years, Garriott went from selling his games in Ziploc bags to selling them through On-Line to eventually forming his

own company, Origin Systems. He would make eight sequels to *Ultima*, as well as a number of spinoffs (Bakie, 2005, p. 19).

Though Apple would single-handedly found the personal computer industry, many other companies would follow them. As with the Apple II, one of the main selling points for these computers was the games. Computers like the Sinclair ZX Spectrum, a British computer that became very popular in Europe, would attract huge communities of independent game developers. These developers would go on to create a huge library of Spectrum games, ranging from surrealist humor in the style of *Monty Python*, to games satirizing current political events (Donovan, 2010, pp. 116-117).

Perhaps the most significant of these early competitors was the Commodore 64. Whereas the Apple was designed to be a flexible system that those with curiosity could explore and expand upon, the Commodore 64 was designed to be affordable. Selling for just $600 when the Apple II was still selling for $1000, it opened up the personal computer market to an even wider audience (Kent, 2001, pp. 251-252). Computers were not just a high-tech gadget for technophiles, they were now becoming an alternative to home videogame consoles. If a computer cost as much as a console, why settle for a game-only system when a computer could play games too (Tomczyk, 1984, p. 179)? Though it would not be nearly as influential as the Apple, the Commodore 64 would claim the distinction of being the best selling computer of the twentieth century (Rehak, 2008, pp. 78-79).

Atari, already the king of the home videogame consoles, was also eager to

enter the home computer market. By this time, however, the culture of Atari had already gone through a major change. The open hacker culture had been replaced by a secretive corporate culture, eager to maintain control over as much of the supply chain as possible. With the release of the Atari 400 and 800 computers, the company kept many of the technical details of the systems secret. Without this information, programmers could not create software for the system. Atari offered to provide them with this information only if they would enter into an agreement to make Atari brand software. The PC developer community, however, still held much of the same hacker ethic that thrived in the university labs. Instead of pulling talented programmers away from other systems, Atari's attempt to exert control over the personal computer industry drove programmers away. By the time they realized their mistake, it was too late. The Atari home computers would be doomed to fade away into mediocrity (Tomczyk, 1984, p. 110).

Though the personal computer industry was at the center of the countercultural hacker scene, its overwhelming growth was causing cultural changes of its own. The Homebrew Computer Club had swelled to hundreds of members at each meeting, though many of the early members no longer attended. Among these absentees was Woz, now too busy with the booming Apple Computers to attend. The hacker ethic that so many had championed over the years now clashed with their companies' imperative to make money. The hacker community now had to make a choice: Keep secrets or lose money (Levy, 1984, p. 269).

Discursively, the articulation of the computer was changing. Computers were no longer viewed as the mysterious tools of the military-industrial complex. Widespread acceptance of affordable computers had demystified them (Levy, 1984, p. 277). At the same time, since computers were being sold as complete systems, their owners no longer needed to be able to open the black box and look inside. Computers were becoming self-contained systems (p. 278). As the worldwide base of computer users grew dramatically, the die hard hackers that had once managed to dearticulate the discourse of computers and rearticulate it in their own terms found themselves greatly outnumbered. Though they still had considerable influence over the discourse, they could not sway the masses, such as the ruthless executives at Commodore or the hip superstars of Apple. For better or for worse, they had achieved their goal of bringing computers to the people.

For game designers, things were changing, too. At On-Line, Ken and Roberta Williams' business model was changing. The young hackers that had flocked to their company to make games were obsessed with making their programs perfect. Though these high quality games had helped him establish On-Line as a leader in computer games, Ken Williams now saw them as a waste of time. He found his money better spent on marketing than on his programmers' pet projects. On-Line was becoming a bureaucracy (Levy, 1984, pp. 350-355). Though this shift in focus from creative vision to maximum profits was taking place across the industry, nowhere was it more apparent than at Atari, where bureaucratic meddling was about to initiate an economic disaster.

The Crash

Although the explosion of personal computers had increased the sale of Apple software to tens of thousands of units, games for the Atari VCS were still being sold by the millions (Levy, 1984, p. 356). Like On-Line, Atari had become more and more bureaucratic as it grew, but on a much larger scale. By the early 1980s, Atari was filled with marketers and other executives, and they, not the engineers, were the ones calling the shots. They had the developers creating games for anyone who would make a deal, including movie studios, toy makers and even dog food companies (Kent, 2001, p. 235). The VCS had debuted with nine games, five of which were based on existing arcade games to some extent. By 1982, officially licensed games were everywhere, and some companies, like Parker Brothers, created nothing but licensed games (Montfort & Bogost, 2009, p. 123). Many of these games, such as the VCS port of *Pac-Man*, were rushed, sacrificing quality to get the game on shelves more quickly (Kent, 2001, p. 236). Kassar and the other Atari executives had counted on the license to sell the game, regardless of its quality (Montfort & Bogost, 2009, p. 76). Though the game sold relatively well, players were disappointed with its terrible quality. Their faith in Atari would be deeply shaken, setting the company up for its most spectacular failure ever.

This failure would come in the form of another licensed game, *E.T.* Based on the film by Stephen Spielberg, the game would be developed in a mere 6 weeks in order to be out by Christmas. *E.T.* became infamous for being one of the worst games ever created. Already distrustful of Atari after *Pac-Man*, players

refused to buy the game (Kent, 2001, pp. 237-238).

When Atari announced fourth quarter profits for 1982, they were substantially lower than projected. The announcement set off a panic and Warner stock took a nosedive (Kent, 2001, p. 234). So great was the fall of Atari that many of the other industry leaders were pulled down in its wake. Coleco and Mattel would abandon the videogame industry that year (pp. 252-255). Even the makers of gaming computers like Commodore, whose sales had skyrocketed as Atari's fell, would eventually be pulled down, suffering losses almost as bad as those of Atari (pp. 264-265). In July of 1984, after months of trying to pull the company out of free fall, Warner sold off Atari, marking the end of an era (p. 268).

The "Crash of '83" would go on to become not only a significant event in the annals of videogame history, but a significant discursive tool in articulating the videogame industry. Though it could be said that the fall of Atari was caused at least in part by power shifting away from the developers, who actually made games, to executives, who were disconnected from the development process and the final product itself, the Crash would be rearticulated as an excuse for even tighter corporate control and less power in the hands of developers.

Out of the Ashes

As iconic as the Crash has become in vidogame history, it was generally confined to the United States. Although the US was and continues to be one of the most important markets for games, the videogame industry in other countries was able to survive the fall of Atari unscathed (Kent, 2001, p. 278). In Japan,

Nintendo's new videogame console, the Famicom, was doing well. Nintendo hoped to find even bigger profits by selling the Famicom in the US, but faced retailers and industry professionals who believed that videogames were dead (p. 280). Undaunted, Minoru Arakawa, then president of Nintendo of America, chose to test the market with a risky New York opening in which he persuaded retailers by offering to buy back their stock of unsold consoles (p. 297). The New York release of the Famicom, renamed the Nintendo Entertainment System or NES for the American Market, was a success. By the next holiday season, more than 1.9 million homes in the US would have an NES (p. 346).

Despite having released games on the Atari VCS, Nintendo now tried to distance themselves from Atari (Donovan, 2010, p. 165; Kent, 2001, p. 350), portraying the Crash as entirely the fault of Atari and the incompetence of its management, despite the fact that by this time, it was under new management after being sold off by Warner (Sheff, 1993, p. 258). In essence, the resurgence of the videogame market after the introduction of the NES was rearticulated to be viewed not as simply the ups and downs of the market, but as the death of the old industry and the birth of a new one. Nintendo would go to great lengths to make this vision a reality.

One of the concepts that Nintendo would use to distance itself from the videogame industry of the past was quality. Poor quality games such as *Pac-Man* and *E.T.*, though not the only cause of Atari's demise, were significant catalysts of the process. To prevent this same fate from befalling the NES, Nintendo set up a complex system of "quality" control to protect their system.

The visual representation of this system was the "Nintendo Seal of Quality," which was displayed prominently on every product released for the NES (O'Donnell, 2008, p. 151). This seal was used to assure both consumers (Arsenault, 2008, p. 116) and retailers (Montfort & Bogost, 2009, p. 134) that buying Nintendo products was not the same risk that buying Atari products was. In order to get the seal, developers were required to enter into a licensing agreement with Nintendo, which limited each developer to making five games a year, as well as prevented them from releasing the game on other systems for 2 years (Sheff, 1993, p. 215). It also meant submitting their games to Nintendo's censors, who would ensure that the games had no content that was forbidden by Nintendo. This forbidden content included, among other things, sexuality, excessive violence, drug use and religious symbolism (Arsenault, 2008, p. 111).

In order to enforce these licensing agreements and give weight to the seal of quality, Nintendo devised a three-tiered plan of defense to protect their new system. This defense included a technological system, developed by Nintendo, as well as the existing patent and copyright systems already in place in the United States. By explicitly linking their technological system with these legal systems, Nintendo was able to leverage the force of the State apparatus, dramatically changing the nature of the videogame industry (O'Donnell, 2008, p. 154).

At the heart of the technological component of Nintendo's security measures was the 10NES chip (Figure 2.1). This chip was built into every officially licensed NES cartridge, with a corresponding component located inside

Figure 2.1: *Nintendo's 10NES chip (Edwards, 2007)*

the NES itself. Upon powering up, the console looks for a specific code from the

chip on the cartridge. If the code is received, the console functions normally. If

the cartridge does not transmit the correct code, the console will not play the

game (O'Donnell, 2008, pp. 189-190). This also meant that all cartridges for the

NES had to be manufactured by Nintendo, giving additional control over third-

party developers by dictating manufacturing prices and production numbers

(Kent, 2001, p. 308).

Nintendo has kept the nature of the 10NES chip a closely guarded secret.

So close, in fact, that the only official record of its existence is the patent that

Nintendo would file to protect it (O'Donnell, 2008, p. 188). Such was the

importance of their patent in this system of control that Nintendo was willing to

open up a small hole in their wall of secrecy in order to tap into the State-backed

power of the patent system. They would open a similar hole in their defenses in

order to invoke the copyright system, as well. Once again, the object in question

was the 10NES chip. While the patent protected their physical system of chips

and circuitry built into the cartridges and consoles, the copyright would protect the code that signaled to the console that a licensed cartridge was inserted (p. 191). While there would be a certain amount of tradeoff involved in this process, Nintendo was giving up a small portion of its secrecy in exchange for the protection of the State. This tradeoff, however, would prove to be a beneficial one for Nintendo.

Near the end of 1987, Tengen, a company created from the remnants of Atari's arcade division, became a Nintendo licensee. Unhappy with the restrictive nature of the agreement, Atari engineers began trying to reverse engineer the 10NES chip. When this proved to be a rather slow process, a lawyer (or possibly a paralegal) working for Atari took advantage of the small hole in Nintendo's defenses that they had opened up by copyrighting the 10NES code. A false copyright infringement case was invented to gain access to the documents describing the code. This was then handed off to the Atari engineers, who were able to use it to create a way to bypass the 10NES protection on the NES console (Kent, 2001, pp. 371-373).

Although Atari and Tengen were able to overcome the technological system that protected the NES, the legal system that Nintendo had made a part of their network proved much more formidable. After an extensive series of legal battles, the courts sided with Nintendo (Kent, 2001, pp. 374-377). Nintendo's victory in the Atari case would set a precedent for all other battles over control of the means of production of videogames (O'Donnell, 2008, p. 192). In the following years, Nintendo would use the legal system to their full advantage. By

1990, Nintendo's legal fees would amount to $20 million per year. According to one of its employees, Nintendo's business had become "video games and litigation" (Sheff, 1993, p. 259).

With both 90% of the home console market (Evans, Hagiu & Schmalensee, 2006, p. 126) and the power of the State-backed legal system, Nintendo had the ability to drastically change the way that videogame companies did business. On one hand, making third-party developers enter into licensing agreements and pay Nintendo 20% royalties on their games transformed them from the jackals and parasites that plagued Atari to valuable allies who brought in even more money for Nintendo (p. 125). On the other hand, these license agreements relegated independent studios to virtual serfdom, with significantly limited control over their games' pricing, distribution and even content. Also, because the cartridges had to be created by and purchased from Nintendo, developers and publishers had to take on a greater portion of the risk associated with releasing a new game. Whether the game sold or not, Nintendo would make a substantial profit (Sheff, 1993, pg. 62). Many studios, including Activision, who had left Atari to escape such bureaucratic control, found Nintendo's demands unreasonable and refused their licensing agreements (Kent, 2001, p. 308).

Despite the unfavorable situation that Nintendo had created for developers, it soon became apparent that Nintendo was the only game in town. Japanese companies that had signed license agreements early on were already making hundreds of millions of dollars a year (Sheff, 1993, p. 217). After several

years of massive success, American developers began entering into licensing

agreements with Nintendo, beginning with Acclaim in 1988 (Kent, 2001, p. 309).

In order to compete with Nintendo, other console manufacturers would

also adopt their model of tight control. Sega's Genesis console would employ

similar lockout technology backed by trademark law. As with Nintendo's system,

Sega's technological barriers would be compromised and its legal network

invoked to punish the offender, Accolade. Though the initial ruling in Sega's favor

was eventually overturned (though not entirely), the lengthy legal process took its

toll on Accolade, which chose to simply license future games rather than risk

another legal conflict (Kent, 2001, pp. 382-388).

The constant flurry of lawsuits being filed by Nintendo and the other

console manufacturers had a significant chilling effect upon all other parts of the

videogame industry, developers, publishers, distributors and retailers alike.

Although it was not illegal for developers to make unlicensed games for consoles

(unless they had already entered into a licensing agreement), very few

developers were willing to take that risk. Those few who did and were able to

circumvent console security measures without breaking the law were dealt with in

other ways. Accusations were made of Nintendo intimidating distributors and

retailers with threats of legal action if they supported these independent

developers (Donovan, 2010, pp. 168-169; Kent, 2001, p. 375; Sheff, 1993, pp.

288-290). Though many of these accusations could have been exaggerated, it is

likely that retailers would not need any threats on the part of Nintendo. Since

console manufacturers controlled the vast majority of the games for their

systems, there were already huge incentives in place for brand loyalty and virtually no incentives for taking risks on obscure titles (Sheff, 1993, p. 290).

It should be noted that the Famicom, the original Japanese version of the NES console did not contain the 10NES lockout chip. Though Nintendo still had their seal of quality and their associated licensing agreements, the technological and legal systems that compelled licensing agreements were not present. The seal was purely a rhetorical device, encouraging players to choose games that were approved by Nintendo, though this approval lacked the severe restrictions and censorship to which NES developers were subject (Arsenault, 2008, pp. 111-112). This more open system did result in some degree of piracy and a much higher number of unlicensed games, it also resulted in the console having a much longer lifespan than the more restrictive NES (O'Donnell, 2008, p. 191). Despite these advantages of a more open system, the changes in the console market over the next decade would almost all be toward more closed systems and greater control by the manufacturers.

Arising out of the ashes of Atari, console games established themselves as the most lucrative and influential part of the videogame market. During this time, personal computers continued to become more commonplace, with sales exceeding 40,000 units by 1994 (Reimer, 2005). Despite their prevalence, as well having nearly ten times more game titles available, console games outsold PC games two-to-one during the 1990s and earned four times as much revenue (Evans, Hagiu & Schmalensee, 2006, p. 128). Also, since games on consoles face much less competition than PC games did (p. 149), status as a console

developer began to be seen as a position of privilege (Sheff, 1993, p. 214) and a sign of prestige. From this point on, console games would become the core of the videogame industry, both economically and culturally.

Graphics and Gore

While videogame consoles were taking the world by storm, personal computers were slowly but surely becoming a part of many people's everyday lives. Many of the computer manufacturers of the early 1980s had disappeared, leaving the Apple Macintosh and the IBM PC, with all its clones, as the dominant platforms (Rehak, 2008, p. 79). For years, Apple computers had been the premier gaming machines (Freiberger & Swaine, 1984, p. 155). With the Macintosh, however, Apple tried to project a more practical image, doing little to encourage game development on their platform (Kent, 2001, p. 455).   Though IBM compatible PCs were originally less suited to games than even the older Apple II (Kushner, 2003, p. 36), the open architecture of the IBM PCs encouraged the development of new hardware such as sound cards and CD-ROMs that made them a more attractive target platform for game developers (Kent, 2001, pp. 455-456). By the early 1990s, the market for both PCs and PC games was growing rapidly (Kushner, 2003, p. 93).

Much like the console market, the PC game market had become dominated by a few large companies. Ken and Roberta Williams' On-Line Systems, now renamed Sierra On-Line, was an early adopter of the IBM PC platform, and had huge successes with games like *King's Quest* (Bakie, 2005, p.

18). Electronic Arts, which was founded by former Apple employee Trip Hawkins

in 1982, had grown to a billion-dollar business by 1991 (McMahan, 2008, p. 89).

Unlike the console market, however, independent developers had alternatives to

the big publishers like Sierra and EA. Computer magazines would still publish

the code in print format, as well as pay the developer for their work (Kushner,

2003, pp. 13-14).

Though independent developers could make modest profits by regularly

submitting games to magazines, there was relatively little money to be made by

this method of distribution. Hoping to increase both their income and the reach

of their games, many of these developers would embrace a new distribution

model known as "shareware." Originally developed as a way to distribute simple

business applications, shareware offered users a trial version of a program that

could be freely distributed. Users who liked the software were encouraged to

buy the full version from the developer (Camper, 2008, pp. 151-152). This

distribution method, which began as an experiment in trust by Andrew

Fluegelman, the first editor of *PC World* magazine, became a small movement.

Users who felt neglected by larger software companies flocked to these small

shareware publishers (Kushner, 2003, p. 30). Within a few years, shareware

users were giving back millions of dollars to the developers whose work they

valued (Donovan, 2010, p. 255).

Among the hobbyist game developers that were drawn to the shareware

movement were John Carmack and John Romero. Both had started off by

creating their own games at home. Romero submitted his games to magazines

(Kushner, 2003, p. 14) while Carmack found small publishers who were willing to pay him (pp. 24-25). The two eventually found themselves working at Softdisk – a small software developer and publisher that had grown immensely with the spread of home computers – where they and a small team formed Softdisk's new computer game division, Gamer's Edge (pp. 36-37).

Although Al Vekovius, the owner of Softdisk, had allowed the team to pursue their passion, game development, he also demanded results. Softdisk's business model was publishing diskettes containing several programs as a monthly subscription. Vekovius wanted the Gamer's Edge team to follow the same model. This meant having two games ready to ship in a month. With this extremely tight deadline looming overhead, the programmers entered crunch mode, working incredibly long hours on little more than caffeine and adrenaline in order to port some of their previous games from the Apple II to the PC (Kushner, 2003, p. 39).

The Gamer's Edge developers proved more than competent, especially Carmack, who was particularly skilled at creating graphics. After porting one of his older games for the first Gamer's Edge disk, he began working on a system to create smooth scrolling graphics in a PC game. Such scrolling graphics had already been created in arcade games like *Defender* and console games like *Super Mario Bros*. PCs, however, lacked the power to perform such intensive graphical tasks. Late one night, Carmack was able to devise a more selective method of scrolling that was able to perform the operation on a PC. By the next morning, he and Tom Hall, another Softdisk employee, created a PC version of

the first level of *Super Mario Bros. 3*, using one of their own characters as a

substitute for Mario. When Romero saw the game, which they had entitled

Dangerous Dave in Copyright Infringement, he knew that they had the potential

to achieve much more than Softdisk had to offer (Donovan, 2010, pp. 254-255).

During this time, the shareware distribution model was beginning to

change. What began as a method for independent developers to distribute their

work outside the mainstream software publishing system was quickly becoming

dominated by its own type of publisher. While many small publishers enjoyed a

great deal of success, two of these publishers, Apogee and Epic MegaGames,

soon grew to dominate the shareware market. Both were founded by

independent developers as a means to promote their own games, but as the

shareware market grew, they eventually moved away from game development

and became merely publishers of other developers work. Although the

shareware market in the early 1990s was at the peak of its popularity, it was also

beginning to have little meaningful distinction from the mainstream computer

game industry (Camper, 2008, pp. 155-156).

Armed with his new sidescrolling engine, John Carmack joined with John

Romero, Tom Hall and several other Softdisk employees to create their own

company, Id Software. They first pitched the idea of making a PC port of *Mario 3*

to Nintendo, who was not interested in the PC market. Soon after, they were

contacted by Scott Miller, the founder of Apogee, who was hoping to publish

some of Romero's old games as shareware. Romero instead pitched an idea for

a game called *Commander Keen*, which used Carmack's new engine. Apogee

both funded the development of *Commander Keen* and published it, quadrupling their monthly sales in the process (Donovan, 2010, pp. 254-256).

With the success of the *Commander Keen* series, Id quit Softdisk and struck out on their own (Donovan, 2010, p. 256). They also began taking their games in new directions. Their next major game, *Wolfenstein 3D*, was notable for both its fast, first person gameplay and its initial shock value. Where most enemies in videogames would simply disappear when killed, the Nazi soldiers that the player killed in *Wolfenstein* would fall to the ground in a pool of their own blood (Kent, 2001, p. 458). Even one of their publishers was worried, due to the levels of violence and game's incredible realism for the time (Kushner, 2003, p. 110). Despite these concerns, *Wolfenstein 3D* became the new best selling shareware game of all time, selling more than 100,000 copies by the end of 1993 (Donovan, 2010, p. 258). The PC, which had always been graphically inferior to dedicated game consoles, was finally beginning to break free of its "business machine" stigma and be viewed as a videogame platform comparable to consoles (Camper, 2008, p. 156).

The success of *Wolfenstein* sparked a great deal of controversy. Though large companies like Nintendo had censored games on their own systems for years, this was largely done behind closed doors. *Wolfenstein* brought these issues to the public sphere when the game was banned in Germany (Kushner, 2003, p. 115). This controversy, however, did little to diminish the popularity of *Wolfenstein*. Even Nintendo approached Id about porting the game to their new Super NES console, provided they removed some of the blood and gore (pp.

120-121).

        One of the most surprising things that Id did with their success was offer to license the use of Carmack's revolutionary new game engine to other developers. Ever since the days of Atari, the videogame industry had been becoming more and more protective of their development process, particularly of their in-house tools. To give other developers access to a complete game engine, especially one as groundbreaking as *Wolfenstein*, was unheard of (Donovan, 2010, pp. 258-259). Although he was still a small child when the first hackers were sharing *Spacewar!* between university labs, John Carmack identified with the hacker community and believed strongly in the hacker ethic (Kushner, 2003. p. 22). For him, the sharing of information was part of being a programmer. Though other companies might have tried to squeeze as much use out of their new technology as possible, Carmack and the rest of Id were ready to move onto the next big project, *Doom*.

        Everything that had made *Wolfenstein 3D* stand out from other videogames was taken to the extremes in *Doom*. Carmack created an even more versatile game engine, capable of dynamic lighting and slopes (Kushner, 2003, p. 121). Uninterested with storytelling, he reduced the plot to the basic premise of killing demons with guns (pp. 128-129). Adrian Carmack, Id's lead artist, was given free reign to create all the blood, gore and satanic images he could imagine (p. 134), while their audio engineer filled the levels with animal grunts and a heavy metal soundtrack (p. 145).

        As the developers refined their game, they also continued to challenge

standard industry practices. Unsatisfied by Apogee's handling of *Wolfenstein*, they decided to publish *Doom* themselves, eliminating the middleman and making themselves completely independent (Kushner, 2003, pp. 125-126). Once again, Id would distribute the game as shareware, with no marketing other than word of mouth and the occasional blurb on the rapidly growing Internet (Kent, 2001, p. 459).   As with *Wolfenstein*, the developers would license their game engine to other developers, but would go one step further by releasing many of the development tools to players as well, spawning the growth of the *Doom* modding community. While mods, or player-made modifications to the original game, had been created for other games before *Doom*, the developers of these games often fought against modders, accusing them of copyright infringement. Id took the opposite approach, encouraging and supporting the modders (Donovan, 2010, p. 260). They even went so far as to separate out all the media data into external WAD files, allowing modders to simply swap their own artwork and sounds into the game (Herz, 1997, pp. 89-90; Kushner, 2003, p. 166).

Doom* would go on to become one of the most popular and culturally influential games of all time. Though at the time of its release it did not reach the same mainstream audience that traditionally distributed games did (Kushner, 2003, p. 162), it would go on to be downloaded 15 million times, with 150,000 copies of the full version being purchased directly from Id (Herz, 1997, p. 84). *Doom* would grow to become a phenomenon, popularizing the first person shooter genre (Bakie, 2005, p. 32; Donovan, 2010, p. 262; Kent, 2001, p. 459) and defining the hardcore gamer community. Eventually, its cultural influence

would extend well beyond videogame culture, impacting other media and cultural practices (Manovich, 2001, p. 244). *Doom* would leave its mark on the videogame industry, as well. For the rest of the 1990s, the videogame industry would be dominated by a race to create more photorealistic 3D graphics (Järvinen, 2002, p. 125).

While game developers had always influenced gamer culture indirectly through the medium of their games, Id became a much more direct influence on that culture through John Romero. After the release of *Doom*, Romero became the public face of Id and the embodiment of the hardcore gamer. He became an object of "nerd worship," sometimes being approached by fans for autographs. He would attend tournaments of *Doom's* multiplayer or "deathmatch" mode, casually flinging boasts, insults and other "smack talk" in a constant stream (Kushner, 2003, pp. 172-174). By the time Romero returned to the same tournament the next year, the other players would all be emulating his over-the-top style, insults and all (p. 187).

Romero's flamboyant style would eventually bring him into conflict with another key member of Id, John Carmack. The two founders of Id had opposing philosophies. Romero loved fame and wanted a bigger company, making games with epic stories. Carmack preferred a simpler approach, placing far more importance on the technology than on the design. After the release of their next game, *Quake*, Carmack would force the issue. Ultimately, the rest of Id's board would side with Carmack, and Romero was forced to resign (Kushner, 2003, pp. 218-220).

After leaving Id, Romero would found his own company, Ion Storm with Tom Hall (who had been forced out of Id during the development of *Doom*). Romero's fame was such that he could land million dollar deals with established publishers and set the terms himself. Unlike Id, whose company culture reflected Carmack's minimalism, Romero's company would embody his own philosophies. Ion Storm would be irreverent and over-the-top, with developers making the games they wanted with no one to stand in their way. (Kushner, 2003, pp. 228-232).

Although Id was able to successfully resist many of the established industry practices, such as traditional developer-publisher relationships and tight control of proprietary software, Ion Storm, for all its hype, would fail spectacularly. Rather than freeing developers from the creative constraints that he felt at Id, Romero's approach would lead to uncontrolled excesses and conflict among the developers. As the party atmosphere began to give way to the realities of business, disgruntled developers would begin to leave the company (Kushner, 2003, pp. 260-261). Romero's game, *Daikatana*, which had caused an uproar among gamers with its now infamous advertising campaign (Figure 2.2), would become mired in the chaos that had enveloped Ion Storm. By the time the game shipped, nearly 2-and-a-half years late, the company's mounting debt had forced Romero to allow their publisher, Eidos to buy a majority share of the company (pp. 278-280).

Daikatana would not live up to its hype. In the end, it would become little more than the butt of Internet jokes (Donovan, 2010, p. 352). With his
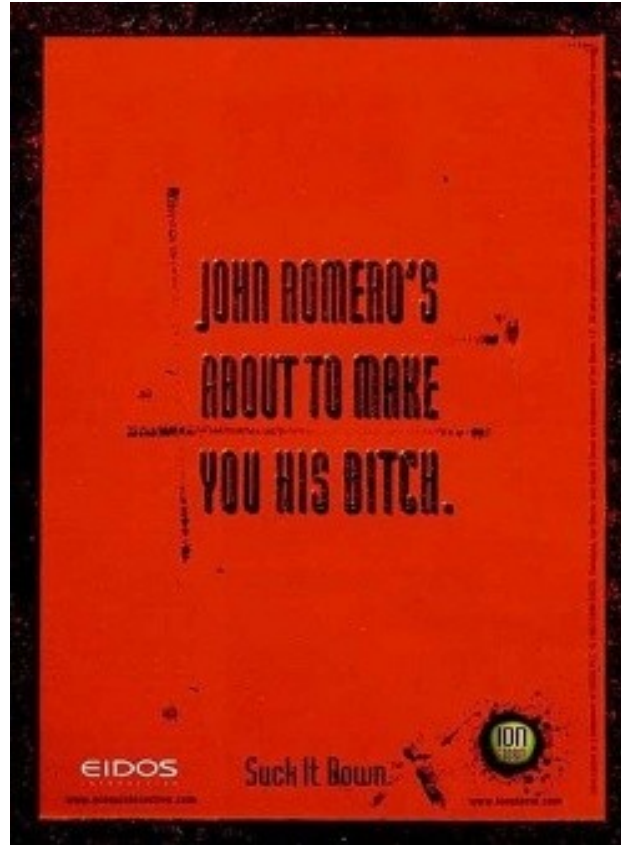
Figure 2.2: *The infamous* Daikatana *"Bitch" ad reflected the hyper-masculine culture that developed around games in the 1990s.*

masterpiece in shambles and his celebrity spent, John Romero, along with Tom Hall and the remainder of the *Daikatana* team, would be unceremoniously fired by Eidos (Kushner, 2003, p. 286). The fall of Romero would mark the end of the era of superstar game designers. Though many respected designers such as Shigeru Miyamoto, Richard Garriott and Will Wright would continue to make well-received games, they would never again achieve the cultural and economic influence that Romero held at his peak.

Although Romero's dream of a videogame industry where designers have complete control over their games did not last, he and the rest of Id software had

a significant effect on the videogame industry. The technical wizardry of John Carmack would allow the personal computer to compete with consoles as a viable platform for action games. Also, as previously mentioned, the success of *Doom* would spawn an industry wide obsession with 3D graphics, leading to a reductionist and empirical method of evaluating game quality, measuring it in polygon counts and frames per second. *Doom* (along with several of its contemporaries, such as *Mortal Kombat*) would also prove the existence of a market for more adult-oriented videogames, challenging the established "censored" model championed by Nintendo.

Id would also impact the culture of the players. The fast action and hyperviolence of *Doom* and *Quake*, combined with the ability for player interaction through multiplayer deathmatches, made these games both an identifying symbol for the the hardcore gamer subculture and a channel through which interpersonal interactions were mediated. The construction of Romero as the "ultimate gamer" further increased the prevalence of confrontational interaction and scatological humor within this subculture as members attempted to emulate Romero's personal style. As the hardcore gamer subculture deviated farther and farther from social norms, games such as *Doom* would become the target of public outcry against the industry (Kent, 2001, p. 460).

While Id would most often be remembered for its technological advances or its controversial subject matter, it also made many more subtle, but no less influential, contributions to the videogame industry. Foremost among these were Id's resistance to the accepted industry philosophies of secrecy with regard to

proprietary technology and legal protection in order to maintain market dominance. Both of these contributions were based upon John Carmack's adherence to the hacker ethic. As Nintendo and the rest of the videogame industry were enclosing themselves in their protective walls of patents and copyrights, Carmack refused to patent his technology (Kushner, 2003, p. 205). Id would take the opposite approach, licensing their powerful engines to other companies and later releasing them as open source. This openness would make the Quake Engine and its derivatives one of the most widely used family of game engines among both hobbyists and industry professionals. It would become the base for engines such as Valve's GoldSrc and Source engines, used in the games *Half-Life* and *Half-Life 2*, respectively. Valve, in addition to adopting Id's Quake Engine, adopted its attitude toward modders. Valve encouraged modding of its own engines and even hired new employees from the modding community (Valve, 2004, pp. 45-46).

Although Id was often seen as makers of alternative or underground games, they were able to achieve the influence necessary to significantly rearticulate the discourse of the videogame industry. By addressing such antagonisms as the modding community, they were able to break the hegemonic discourse that portrayed them as destructive and potentially criminal (Donovan, 2010, p. 260), rearticulating them as legitimate users of their programs and important members of the gaming community as a whole. Many of the groups that are currently challenging established videogame discourse and practices owe a great deal to the actions of Id Software.

The Political Game

Despite the success of PC games such as *Wolfenstein* and *Doom*, the console market remained the most lucrative part of the videogame industry, and it was being fiercely contested. Although the NES had managed to control between 86% to 93% of the home console market (Kent, 2001, p. 360), the next generation of home consoles would be far from one-sided. Their next console, the Super NES, would face tough competition from Sega's new console, the Genesis. By the end of 1991, the Super NES would control 45% of the market to the Genesis' 55 (Donovan, 2010, p. 220).

The competition between the two companies was fierce. Sega attacked Nintendo in ads, stating that "Sega does what Nintendon't" (Kent, 2001, p. 405). Although Sega had adopted Nintendo's strategy of controlling the hardware and forcing developers into licensing agreements, Sega's licenses were much less restrictive than Nintendo's, which began slowly attracting developers that were previously developing games for the NES (Sheff, 1993, p. 356). Even important Nintendo licensees like Acclaim began signing licensing agreements with Sega (Kent, 2001, p. 440).

Nintendo's business strategy, which had once given them total control of the industry, was now beginning to cost them sales. This problem would be compounded with the September 1993 release of the home version of *Mortal Kombat*. With its copious amounts of blood and exaggerated killing moves performed by digitized actors, *Mortal Kombat* could not pass through Nintendo's strict censorship policy. When the game was released, the Super NES version

was toned down, with the blood and many of the excessively violent moves removed, while the Genesis version remained true to the arcade version. Not only did the Genesis version sell three times more copies than the Super NES version, the latter provoked thousands of angry letters, some from parents, concerning the censorship, which had previously gone unnoticed (Kent, 2001, p. 466).

Two months after the release of *Mortal Kombat*, Senator Joseph Lieberman called a congressional hearing to address the issue of videogame violence. There is some debate over what prompted the senator's interest in the issue. Although the official account of the events leading up to the hearings says that the senator was made aware of videogame violence by a member of his staff whose son wanted a copy of *Mortal Kombat*, many people accused Nintendo of encouraging the hearings as a desperate attempt to stop Sega's increasing success in the home console market (Kent, 2001, pp. 466-469). Whether or not they had tried to initiate the hearings, Nintendo would try to use them to their advantage. As demonstrated in a number of court cases throughout the 1980s (See Kent, 2001, pp. 371-390), they had already managed to create a complex sociotechnical system capable of leveraging the power of the State in order to overcome their rivals. While the senate hearings threatened the entire videogame industry, they also held the potential to allow Nintendo to crush Sega just as it had Atari and Tengen.

During the first day of the hearings, after a number of expert witnesses had spoken, members of the videogame industry were called to testify, beginning

with Howard Lincoln, senior vice president of Nintendo of America. When asked

about violence in videogames, Lincoln brought up the sanitized version of *Mortal*

Kombat as an example of Nintendo's commitment to combating violence in

videogames, citing its poor sales and public backlash as the sacrifices that

Nintendo was willing to make in order to live up to this commitment (Donovan,

2010, p. 231). Lincoln would even allude to the 10NES chip, Nintendo's key to

enforcing its licensing agreements, as a tool for protecting children from violent

content (Kent, 2001, p. 474).

Following Lincoln's remarks, Bill White, the representative from Sega of

America took the stand. White countered the accusations from Nintendo by

claiming that Sega's target audience was much older than that of Nintendo. He

also brought up the fact that while the rest of the industry was scrambling to

develop a ratings system to answer the current controversy, Sega already had

their own ratings system in place (Kent, 2001, pp. 474-475).

After White's testimony, as well as that of several others, Senator

Lieberman once addressed Nintendo's Howard Lincoln. Lincoln quickly seized

the opportunity and changed the subject back to Sega, calling White's testimony

misleading, if not an outright lie. White countered by showing a videotape of

violent games on the Super NES that had gotten past Nintendo's censors. The

hearings turned into a heated battle between Lincoln and White, while Senator

Lieberman watched in surprise as his hearing began spinning wildly out of control

(Donovan, 2010, p. 232; Kent, 2001, pp. 476-477).

After more debate between Sega and Nintendo, the hearings were

adjourned for 3 months. During this time a number of important changes took

place in the videogame industry. These changes were directed as much toward

protecting themselves from future political action as they were toward actually

addressing videogame violence. Unsatisfied by the representation of the

Software Developers Association, the leading members of the videogame

industry withdrew to form their own organization (Donovan, 2010, p. 234).

Despite the numerous power struggles that took place during this time between

Sega and Nintendo, they, along with five other industry leaders, compromised in

the creation of the Interactive Digital Software Association (IDSA), which would

later be renamed the Entertainment Software Association (ESA). They would

also create the Entertainment Software Ratings Board, or ESRB, in order to

provide an industry wide ratings system. When the hearings resumed, the ESRB

ratings would be highly praised by Senator Lieberman and the other committee

members (Kent, 2001, pp. 479-480).

The congressional hearings on videogame violence suffered from a

number of problems. Perhaps the most significant of these was the lack of

understanding of videogames and the videogame industry that the committee

had when the hearings began. Although *Mortal Kombat* was supposedly the

game that prompted the hearings, the game most referenced throughout the

question and answer period was a very obscure game known as *Night Trap*, a

game for the Sega CD that featured prerecorded clips of full motion video (Kent,

2001, p. 272). In *Night Trap*, the player is tasked with protecting a house full of

girls having a sleepover from vampires, in what amounted to an interactive B

movie. Most of the people on the committee's panel of experts misrepresented the basic premise of the game, stating, rather, that the player's goal was to kill the girls (p. 273). With such limited information on the very videogames that they were investigating, the committee lacked the ability to confirm or deny the claims and accusations that Lincoln and White began flinging at each other.

The hearings would not have the effect that Senator Lieberman intended. *Night Trap*, which had been largely overlooked at its initial release, began selling tens of thousands of copies during the hearings, gaining enough popularity to be released for the PC the following fall. *Mortal Kombat* also received a boost to its sales (Donovan, 2010, p. 234). Even Id Software, whose games were not mentioned during the hearings, saw increased popularity from the hearings (Kushner, 2003, p. 171). Nintendo, unable to break Sega, chose to abandon their censorship of violence. When *Mortal Kombat II* was released, the Nintendo version would have just as much blood and gore as all the others (Kent, 2001, p. 480). In the end, Senator Lieberman's crusade to stop the violence would do little more than legitimize its presence in videogames.

Perhaps more than any other event, the 1993 congressional hearings would solidify the videogame industry into a single, monolithic entity. Although competition would continue to be fierce among console manufacturers, they now had a banner a banner to rally behind, should the need arise. That need would arise before the end of the decade, when Senator Sam Brownbeck would call for another round of hearings in the wake of the Columbine school shootings. This time, the IDSA spoke for the videogame industry. There was no squabbling or

posturing by industry executives, just the single voice of a united industry.

Despite the more urgent tone of these hearings, nothing significant resulted from

them. The videogame industry emerged virtually unscathed, due in large part to

the testimony of the IDSA (Kent, 2001, p. 555).

The Monolithic Industry

As the twentieth century drew to a close, the videogame industry would go

through a number of major changes, especially in the console market. After a

failed deal with Nintendo to develop a CD based peripheral for the Super

Nintendo, Sony would enter the market with its own console, the PlayStation

(Kent, 2001, p. 504). Microsoft would follow in 2001 with the release of the Xbox

(p. 574). Together with Nintendo, these three manufacturers would become the

dominant forces in the console market for the next decade.

The turn of the century would also see the demise of a number of console

manufacturers, most notably Sega. The company, which had once stood toe-to-

toe with Nintendo, had a number of significant failures following the Genesis

(Kent, 2001, pp. 493-509). Their last console, the Sega Dreamcast, was an

ambitious project. Unfortunately, it was soon eclipsed by the release of Sony's

PlayStation 2 in March of 2000. Within a year, Sega had been forced out of the

console market (Donovan, 2010, p. 334). Atari, 3DO, Commodore and NEC

would meet similar fates with their consoles (See Kent, 2001). The chaotic and

unpredictable console wars of the 1990s would give way to a much more orderly

form of war between the new console superpowers, with all three coexisting in an

Orwellian state of stable conflict.

This equilibrium among the three major console manufacturers has endured for a number of reasons. Unlike the personal computer market, there has been little demand for standardization across systems. Since videogame consoles are not used for the same kind of collaborative work that PCs are used for, compatibility for the purposes of file sharing is not an issue for consumers. To the contrary, many consumers value the product differentiation between the competing platforms (Evans, Hagiu & Schmalensee, 2006, p. 139). This same incompatibility also ensures that console manufacturers have no common interests beyond the general health of the industry, discouraging any kind of cooperation between them (Williams, 2002, p. 44).

As the console market settled into its current state, innovation and creativity within the industry began to stagnate. While development practices of the time were certainly a factor in this process, the driving force behind this stagnation was not videogame developers, but videogame publishers. The consolidation of ownership within the industry had already reduced the field down to a small number of multinational "super publishers" who were faced with the dilemma that 90% of their profits came from 10% of their games. The effect of this situation was that publishers became increasingly conservative, focusing more and more on sequels to popular game franchises and licensed games and moving away from the creation of original intellectual property, or IP (Dyer-Witheford & Sharman, 2005, p. 190). While this move is often characterized as justifiable, at least from a business standpoint, some scholars question if it is

even economically sustainable. Matthew White has argued that this kind of system not only disrespects players, but is setting the industry up for another crash (White, 2009, p. 5). While highly derivative games are safer investments than new IP, they also generally bring in far smaller returns than the original title. White suggests that the combination of general diminishing returns for sequels and certain franchises coming to an end as they become unprofitable could potentially initiate another crash like the one in 1983 (p. 9).

This period would also be the lowest point in the quality of life of videogame developers. It would see both the drafting of the *Scratchware Manifesto* and the filing of the "EA Spouse" lawsuit. A number of factors, both technical and social, contributed to the worsening of conditions. Part of it stemmed from the very advances in videogame technology that developers were striving for. As the technical complexity of the games increased, the number of artists and programmers required to make a standard console title also increased. *Super Mario World* had a development team of 15 people (Kent, 2001, p. 432). *Mario 64* had a development team of more than 50 (p. 530). By the time that *Halo 3* was in development, its team had over 100 members (Evans, Hagiu & Schmalensee, 2006, p. 144). With creative control being shifted toward publishers and away from developers, individual programmers and artists were becoming little more than cogs in a huge industrial machine. The increased cost of development and restrictive licensing agreements meant that unlike the founders of Activision, who simply left Atari to make their own games, this generation of developers were faced with incredibly high barriers to entry into the

market.

Perhaps most detrimental to the well-being of developers during this time were elements within developer culture. Despite the sweatshop conditions in which many developers were working, they were inclined to endure this mistreatment because of the shared cultural understanding that game work was somehow different than normal work (O'Donnell, 2008, pp. 85-86). As Erin Hoffman, the infamous EA Spouse noted in her original blog post, game developers enter the industry because they love games and have a strong desire to make their product the best it can be, in spite of poor work conditions. Working in the industry is seen as a privilege, which could easily be revoked by an employer (Hoffman, 2004). Other toxic cultural elements include the concept of crunch time. While the concept of crunch time made sense in the context of solo developers pushing themselves or of small studios trying desperately to stay afloat, huge studios like EA adopted the concept as standard practice. Developers, who often began their careers in small studios or with their own projects would rarely question the necessity of crunch time. In fact, most developers would come to feel that they could not critique the system at all (O'Donnell, 2008, p. 10).

Hegemonic Videogame Discourse and its Limits

Throughout the development of the videogame industry, there are a number of common themes. The technological systems themselves have grown more complex. The associated sociopolitical systems have also grown in

complexity. As these networks grow in size and complexity, the power dynamics within these systems have fairly consistently shifted away from developers and toward publishers and manufacturers. The latter are then able to establish themselves as obligatory points of passage within these networks, imposing hegemonic control over other nodes within the network, including both developers and players.

These trends are directly related to the attitude of technological determinism that permeates the videogame industry (Bittanti, 2004). Because of the perception that quantifiable technological improvements signify quantifiably better games, developers have been willing to sacrifice their position and influence within their networks in order to achieve such incremental advances. This often means a willingness to trade broad freedoms in exchange for access to proprietary technology (O'Donnell, 2008, p. 194). The fact that these freedoms are willingly given shows the hegemonic forces at play within the industry. By doing what they consider to be most beneficial to their own interests, developers put themselves in a position in which they can be easily exploited, as in the EA Spouse case.

Up until the last few years, this fixation on technology could be justified in the fact that the most technologically advanced platforms were also usually the most popular. This is perhaps not surprising, as console manufacturers rarely made any attempt to differentiate their product from the competition except in terms of technological achievement and price. Consoles that failed in these two categories were not focused on excelling in a third. This pattern, however,

changed after the 2005 Game Developers Conference. While Microsoft and Sony extolled the improved graphics on their new systems, the Xbox 360 and the PlayStation 3, Nintendo unveiled their next console, the Wii. Of the three systems, the Wii was technologically inferior to the other two by a significant margin. Despite its apparent lacking, the Wii would go on to be by far the most popular of the three, based not on easily quantifiable technical specifications, but on its innovative new control scheme (Juul, 2010b, pp. 13-16).

The success of the Wii demonstrates a fact that until then could only be speculated, that players do not share the industry's overly deterministic view of technology being the driving force behind videogames as a medium. Perhaps it would be more accurate to say that within the set of all potential players, this view is held by a relatively small group. Even as the Wii was becoming a gaming phenomenon, many developers, players and journalists were outspoken in their disdain for the new system (Miller, 2007; Taft, 2007). Notable among these critics was Chris Hecker, a well-known developer from Maxis, who boldly stated at the 2007 Game Developers Conference that "the Wii is a piece of shit" and that it was little more than two GameCubes duct-taped together (Pfister, 2007). Even if the majority of players did not share the industry's vision of what videogames were and what they ought to be, there were still those who did, the hardcore gamers.

While the Wii challenged long-held preconceptions about what players really wanted, it also questioned the industry's ideas about who the players really were. While the Wii appealed to many traditional players, it also attracted

millions of new players who had never owned a console before (Donovan, 2010,

p. 341). Why had such a large market gone untapped for so long? Why does an

industry that is frequently compared to the motion picture industry in scope

(Williams, 2009, p. 41) focus so much of its efforts on such a small segment of

the population? Why does that small population feel threatened by a console

that is directed at this larger market?

I suggest that the answer to these questions lies in understanding the

hardcore gamer ideology, which could be considered to be the dominant ideology

in the videogame industry. Over the last 40 years the videogame industry has

slowly articulated this ideology, with powerful actors, such as Nintendo, exerting

considerable influence over this process, often rearticulating key events, such as

the Crash in such a way as to serve their own interests. The result is a system in

which millions of potential players have been marginalized for years, with no

games being created to serve their needs. In the next chapter, I will attempt to

examine this ideology in greater depth as it currently exists by mapping the

discourse of the hardcore gamer. By doing so, I intend to show the limits of this

discourse and demonstrate how it can be challenged.

CHAPTER 3

HARDCORE IDEOLOGY

The monolithic nature of the videogame industry, which is reflected in the

prevalence of the hardcore gamer ideology, sets it apart from other forms of

mass media. While other industries, such as the Hollywood film industry, have

been accused by many critics of reinforcing an ideology that legitimizes dominant

institutions and values, they exhibit a much more complex relationship between

competing ideologies (Ryan & Kellner, 1988, pp. 1-3). Indeed, the film industry

has gone through a number of transformations, from conservative to liberal, with

power shifting from the powerful studios to influential directors and back again

(Waxman, 2005, pp. ix-x).

The videogame industry, by contrast, has followed a fairly consistent

pattern of development, with console manufacturers and huge

megaconglomerates consistently gaining more power while very rarely being

forced to relinquish it. Even the infamous Crash, which was influenced in no

small part by the corporate mismanagement of Atari by its Warner executives, not

only failed to weaken the corporate grasp on developers, but allowed Nintendo to

gain even greater control over developers through their technologically and

legally enforced licensing system. The result of this continual consolidation of

power is a videogame culture that is more ideologically homogeneous than any corresponding "film culture" or "television culture."

The homogeneity of videogame ideology has ensured that dissenting voices within videogame discourse have been minimized. Many of the antagonisms to this discourse have been exposed through external influences, such as the congressional hearings begun by Senator Lieberman. Because these forces are seen to be outside the network, the antagonisms they reveal rarely become sites of resistance. On the contrary, these efforts often have the unintended effect of strengthening the existing hegemonic forces, just as Senator Lieberman's vilification of *Night Trap* had little effect on gamers other than encouraging them to buy the game (Kent, 2001, p. 478).

Despite the videogame industry's resistance to change, antagonisms are beginning to appear in the discourse of videogames. They come from exploited developers and marginalized players. Even Nintendo, which has more often than not been a conservative force within the industry, has created new antagonisms by challenging traditional gamer demographics through the success of the Wii console. The nature of videogames as a medium is not set in stone. In fact, it is in the process of undergoing a major change.

Hardcore Players

The hardcore videogame ideology is most apparent in the culture that has grown up around players. Some of the identifying traits of this ideology include an obsessive time commitment to playing games (Kubik, 2010, p. 59) and a

desire for high difficulty in their games (Juul, 2010a, p. 29). Despite the often

negative associations with this stereotype in mainstream culture (Bogost, 2006a,

p. 4; Nichols, et al., 2006, pp. 44-45), most hardcore gamers self-identify as such

(Carr, 2005, p. 468).

The appellation "gamer" itself says something about videogame culture.

Most people do not label themselves according to their media consumption.

Despite the popularity of their respective media, few people would self-identify as

"televisioners" or "book readers." As Ian Bogost noted in a 2011 interview:

> In some ways, the concept of the gamer is one of the worst ideas
> that proponents of games have advanced. It signals it as sort of a
> lifestyle –that gaming is something that you do and you identify with
> primarily. We don't do that with other mature media and we don't do
> that with other activities. You don't think of yourself as a "pubber"
> because you go to the tavern after work. (quoted in Ewalt, 2011)

By discursively constructing the playing of videogames as a lifestyle or as a

characteristic of a particular social group, it forces people into a false dichotomy

between being a gamer or being a nongamer. Again, due to the negative social

stigma that is often associated with gamer stereotypes, many people who would

otherwise enjoy videogames are pushed away.

While the insulated and withdrawn nature of this culture has had a

detrimental effect on the development of the videogame industry, it also has

much broader social consequences. Chief among these is the marginalization of

certain social groups, including women.

In July of 2011, the website PowersGaming began organizing a launch

party for *Battlefield 3*, a first person shooter. Despite the fact that *Battlefield* was

a game already targeted toward men, the organizers of the event chose to

explicitly ban women from attending the event. News of the ban quickly spread through websites like Reddit, eventually appearing on the popular videogame culture blog *Kotaku*. Responding to the negative publicity, the organizers of the event made a number of rapid revisions to their site, reframing the event as a "gentlemen's retreat" and later as an event to help them "become better men" (Good, 2011). Although the text of their message was changed, their policy remained unchanged throughout the controversy.

While instances of misogyny are rarely so blatant or so widely publicized, the PowersGaming incident typifies the attitude held by many hardcore gamers, as well as the resistance that women often face when attempting to participate in online spaces. This can be seen as continuation of the long-standing tradition of the alienation of women by male game-oriented socializing (Carr, 2005, pp. 468-469). Similar resistance is met by racial minorities, homosexuals and many other social groups. Discrimination is also not limited to large events, but exists in a wide range of game-related activities, including in-game hate speech (Garaniols, 2010) and harassment in online forums (Kesler, 2010, Everett & Watkins, 2008, 155).

Though specific acts of discrimination, such as the PowersGaming ban, are usually condemned by the mainstream media, attempts to change or redefine videogame culture are often met with skepticism by the popular press. The concept of feminist gamers, for instance, is often dismissed, with feminists and real gamers being defined as two mutually exclusive groups (Jenkins & Cassell, 2008, p. 10). Although many journalists, especially in the years since the release

of the Nintendo Wii, openly acknowledge that gamers and gamer culture is indeed broader than the gamer stereotype might suggest, these concessions are made in a manner that does not challenge the stereotype itself, but rather confirms it (Shaw, 2010, pp. 407-408). In this way, media attitudes toward videogame culture serve to justify and normalize its current ideology in the minds of those who are a part of it, while simultaneously portraying it as deviant to those on the outside, thus widening the gap between gamers and nongamers.

Hardcore Developers

Unlike players, who tend to express their culture in relatively public settings, game developers tend to be more secretive about their culture. In fact, during his study of work practices within the videogame industry, Casey O'Donnell noted that secrecy is a significant element of developer culture (O'Donnell, 2008, pp. 37-38). The result is a culture that is even more insulated from the mainstream than that of gamers in general.

There is no formal "discipline" of game development. Most developers enter the industry with little or no knowledge of how games are made (in part due to the aforementioned secrecy) and learn the actual process of of game development in their first development studio (O'Donnell, 2008, pp. 57-58). With no common frame of reference as developers, members of development teams appeal to each other's identity as a gamer in order to establish working relationships and communicate ideas. In the culture of game developers, games are the *lingua franca* (p. 42). Thus, to be an effective game developer, one must

first be a gamer.

The consequences of game development studios being an extension of gamer culture are directly or indirectly related to many of the problems that game workers face. It conflates the concepts of work and play, giving the industry a "mystique," leading to the view that game work is fundamentally different from other forms of work (O'Donnell, 2008, p. 37). While this can be productive, creating a "fun" environment that motivates employees, it can easily collapse into destructive work practices (p. 19). Nowhere is this better or more dramatically illustrated than in the collapse of John Romero's studio, Ion Storm, during the development of *Daikatana*.

In spring of 2000, as *Daikatana* was approaching the end of its troubled development, the online magazine *Salon* published an article by David Kushner, in which he describes the developers at the Dallas offices of Ion Storm:

> Since Daikatana's inception, elite and obsessive gamers have road-tripped from around the world to work with their hero, Romero. They've quit school, left relationships and literally built beds under their desks to live and breathe nearly every breath in the house Romero built. Their commitment to a self-described "death schedule" -- the final, endless rush to perfect their game -- isn't just some start-up novelty, it's a way of life. (Kushner, 2000a).

The epitome of the hardcore gamer, John Romero became a videogame developer because he loved playing games. He had coined the term "death schedule" at his first full-time job as a game developer, working for Softdisk in 1989 (Kushner, 2003, p. 39). Over the course of the next decade, the death schedule, more commonly referred to as crunch time, would become a "way of life" not just for the *Daikatana* team at Ion Storm but for the videogame industry

as a whole (Deuze, Martin and Allen, 2007, p. 349; Hoffman, 2004; O'Donnell, 2008, p. 13). Destructive work practices such as this are tolerated, at least to a certain point, due to the perception of game developers that their work is different than other industries. While these practices have a number of negative effects, one of these effects is that many potential developers are driven away from work within the videogame industry, leaving only those hardcore enough to pull up their roots and sleep under their desks.

> Luke "Weasl" Whiteside is the newest level designer to join the Daikatana team and, in a way, the most enigmatic. Since he came to the company just a few months before my visit, Weasl managed to miss out on Ion Storm's tempestuous back story. He's still so awed to be working here that sometimes he doesn't leave. Underneath his desk there's a pillow. On some nights, he hunkers down below his computer, munches some M&M's and goes to sleep. For Romero, who dreamed of populating a company with gamers as intense as himself, Weasl is as hardcore as it gets." (Kushner, 2000b).

While the members of the *Daikatana* team are certainly an extreme example of hardcore game developers, their situations are not unlike many other game developers who got into the industry because of their love of games; they endure the harsh working conditions because of their sense of awe or privilege at being game developers. Although there is a certain logic to the relationship between player culture and developer culture, this link is essentially a feedback loop, reenforcing the *status quo*. As videogames embody ideology on a fundamental, procedural level (Bogost, 2006b), the ideology of players becomes the ideology of the developers, which influences the production of games, which then instills itself more deeply within the players.

In addition to reenforcing destructive work practices, the cyclical nature of

player and developer culture reproduces the prejudices that exist within it, including the misogynous attitudes that are frequently expressed by male players online. Although these attitudes among developers can usually only be assumed by analyzing unfavorable portrayals of women in completed games, they can occasionally be exposed in less subtle ways.

Such a case occurred after the release of the game *Dead Island* on Steam. Shortly after its release, a Steam user discovered an unused portion of code that referred to a skill for one of the female characters named "Feminist Whore" (T. John, 2011). This code was not used in the final version of the game, although the skill to which it refers was most likely renamed as the "Gender Wars" skill, which remained in the finished product (Farr, 2011). In any case, this choice of naming convention illustrates the attitudes and beliefs held by game developers that guide their decisions throughout the development process, thus reproducing these attitudes in a new generation of games and players.

This system of feedback affects not only the nature of videogame culture, but also helps to determine who can participate in that culture. Playing videogames serves not only as a catalyst for inspiring an interest in game development, but as a starting point for an interest in computer culture in general (Brunner, 2008, p. 41). Thus, groups that are marginalized by videogame culture and less likely to take an interest in videogames are at a significant disadvantage within the videogame industry, as well as in many other technology-oriented fields.

Those from marginalized groups who are still able to "break in" to the

industry face additional resistance in a number of forms. The videogame

industry is noted for being a hostile environment for women (Jenkins & Cassell,

2008, p. 13), who often must cope with the situation by making themselves "one

of the boys" (O'Donnell, 2008, p. 52). Racial, class and gender diversity is also

extremely limited within the industry (p. 49), leading to the common assumption

that videogames are a space created by White males for other White males

(Leonard, 2003, p. 2; O'Donnell, 2008, p. 50). Indeed, the "typical" videogame

developer, based on a study conducted by the International Game Developers

Association (IGDA), is a White male in his early thirties (Everett & Watkins, 2008,

p. 160). Additionally, the women who are employed by the videogame industry

are primarily found in roles such as human resources or marketing, leaving the

core development tasks such as programming, design and art as almost

exclusively male professions (Deuze Martin & Allen, 2007, p. 346; Fullerton et al.,

2008, p. 164). This lack of diversity has a direct impact on industry-made games,

as the developers both imbue these games with their own ideologies (Bogost,

2006b) and tend to unconsciously view themselves as being representative of

the end users of their product (S. John, 2006; Kerr, 2006, p. 97). Thus, the "for

White males by White males" view of videogames is not entirely inaccurate.

The Casual Other

Due to the male dominated discourse that permeates videogame culture, it

is easy to make the assumption that videogame culture is made up almost

exclusively of young White males. According to the ESA, however, this is far

from the truth. According to its published figures for 2010, over 40% of those who play videogames are female, with videogame purchasers being 48% female (ESA, 2011). Between the ages of 24 and 35, some studies have shown that women actually outnumber men two-to-one (Fullerton et al., 2008, p. 163). Over a quarter of all players are over the age of 50 (ESA, 2011). Additionally, studies on race and media consumption suggest that Black and Latino youth are likely to spend more time playing console videogames than their White counterparts (Roberts & Foehr, 2004, p. 128). In essence, every aspect of the "young, White male" gamer stereotype is far from representative of the gamer community as a whole. Players who fit all three attributes would be an even smaller subset. If we were to expand our view beyond North America to look at videogame culture on a global scale, this group would likely become a very small minority. If there is really this much diversity among players, why is this not reflected in videogame discourse?

In the realm of videogame discourse, the term hardcore is used to set the boundaries of legitimate gaming (Kubik, 2010, p. 57). Those who are hardcore gamers are viewed as legitimate authorities on gamer culture, while those who are identified as being not hardcore are instantly dismissed as being, at best, ignorant. This process is what Göran Therborn refers to as "excommunication," in which those who go against the hegemonic groups are "excluded from further meaningful discourse as being insane, depraved, traitorous, alien, and so on" (Therborn, 1980, pp. 82-83). Indeed, although much hardcore videogame discourse can be considered hyperbolic in nature, it often consists of aggressive

ad hominem attacks and inflammatory accusations, condemning nonhardcore players as malignant threats that need to be dealt with (Kubik, 2010, p. 72).

Also significant to videogame discourse is the term "casual gamer." The term, which originally was meant to refer to the growing demographic of nontraditional players who played games that required a lower time investment, was quickly appropriated by the existing hegemonic group to simply mean the opposite of hardcore (Juul, 2010a, p. 8; Kubik, 2010, pp. 58-59). As the term "casual" made the transformation from a marketing demographic to a rhetorical device, it was gendered as female (Juul, 2010a, p. 28; Kubik, 2010, p. 59). It also became associated with a lack of knowledge about games and game conventions, a dislike of difficulty in games, a small amount of time spent actually playing games (Juul, 2010a, p. 29), and a smaller financial investment in purchasing new games (Kubik, 2010, pp. 56-57). In practice, these distinctions were not so much a definition of what casual was as they were a negative definition, defining what hardcore was not. For the ideology of the hardcore gamer, the casual gamer became the alter ideology, the way in which members of the community were meant to view the Other (McKerrow, 1989, p. 95).

While acknowledging the fact that large numbers of videogame players and potential players are currently being marginalized by the dominant ideology of the industry, it is important not to essentialize these groups. For example, although gender is a factor in media consumption and videogame culture (as well as cyberculture in general) is typically gendered as male, this often leads to the assumption by scholars that there is an essential difference in the ways that men

and women play games (Shaw, 2010, pp. 408-409). This ignores the fluid nature

of individual game preferences and playing styles, as well as the often ill-defined

boundaries of these groups. Many women identify as hardcore gamers (Kubik,

2010, p. 90), while many men do not. Additionally, many gamers who at one

point in time identified as hardcore may change their gaming preferences due to

changing circumstances in their lives or simply by discovering new games

outside their previous areas of interest (Juul, 2010b, pp. 51-52). Even broad

statements about women who do not identify as hardcore gamers can be

problematic, as game preferences within this group can be very broad and are

not necessarily feminine (Kerr, 2003).

The Limits of Hardcore Discourse

The complexity of gamer play styles and preferences makes any attempt

to map these qualities onto specific races, genders or sexual orientations

extremely problematic. Indeed, when such claims are made by hegemonic

groups within videogame culture, we begin to see the limits of the hegemonic

hardcore discourse. These limits can be seen when comparing the discourse

concerning casual gamers to the way in which self-identified casual gamers

describe themselves.

In his book, *A Casual Revolution* (2010a), Jesper Juul examines the

common portrayals of casual gamers and how these images compare to the

actual players who are identified as such. The stereotype suggests that casual

gamers have little game knowledge (and thus need more explicit instructions and

simplified interfaces), are not willing to make large time investments, and prefer low difficulty in their games (p. 29). Upon interviewing self-identified casual gamers, however, Juul found that all three of these descriptions were misleading, if not completely false. In general, casual gamers do have considerable knowledge about games, even if only about the games that they play (though the same qualification could be applied to many hardcore gamers). They do invest large amounts of time playing games and tend to enjoy difficulty, often preferring a game to be too difficult rather than too easy (p. 50).

Of the gamers interviewed by Juul, those whose play style most fit the stereotype of the casual gamer were those hardcore gamers who had shifted to more casual play. These players still had a high level of videogame knowledge, but usually preferred easier and less time consuming games, often due to time constraints placed upon them in their personal lives (Juul, 2010a, p. 52). Although their play style more closely resembles the casual gamer stereotype, the fact that these are exhardcore players suggests that the majority are still young White males. Thus, even this group challenges the way in which casual gamers are articulated as the alter ideology for hardcore gamers.

The hardcore gamer discourse also begins to break down when it deals with game developers. Discourse within the industry tends to emphasize how game work is different from other forms of work. By classifying the entire industry as a space of exception, new forms of exploitation can be introduced into situations in which they would not normally be tolerated (O'Donnell, 2008, p. 13).

While this discourse of videogame exceptionalism is meant to inspire pride in developers and remind them of the privilege that they have been granted to be part of the industry, it also brings with it the seeds of its own counter-discourse. Indeed, when not framed by the assumption that the videogame industry is fundamentally different from other forms of work, many narratives of videogame development cease to be examples of dedication, playfulness and achievement, becoming, instead, tales of abuse, excess and adversity.

In the infamous *Scratchware Manifesto*, a developer known as "Designer J1" uses several segments from David Kushner's *Salon* article on the *Daikatana* team to illustrate the terrible working conditions that exist in the industry. Among other things, Designer J1 critiques the construction of Luke "Weasl" Whiteside as the epitome of the hardcore programmer:

> Sounds like poor Weasl is suffering from a case of vampiric possession. Concentration camp victims identified with their oppressors, too. Not to say that the much (and probably accurately) maligned Ion Storm is the only company where this happens -- no, not at all. It's all over. Doesn't that make you feel better about the games you buy? It's a good thing that CDs don't carry bloodstains well. (Designer X, et al., 2000)

In this discourse, studio heads are no longer heroes being worshiped, but oppressors, controlling their subordinates through deception and force. The description of Weasl and others sleeping under their desks and surviving off candy becomes a somber example of employee mistreatment, rather than a quirky story about the adventures of working with videogames.

By distancing game work from the traditional workplace, the industry is able to sidestep many of the rights that workers would normally expect to be

granted by their employers. This distancing, however, means that when the mystique of the industry is pushed aside, it becomes apparent how far the industry has strayed. This allows the discourse being articulated by the industry to be appropriated by marginalized groups and reframed as counter-hegemonic discourse.

Unlike the case of Senator Lieberman's hearings, many of these antagonisms have become sites of resistance. Perhaps the most apparent of these is the turn toward casual games that has occurred in the last decade. In many ways, this shift has had the broadest reach of any of these counter-hegemonic forces, yet is also perhaps the least revolutionary. This is largely due to the fact that the growth of casual games has been economically driven as entities within the videogame industry have realized the potential market for casual games (Juul, 2010a, p. 7). Although the involvement of many influential agents within the industry, such as Nintendo, has allowed videogame discourse to be dramatically rearticulated in many ways, it has also rearticulated it in a way that continues to reinforce the interests of the hegemonic powers. While the turn toward casual games has begun to broaden the types of games that are being produced, thereby serving many groups that are typically marginalized, it has done little to change the existing structure of the videogame industry. Rather than solving the problems that exist within the industry, casual games simply reproduce them in a new form. The sense of disappointment in the current state of casual games is expressed by game designer Eric Zimmerman:

> There was an idea that downloadable games could be a renaissance for innovation...But in fact, the downloadable casual games industry has evolved into something more clone-driven and genre-bound than the so-called hardcore game industry that it sought to make an end-run around. So, the downloadable casual games industry has become a parody of itself. (quoted in Juul, 2010a, p. 101)

Just as the hardcore production model has been reproduced in the growing category of casual games, so too have many of the problems that come along with it. Even the fact that these games are labeled as casual automatically devalues both the game and the player (Kubik, 2010, p. 73). Although the move toward casual games has allowed more people to participate with videogame culture, they do so as second-class citizens.

While I do not believe casual games to be the cure-all for the videogame industry's problems, I do not wish to undervalue the contributions made by casual games. Indeed, the success of the Nintendo Wii, which was arguably designed around the idea of casual gaming (Kubik, 2010, p. 69), destabilizes videogame discourse by challenging many of the fundamental assumptions about who plays games, what aspects of games are valued by players and what constitutes a profitable game.

A second form of resistance can be seen in the popularity of videogame modding. Modding, which gained popularity in the 1990s, largely due to the support of developers like Id Software, lowers the barrier of entry for game development, allowing those who would not normally be able to create a game to do so (Sief El-Nasr & Smith, 2006). This allows groups that have been marginalized by the industry to create content for themselves. One of the best

examples of this can be seen in the "FinnWars" mod for the game *Battlefield 1942*, a first person shooter set in World War II (Postigo, 2007, p. 309). "FinnWars" places the game in the middle of the Finnish Wars, a series of wars in which Finland fought against both the Soviet Union and Nazi Germany in order to maintain its independence (ModDB, 2006). Though culturally significant to the Finnish people, the relative obscurity of these wars outside of Finland makes such a game an unlikely choice for a large development studio. The "FinnWars" mod thus became a way to provide content to a group that could otherwise have gone underserved.

Although modding opens up opportunities for new content and new forms of empowerment for players, it also creates new forms of exploitation (Postigo, 2003, p. 597). Modders create massive amounts of free content for commercial games, yet receive no compensation for their work, despite extending the lifetime of the games they mod and driving the sale of more copies of these games, thereby generating a considerable value for the industry (Postigo, 2007, p. 302). Modders are also limited in their creative expression by the constraints placed upon them by the game engine that they choose to mod (See Figure 3.1). While some engines give the modders more control than others, any mod is, by definition, a derivative work. Thus, mods are imbued with much of the same procedural rhetoric as the games they are based upon, limiting the degree to which they can be seen as sites of resistance.

The form of resistance with which this paper is most concerned is the growing independent games movement. This movement shares many
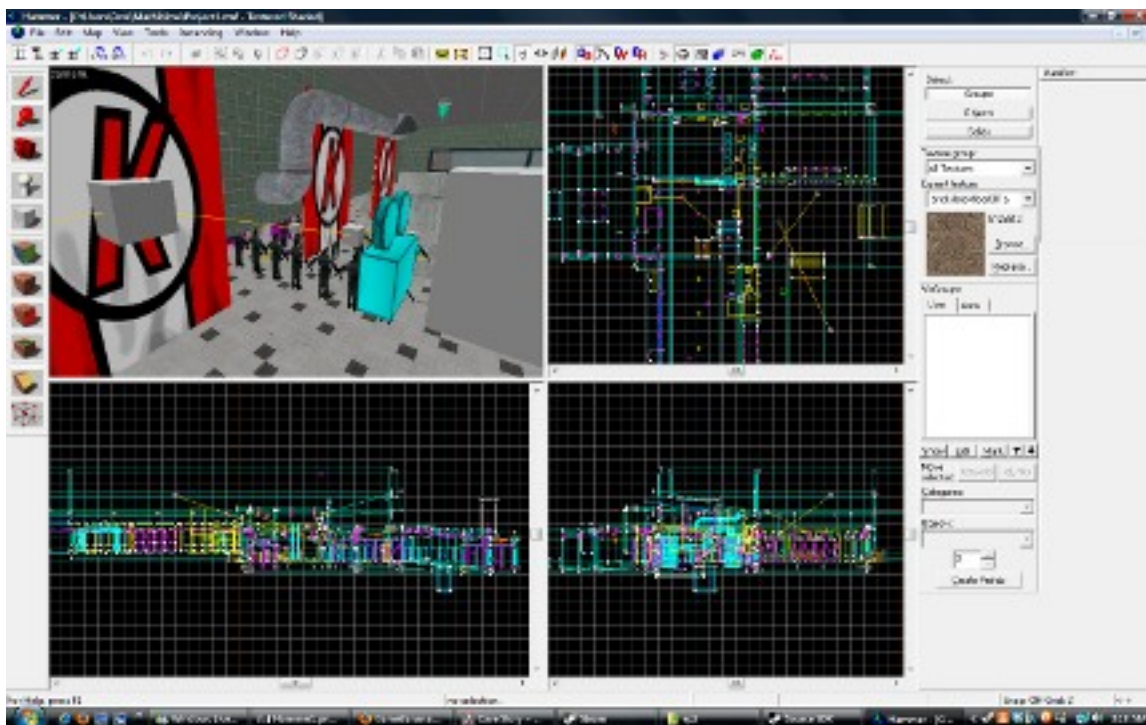
Figure 3.1: *Development tools like Valve's Hammer Editor allow modders access to many of the same tools that developers used in creating the original game.*

similarities with both the industry's shift toward casual games and the mod scene.

Indeed, there is a certain amount of overlap between the three. Many of the

most influential casual game developers, such as PopCap, began as

independent developers (Donovan, 2010, pp. 360-361). Modding has also

served as a point of entry for aspiring independent developers. Groups of

modders have even gone on to form their own independent studios, as was the

case of the "FinnWars" mod team, which formed Iceflake Studios in order to

create a commercial sequel to their mod (Iceflake Studios, 2010).

The key difference between the independent games movement and the

other two forms of resistance I have mentioned is its relationship with the

videogame industry. Independent games are not limited to derivative works, nor

are independent developers bound by the same corporate structures as other developers. Through various websites, forums, and other organizations, independent developers have created their own subculture within the larger videogame culture. Of course, this culture is not insulated from the videogame industry, nor from hardcore gamer culture. Its relationship to these, however, allows it to become a site of resistance to the hardcore gamer ideology. In the following chapter, I argue that this resistance is achieved in the form of a technology-oriented social movement.

CHAPTER 4

THE INDIE GAME MOVEMENT

As the number of independent game developers increased in the late

1990s, organizations began to arise to showcase this new talent. Just as

independent films have the Sundance film festival, independent videogames

have the Independent Games Festival and IndieCade. In describing the mission

of the festival, the IndieCade website says the following:

> The decline of innovation in the game industry, combined with the
> rapid growth of what can appropriately be called the "independent
> game movement" creates not only the opportunity but the demand
> for a public event that showcases the best work of international
> independent game developers, artists, modders, and alternative
> creators. In spite of high demand, E3 has traditionally not admitted
> non-game-industry attendees; the Game Developer's Conference is
> equally off limits to the general public. Yet the success of such
> products as Whyville and Food Force would indicate that the
> general public is interested in being exposed to new games
> produced outside the mainstream game publishing infrastructure.
> (Indiecade, n.d.)

On videogame blogs, online forums, and on the official websites of organizations

like IndieCade, there are references to independent game developers, artists and

modders being not just part of a niche market or hobbyist subculture, but part of

a social movement (see Indiegames, 2010; Jenkins, 2006). This discourse begs

the question: Does the rising popularity of independent games constitute a social

movement?

When looked at through the lens of traditional social movements, this claim seems dramatically overstated. There are no rallies held to protest the lack of innovation in the videogame industry, nor does anyone boycott new games because of the industry's inaccessibility. Indie developers do not organize themselves into mass political parties in order to realize their agenda. The indie games movement does not even have traditional political reform as its underlying goal. How then could something like this be a social movement?

Although the independent games movement does not meet the traditional criteria of a social movement, it does fit into the category of a product- or technology-oriented social movement (TPM). Rather than having large-scale political change as its goal, this form of social movement has as its goal a change in the way that products or technologies are used by creating alternatives to their common or popular forms.

Independent Games as a Technology-Oriented Movement

David Hess (2005) has suggested that there are three processes or stages that are particularly pronounced in TPMs: Private-sector symbiosis, incorporation and transformation, and object conflicts. Private-sector symbiosis is the process by which the goals of a social movement and those of inventors and entrepreneurs are brought to coincide, creating a cooperative relationship between the two groups. Incorporation and transformation occurs when the existing industry begins to adopt these innovations and transform them to fit with

their own technologies and interests. The final stage, object conflicts, refers to the conflicts between actors that arise out of these design transformations (p. 516).

Private-sector symbiosis can be seen as a driving force not only for the independent games movement, but for many of the early innovators in the field of videogames. As the early days of videogames were dominated primarily by independent developers, this parallel is not surprising. The primary source of motivation during this early period was the hacker movement, as part of the broader countercultural movement of the 1960s. The hacker imperative to bring computers to the masses drove early experiments such as the People's Computing Company, the Homebrew Computer Club and even Atari. These organizations would later prove essential in the rise of the videogame industry.

The hacker movement would continue to be a source of motivation long after the industry had become established. The hacker ethic of information sharing would go on to influence the rise of shareware as a distribution model, especially among game developers. The most influential of these, John Carmack, John Romero, and the other Id developers, would further articulate their goals with hacker discourse by incorporating modding tools into their games. This would go on to make modding a significant component of the independent game movement.

As modding became incorporated into the mainstream industry, following the success of *Doom*, a complex system of legal rights and restrictions would grow up to regulate it. Whereas modding before *Doom* was generally not

sanctioned by the original game's creators and thus remained, like many hacking practices, in an area of ambiguous legality, games that supported modding required licensing agreements in order to protect developers from potential legal action. Even the defiant developers at Id were grudgingly forced to place some basic restrictions upon their overzealous modding community (Kushner, 2003, p. 169). Thus, the process of incorporation is inseparable from that of transformation (Hess, 2005, p. 523).

The end-user license agreements (EULA) associated with modding tools would eventually become sites of object conflict as modders found themselves confronted with intellectual property law. Early unsanctioned modding frequently involved the remixing of IP, such as *Castle Smurfenstein*, a parody of the Smurfs created by modifying the popular Apple II game *Castle Wolfenstein* (Nevins, 1999), which would later be the inspiration for Id's *Wolfenstein 3D*. This tradition of IP remixing continued with the creation of the *Barney* mod for *Wolfenstein 3D* (Kushner, 2003, pp. 115-116) and *Doom* mods featuring characters from *Star Wars* (pp. 165-166) and *Aliens* (p. 193).

While many of these mods would proceed unhindered, others would be shut down by developers. Mods such as "Duke it out in Quake," a mod of *Quake 3* that incorporated elements of Apogee's Duke Nukem franchise, and the "GI Joe" mod for *Battlefield 1942* were halted due to copyright issues (Nieborg, 2005; Postigo, 2008, p. 61). Although these mods, like much fan-generated content, were noncommercial in nature and may not have been subject to copyright litigation, the move to shut them down was made by the developers, based on

the restrictions laid out in the EULA, rather than through any actual legal action.

Thus, these groups of modders were prohibited from using mod technology in the

way it had historically been used and were left with few means of recourse.

The independent games movement has clashed with established

companies on other issues in addition to modding. One such issue is digital

distribution. Distribution channels are vital for independent developers as it is

their ability to avoid the costly and tightly controlled mainstream publishing

process that allows them to remain independent. Throughout the history of

videogames, independent games have been distributed through a variety of

digital means, such as bulletin board systems (BBS), university networks and

eventually services such as Valve's Steam. The growth of the Internet in the

1990s was accompanied by a growth in the number of independent game

developers. This growth, however, was mostly limited to PC games, as

proprietary devices, such as consoles, were kept under lock and key by legal

structures and technological barriers, such as the 10NES chip.

As small, downloadable games became more popular and more profitable,

industry players like Microsoft and Sony began developing methods of delivering

this content to their own devices. In 2005, Microsoft unveiled Xbox Live Arcade,

a digital store and downloading service that allowed players to download games

using Microsoft's latest console, the Xbox 360. Both Nintendo and Sony would

follow with their own services the next year (Donovan, 2010, p. 365). Soon,

other hardware manufacturers like Apple and BlackBerry would create similar

services for their own devices, creating even more channels through which

independent developers could sell their games without incurring heavy

manufacturing and publishing costs.

As with other examples of incorporation, the adoption of digital distribution

by hardware manufacturers dramatically transformed it. Whereas BBS and other

systems were free and unregulated, these new services were tightly controlled

with licensing agreements and had lengthy review processes that games and

other programs had to pass through in order to be listed. Apple in particular

became notorious for their restrictive and seemingly arbitrary App Store review

process, which often rejected submissions without explaining the decision to the

developers (Raphael, 2009).

Not surprisingly, these policies quickly became sites of object conflicts.

One highly visible example occurred with the game *Phone Story*, released in the

Apple App Store in September of 2011. *Phone Story*, a game created by the

independent development team Molleindustria, was created as a satire of Apple's

own corporate practices. The game tasked the player with such jobs as

overseeing the mines that produced the raw materials for creating iPhones and

catching suicidal factory workers as they hurled themselves off the roof of a

manufacturing plant that supplies Apple. Although the game managed to pass

Apple's review process, it was removed from the store several days later for

violating App Store policy (Brown, 2011).

Object conflicts have also arisen around issues much broader than the

censorship of a single game. When Amazon launched their own app store to sell

programs for Google's Android operating system, their distribution terms gave the

company broad control over the pricing of individual apps and games. These

rules discouraged developers from offering discounts in competing app stores,

yet allowed Amazon to discount the price of the app in its own store, even if it

was selling well. While these terms had the potential to help Amazon draw

consumers away from competing stores, they seriously jeopardized the profits of

the developers. This prompted the IGDA Board of Directors to issue warning to

developers, urging them not to use the new app store (IGDA Board of Directors,

2011).

Thus, with regard to digital distribution, object conflicts occur in at least

three different forms. First, developers must choose which platforms to target

with their games, which often forces them to censor themselves in order to better

meet the guidelines of that system. Second, object conflicts occur at the point of

consumption, when consumers have the option to purchase the same game on a

number of different platforms. Finally, object conflicts can occur when the

corporate owners of these distribution channels choose to use the broad powers

given them through their own policies to ban, restrict, or otherwise interfere with

the ability of developers to use these channels.

Independent Games as Resistance to Hegemonic Discourse

As the independent games movement can be seen as a TPM, offering

alternative games to those being produced by the mainstream videogame

industry, these games become part of the process of disarticulation and

rearticulation of videogame discourse. The games that are most effective at

doing so are those that deal most directly with the various antagonisms that exist in that discourse. In this case, the struggles that result in disarticulation are those in which consumers are faced with both accepted mainstream products and the alternative products offered by the TPM. This provides the opportunity to question the ideology behind the existing products, challenging hegemonic discourse.

One of the most common motivations of indie developers is, as was mentioned in the quote from IndieCade, to address the lack of innovation within the videogame industry. Developers do this to differing degrees, with some making incremental changes to accepted design conventions and others creating games that lie far beyond the industry's view of what is acceptable. This is often done by drawing a connection between the views and goals of the developers and videogame culture as it was before the consolidation of the major videogame industry, when most developers were independent.

One group of developers who took this route was Introversion Software. Founded in 2001, Introversion's goal was to revive the eccentric culture of the early UK videogame industry that thrived during the time of the ZX Spectrum (Donovan, 2010, p. 364). That year, as major videogame publishers were releasing big budget titles such as *Diablo II* and *Grand Theft Auto III*, the three-man studio released *Uplink*, a game that simulated computer hacking. Instead of 3D graphics and expansive virtual worlds, *Uplink* featured simple text boxes, icons and progress bars with a monochromatic blue style. Though the game was virtually unknown among mainstream audiences, reviewers praised its

minimalistic graphics as well as its unconventional gameplay, calling it "perverse and brilliant" (Gillen, 2002, p. 85).

Introversion's most successful game, *DEFCON*, would be even more provocative. Inspired by the movie *WarGames*, the game put the player in the role of a military commander waging a nuclear war. According to Mark Morris, one of the game's developers, it was a game that would not have been able to pass industry gatekeepers:

> I don't think *DEFCON* would ever have got commissioned by a publisher. Never in a million years. Publishers always want to be mass market, they look at things and ask what is going to be the turn off in this game. How many people are we going to offend by calling it a genocide 'em up? Why would you want to play a game that's miserable? My response is look at all the melancholy albums that are out there and sell in massive numbers. How many weepy films? There's absolutely no reason why games can't evoke that same kind of slightly depressed, contemplative emotional state in the player that other mediums do. (quoted in Donovan, 2010 p. 367)

By self-publishing *DEFCON*, Introversion was able to create a game that was not only unconventional, but also overtly political.

A second antagonism to videogame discourse is the marginalization of players through gendered hardcore-casual dichotomy. Although the female demographic has grown substantially, this has not translated into cultural power for women (Kubik, 2010, p. 131). When women are portrayed in videogames, it is often in a highly sexualized manner (Taylor, 2006, p. 118). Even strong female protagonists, like *Tomb Raider's* Lara Croft, are designed with the male gaze in mind (Schleiner, 2001, p. 222; see also Kennedy, 2002; Peck, Ketchum & Embrick, 2011, pp. 216-217).

As a counter example to these mainstream depictions of women, I point to the game *Aquaria* (Figure 4.1), a collaboration between indie developers Alec Holowka and Derek Yu (who formed the company Bit Blot in order to create this one game). Although by no means as popular as *Tomb Raider* in terms of overall sales, *Aquaria* is one of the most well-known games in the independent scene and was awarded the Seumas McNally Grand Prize at the Independent Games Festival in 2007 (IGF, 2011). The gameplay of *Aquaria* focuses on exploration, similar to other action-adventure titles such as *Metroid* and *Zelda*. The game's main character, an aquatic creature named Naija, finds herself alone in a vast ocean, full of life yet devoid of companionship. The game's narrative focuses on

Figure 4.1: *Screenshot of* Aquaria. *Taken by the author. (Bit Blot, 2007)*

Naija's search for others like herself. As the game has almost no words other than Naija's occasional monologue, the story is told through the world of Aquaria itself, making the game one continuous "narrative environment" or "navigable narrative" (Fullerton, Moire & Pearce, 2007).

Although there is combat in *Aquaria*, it is significantly downplayed as a secondary skill, which is not even available at the beginning of the game when Naija is in her normal form. Her two primary skills, which are used to overcome the majority of the game's obstacles, are singing and cooking. Singing allows Naija to open doors, move heavy objects, transform into an offensive or defensive form, and interact with the environment. Combat is both a means of protecting yourself from dangerous creatures and a way of collecting ingredients with which to cook. Recipes are learned both by finding new dishes and by simply experimenting in the kitchen (Bit-Blot, 2007). Through this cross-pollination of the domestic and wild, the mundane and the fantastic, traditional action-adventure conventions are not replaced, but rather reframed to more closely resemble traditional girls' stories in which play and adventure are situated within domestic spaces (Fullerton et al., 2007; Jenkins, 1998, pp. 280-281).

The Border House, a blog that focuses on issues of race, gender and sexuality in videogames, offers a feminist reading of *Aquaria*. The author notes a number of differences between *Aquaria* and other games, notably that the main character did not seem to be over sexualized or designed for the male gaze. The author also expressed a greater deal of identification with the main character than in mainstream games, comparing the central narrative and the element of

exploration to the experience of discovering feminism and piecing together an understanding of social dynamics, power and oppression (Blake, 2011).

While some games, like *Aquaria*, attempt to leave behind the common androcentric elements present in mainstream games, others take a more active approach, dealing with issues of gender and sexuality as central themes. One of the most well-known indie developers to deal with these issues is Anna Anthropy, who publishes her games under the title of Auntie Pixelante. Known for titles such as *Calamity Annie*, *REDDER* and *Lesbian Spider-Queens of Mars*, many of her games deal with BDSM (which encompasses bondage and discipline, dominance and submission, sadism and masochism, and similar practices), homosexuality and transgender issues.

Perhaps her most interesting treatment of sexuality, as well as one of her most critically acclaimed games, is *Mighty Jill Off* (Figure 4.2). This game explores the relationship between the protagonist, Jill, and her "Queen." The player begins by being cast out of the Queen's chamber at the top of her tower to the dungeons beneath it (Aunte Pixelante, 2008). The basic premise of the game is a variation on the standard "save the princess" game. Just as in *Super Mario Bros*, the game is won by getting the hero to the Princess (Queen) at the end of the castle. In *Mighty Jill Off*, however, the Queen is not a passive character being kept against her will. Rather, it is her will that compels the hero, Jill, to embark on the quest in the first place.

The game itself is a relatively difficult platform game, based loosely off the arcade game *Bomb Jack*. Playing the game requiring precise jumps to avoid the

Figure 4.2: *Screenshot of* Mighty Jill Off*. Taken by the author. (Aunte Pixelante, 2008)*

numerous traps scattered throughout the tower. Although a skilled player could

complete the game in under fifteen minutes, new players will most often die

frequently, repeating certain rooms over and over again as they perfect their

timing and reflexes. Upon reaching the top of the tower, Jill is greeted by her

Queen, who promptly tosses her back out to do the same task again. With a final

wink to the audience, Jill lets the player know that all the trials of the game were

merely a part of her role as the submissive member of their relationship.

What makes the narrative of *Mighty Jill Off* so successful as a narrative is

that it does not simply rely on the textual, or even the visual to do the storytelling,

but rather takes advantage of the procedural. The BDSM themes of the game

are not simply communicated to the player through its framing fiction, but through

the very mechanics and logic of the game. By struggling through the various

obstacles and challenges that the game presents us with, we, as players, enact

the experience of a submissive "bottom" role as the traditional Mario-Princess

relationship is reframed not as one between hero and damsel, but between

submissive and dominant. Thus, *Mighty Jill Off* is not about showing BDSM

culture, it is about performing BDSM culture.

This performative aspect of the game is both fitting, as role play is often

considered an important aspect of BDSM practice (Bardzell & Bardzell, 2006),

and necessary for the subject matter. Examples of BDSM in mainstream media,

including videogames, have been criticized for being merely representational,

commodifying the BDSM aesthetic without dealing with it in meaningful ways

(Bardzell & Bardzell, 2006; Weiss, 2006, p. 121). *Mighty Jill Off* does the exact

opposite, eschewing the standard depictions of kinky sex (the game does not

actually include any sexually explicit images) in favor of exploring other aspects

of the relationship. Also, as this relationship is expressed as much through the

player's effort and frustration as it is through that of the player character, there is

a certain physicality to the experience that other media fail to achieve.

Contrasting Organizational Structures

While the goal TPMs is to create alternative technologies and products to

fulfill the same needs as those being created by existing institutions, they tend to

have organizational structures that differ dramatically from those institutions.

Although they can take the form of unified organizations, such as the Danish

Organization for Renewable Energy (Hess, 2005, p. 526) they are more often

loose collectives of smaller organizations, such as the open source software movement (p. 528). If we look at TPMs as a subset of traditional social movements, this tendency toward less rigid structure fits the conceptualization of social movements as "an uninstitutionalized collectivity" (Stewart, Smith & Denton, 1994, p. 5).

The organizational structure of the independent games movement leans heavily toward the "open" end of the spectrum. Although there are certain overarching organizations, such as IndieCade and the Independent Games Festival, that tie much of the community together, it remains a community made up of many different studios, teams and collaborations. These vary in size and composition from large, influential companies, like Id Software, to small, often temporary teams, like Bit Blot, to individual developers, like Locomalito. As these loose, malleable structures contrast sharply with the huge and increasingly hierarchical structures of the mainstream industry, they also provide solutions to many of the problems inherent in the industry.

O'Donnell (2008) notes a number of cultural patterns that exist in the videogame industry which undermine the creative collaboration of developers. The roots of these problems, he argues, are "in the industry's emphasis on secrecy, closed networks of access, and the use of the State to discipline those networks" (p. 5). Although these aspects of the industry became most pronounced during the late 1990s when it transitioning into its present oligopolistic state, many of them originated in earlier periods of corporate growth, such as the rise of Atari or Nintendo's entry into the home console market.

As I have previously mentioned, secrecy is a part of almost everything in the videogame industry. The number of patents, copyrights, nondisclosure agreements and other contracts is such that industry workers often have the fallback position of assuming that everything is secret (O'Donnell, 2008, p. 62). One of the effects of this policy is that developers have very little work-related communication with other developers outside their company, even when working on the same project. Advice that developers do share with one another is often discounted, as each development studio assumes itself to be so unique that such advice would not apply. The result is that teams often repeat the mistakes of others, only realizing this fact in retrospect (pp. 234-235).

This pervasive level of secrecy also helps keep the networks within the industry closed, keeping others out. This can be seen in the difficulty that aspiring game developers encounter when trying to become part of the industry. The secrecy of those within the network prevents sufficient information from reaching those who want to join (O'Donnell, 2008, p. 235). Additionally, as these networks continue to shrink through corporate consolidation, risk and labor continue to be shifted onto those on the fringes of these networks. Rather than promoting creative collaboration between different members of the network, these constraints serve primarily to "shore up existing sites of power and control" (p. 293). Thus, barriers to entry remain high, and many of those within the industry are prevented from fully participating.

Maintaining these closed networks requires a significant amount of discipline. While they can be, and to a certain extent are, disciplined through

technological means, the videogame industry has turned instead to the power of

the State and its ability to wield violence to control and maintain these networks

(O'Donnell, 2008, p. 294). Thus, even if someone is able to hack the

technological barriers of the videogame industry, such as lockout chips and other

security measures, they are then faced with the power of the State, in the form of

copyright and patent law. This combination of technology and legislation

effectively dictates who can and who cannot make games.

To say that independent developers are immune from these elements

would deny the complex relationship that independent developers have in

relationship to the industry, as well as apply a false sense of homogeneity upon

the independent game community. Attitudes toward the industry among

independents range from the more revolutionary discourse of scratchware

developers (Anthropy, 2009; Designer X, et al., 2000) to developers who make

games independently only to break into the industry (O'Donnell, 2008, p. 55).

Although independent development teams may embrace or reject industry

practices and values to varying degrees, I argue that the independent developer

community offers models of alternative organizational structures that are capable

of overcoming many of the problems that contemporary videogame development

faces.

While the culture of the videogame industry is characterized by secrecy,

the independent development community is notable for its culture of openness.

Indie developers congregate on online forums, such as The Independent Game

Source (www.tigsource.com), the Super Friendship Club

(www.superfriendshipclub.com), The Bit Collective (bitcollective.ca), and many others. Each of these sites was created by independent developers and is open to the public. Developers routinely post tutorials, coding questions, and project logs. The very things that most development studios are most reluctant to share become the cultural capital of the indie games community.

Perhaps the greatest contributions to the independent developer community have been from developers who have created entire game engines and then released them as open source projects. Examples include the Flixel engine, which was used to create the popular Flash game *Canabalt*, and the Monocle Engine (see Figure 4.3), which was started by Alec Holowka, the programmer behind *Aquaria*. Once again, this points to the considerable overlap that exists between the independent games movement and the open source software movement.
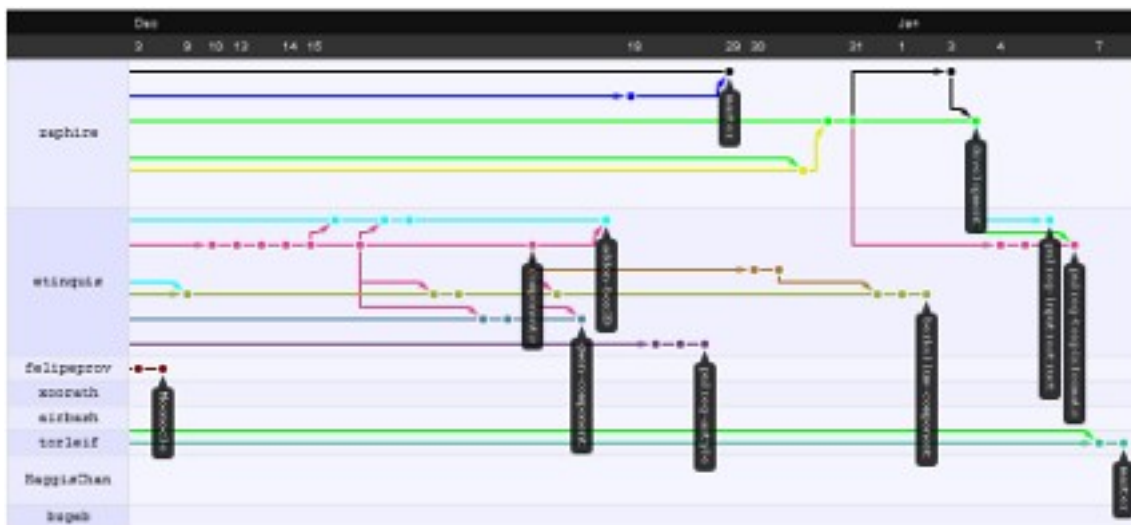

Figure 4.3: *GitHub network graph showing development on the Monocle Engine. Colored lines show the different developers involved and different branches of the project.*

Just as the culture of secrecy within the videogame industry leads to closed networks and high barriers to entry, the openness among independent developers fosters a system with very low barriers to entry. A great deal of forum contributors confess to having little or no experience in game development and many developers on the forums self-report as being teenagers. Indeed, many forum topics, such as tutorials, are designed specifically for the benefit of those who are outside the existing support networks.

Although the independent community draws in a large number of new people to the field of videogame development, it is also drawing an increasing number of professional developers away from established studios. Indeed, many of the most successful independent developers became independent after working in the industry for years (Kohler, 2010). Such was the case with Kyle Gabler and Ron Carmel, the developers of *World of Goo*. Both were working for Electronic Arts, where they felt constrained by the conservative corporate culture. After calculating how long they could live off their savings, the pair quit their jobs and formed their own studio, 2D Boy (Donovan, 2010, pp. 357-359). *World of Goo* would become their first game, and would go on to win numerous awards and become one of the the best selling independent games of the decade (p. 366).

Many other industry veterans have found themselves in a similar situation to that of Gabler and Carmel. According to a survey published on Gamasutra, creative freedom is the primary reason that developers want to leave the industry and become independent (Fedor, 2011). Another common motivation for leaving the industry is the acquisition of a small studio by a larger one. Although these

buyouts occasionally preserve the culture of the original studio, they more often

mean the assimilation of the developers into the corporate culture of the larger

one (Kuchera, 2011). As such acquisitions have become standard industry

practice (O'Donnell, 2008, p. 170), the exodus of veteran developers is unlikely to

slow in the foreseeable future.

This constant influx of industry talent suggests a corollary to O'Donnell's

concept of "breaking in" to the industry. Just as breaking in has become a

significant cultural aspect due to the closed networks of the mainstream industry,

"breaking out" may become another standard element of the game developer

narrative. This, of course, has significant implications for independent game

development, as it means a greater influx of mainstream processes and

attitudes. As Sean Murray, one of the founders of Hello Games notes:

> You get into this mentality that it takes 50 people to do anything.
> When people say, 'Should I work in the industry first?,' I say they
> should. But if you want to do your own thing, you need to keep that
> alive, because it can become very hard to break away. (Kohler,
> 2010).

This movement between mainstream and independent development could

perhaps be seen as a form of incorporation and transformation, albeit in the

opposite direction. In this case, rather than the established industry incorporating

aspects of the TPM into its own existing practices, we see the indie games

movement incorporating aspects of the existing industry that developers bring

with them as they leave.

The differences in structure between the independent games movement

and the mainstream industry also mean that independent developers have a

different relationship to the State. Unlike huge corporations such as Nintendo, most small studios lack the resources to leverage the power of the State. Although they can apply for the same patents and copyrights that larger corporations can, these documents mean little without the ability to fight for them in the courts.

One notable exception to this rule is Mojang, the small Swedish development studio founded by Markus "Notch" Persson, the creator of *Minecraft*. In August, 2011, Mojang was sued by the ZeniMax Media, the publishers of the *Elder Scrolls* series over the title of their upcoming game, *Scrolls* (Webster, 2011a). Due to the massive success of *Minecraft*, the nine-man studio was able to hire lawyers in order to fight the case and managed to prevent an interim injunction against them (Knapp, 2011). In typical indie disdain for secrecy, Notch has been very public about the entire process, even going so far as to post the legal documents served by the ZeniMax lawyers on his blog (Persson, 2011b). Many other independent developers have criticized the lawsuit through Twitter, blog posts, and, quite appropriately, a satirical game, entitled *The Elder Scrolls V: Sky Edge* (Auntie Pixelante, 2011).

Given the negative reaction that many independent developers have toward the use of the State to stifle competition, it may not come as a surprise that many developers attempt to remove the State from the equation completely. Whereas most commercial game titles now come loaded with digital rights management (DRM) software, the digital successors to physical technologies such as the 10NES chip, many independent games are released DRM-free

(Doctorow, 2009; Hyman, 2009). Thus, the State apparatus, which enforces the closed networks and unspoken rules of secrecy in the mainstream industry, is left with relatively little power to discipline the independent developers.

Alternative Economic Models

As O'Donnell (2008) notes, the interactive, collaborative practices of videogame industry exemplifies the work of the "new economy." These practices, however, are tightly controlled and disciplined by the organizational structure of the industry itself, limiting, to a certain extent, the ability of major studios to diverge from the traditional economic model of development studios, publishers, distributors and retailers (Schoback, 2005, p. 856; Williams, 2002, p. 46). With less restrictive organizational structures, independent developers are more able to experiment with new economic models, taking advantage of technological advances in computing and communications to get their games to their players through nontraditional channels.

One of the most significant technologies for the independent games movement is the development of digital distribution (Martin & Deuze, 2009, p. 280). As previously mentioned, the centrality of digital distribution to the independent games movement has made it a common place for object conflicts as the videogame industry has attempted to incorporate and transform it to suit the needs of existing organizations. Thus, many online and downloadable games are monetized through models such as ad-supported content, advergaming, subscriptions, and microtransactions (IGDA, 2009, pp. 12-13),

models that favor large organizations with established infrastructures capable of regulating and managing large networks of players, advertisers, databases, and payment services.

Although digital distribution in many cases reproduces the existing economic models of the videogame industry, it also allows independent developers to create new models that bypass many of the traditional sites of industry control. By circumventing publishers and distributors, it has become a viable model of distribution for small independent studios with . One of the first studios to take advantage of this was Introversion Software.

With the success of *Uplink*, which was sold directly from their website, Introversion began receiving offers from publishers, all of whom offered the trio far less for the publishing rights than they were making on their own. Not only did Introversion reject these offers, they went on the road to try and convince other small development studios to abandon the standard industry model (p. 365). Thus, digital distribution became articulated as a liberating technology, offering developers a path to freedom from the industry publishing model.

As more developers began selling and distributing their games over the Internet, services began arising to facilitate these transactions. Among these was Valve's Steam service. Steam, which evolved in part from a canceled massively-multiplayer online (MMO) project (Valve, 2004, p. 10), originally sold only Valve games. Valve soon opened it up to outside developers, transforming it into the most successful PC downloading service on the Internet (Donovan, 2010, pp. 362-363). Despite the success of Steam, many large developers and

publishers have had difficulty modifying their existing business practices to take advantage of the service. Indeed, many publishers have refused to put their games on Steam, with some even creating their own competing online stores (Coldewey, 2011; Peckham, 2010; Wingfield, 2011). Not surprisingly, many of the first non-Valve games to appear on Steam were independent titles (Donovan, 2010, pp. 363-364). Although some developers still choose not to use services like Steam for technical reasons (Persson, 2011a), they are generally not burdened by the rigid organizational structures and traditional supply chains that are found in the industry.

Soon after the release of Steam, Microsoft created a similar service for their Xbox console, Xbox Live. Sony and Nintendo followed with their own services for their own consoles (Donovan, 2010, pp. 365-366). This made it possible to create small, affordable games for consoles by bypassing the expensive manufacturing and distribution costs associated with traditional console games. Of course, each of these services remain connected to proprietary networks, thus maintaining the strict level of control that all post-Crash console manufacturers have held over their systems (O'Donnell, 2008, p. 175).

Independent games have taken advantage of all three of these services, with games like *Braid* and *Limbo* on Xbox Live, *Flow* on the Playstation Network and *Cave Story Wii* on WiiWare. Again, since most independent developers have no contractual obligations to publishers or platform holders, many indie games are released across multiple platforms and services. Tristan Donovan

(2010) has referred to this proliferation of independent games across consoles as "a turning point for the commercial viability of indie games" (p. 366), specifically citing successes such as Jonathan Blow's *Braid* and 2D Boy's *World of Goo*. Indeed, opening up the console market to independent developers has removed one of the major distinctions between the reach of indie games and the reach of traditional industry games.

Although these services allow independent developers access to the resources of industry networks, this is not to say that such access is open or unregulated. Rather, the access that independent developers are granted to consoles is as tightly controlled as other forms of access within the industry. In order to develop for these platforms, developers are often forced into the use of proprietary technologies, such as the case is with Microsoft's XNA Studio for Xbox Live development (O'Donnell, 2008, p. 176). Small developers are often discouraged from developing for certain systems due to the prohibitively high cost of development kits, which can cost several thousand dollars each (p. 178). Companies can also discourage developers more directly, as Nintendo has in attempting to create a distinction between independent and hobbyist or "garage" developers (Morris, 2011). Thus, the vast majority of independent game development remains restricted to the PC.

While the flexibility of independent developers allows them to more quickly and effectively adopt new economic models, it also allows them to adopt economic models that larger organizations are incapable of adopting, such as freeware. As the name implies, freeware games are distributed online at no cost

whatsoever. Unlike shareware, freeware games do not have a commercial version that players are encouraged to purchase. The full game is made available to the public and can be redistributed freely. Freeware also differs from other "free to play" models in that the developers do not monetize their games through other means, such as advertising or microtransactions. Aside from some developers accepting donations from players, freeware games do not generally earn any money whatsoever.

Since most freeware developers have another job as their primary source of income, they are often categorized as hobbyist developers (MacDonald, 2005) or as not being "true" independent developers (Schreier, 2011). Such distinctions, however, are problematic, as a number of the most critically acclaimed independent games, including Locomalito's *8-Bit Killer*, Bay 12 Games' *Dwarf Fortress*, Daisuke Amaya's *Cave Story* (Figure 4.4)*,* are freeware titles (though commercial versions of *Cave Story* would eventually follow on WiiWare, Steam and other platforms). Additionally, Amaya, who has to date released all of his games as freeware, was a speaker at the 2011 Game Developers Conference (Parish, 2011).

Developers cite a number of reasons for releasing their games as freeware. Most often, these reasons have more to do with creative freedom and personal ethics, rather than lack of experience. Some, like the Spanish developer Locomalito, make their personal philosophies public.

> Free indie game developers like me have no ties with [sic], we dont
> [sic] look for the masses, we often invest in ideas that are

Figure 4.4: *Screenshot from* Cave Story. *Taken by the author. (Studio Pixel, 2004)*

> commercially unacceptable, we believe in the culture of
> videogames beyond money, so we just make games for love.
> (Locomalito, n.d.)

The choice to release a game as freeware, more often than not, is a deliberate

one on the part of the designer in order to achieve a goal other than profits. It is

also an option that is generally not available to traditional development studios,

which have much higher operating costs.

Independent developers have also experimented with even more unusual

economic models. One of the most unique and successful of these models is

that of the Humble Indie Bundle. The Bundle, which consisted of a number of

critically acclaimed games, including *Aquaria* and *World of Goo*, was sold on a "pay what you want" basis. The games were also provided DRM-free, meaning that there were no technological restrictions to prevent a purchaser from installing the games on multiple computers, nor any kind of system to prevent piracy. This rejection of DRM technology is a move that contrasts sharply with the industry's tendency toward greater control over their products and their customers.

Although experimental in nature, the first Humble Bundle earned over $1.2 million (Masnick, 2010). It would be followed by three additional humble bundles, earning $1.8 million (Thompson, 2010), $2.1 million (Bradford, 2011), and $2.3 million (Humble Bundle, 2011), as well as several smaller bundles. A significant portion of the earnings was also donated to the Electronic Frontier Foundation and Child's Play charity. The incredible success of the Humble Bundle would go on to inspire other bundles, some of which, like Indie Royale, would have even more unusual economic models (Orland, 2011).

CHAPTER 5

AN INDIE GAME ECOLOGY

Having discussed the way in which the videogame industry evolved as a sociotechnical system, the discourse that was articulated during that process and the ways in which the independent games movement resists that discourse, it is now possible to look more clearly at the medium of videogames as a whole. The goal of this chapter is to construct a model of videogames not as a single monolithic industry, but as a larger ecology, including both traditional game developers and independent developers.

It should be noted that the boundary between the industry and independents is far from clear. Id Software, for example, has been a well-known and influential figure in the videogame industry since the 1990s. Despite its position within the industry, it was technically an independent company until its acquisition by ZeniMax in 2009 (Remo, 2009). As mentioned in Chapter 3, Id was one of the major forces behind the legitimation of modding and the official distribution of modding tools. This helped to lower the barriers to entry for game making and served as a training ground for many future independent developers. At the same time, the culture of Id included many problematic elements such as the conflation of work and play and the infamous death schedule, which would go

on to influence many of the unhealthy corporate practices in the mainstream industry. Since Id has both resisted and contributed to the corporate culture of the videogame industry, it defies attempts to categorize it into one group or the other. Thus, while a bipolar model of videogames may be somewhat more useful than the monopolar model, my intention is not to essentialize games and developers as being either independent or not, but to convey the complexity of structure and subtlety of variation within what could be termed the "greater games industry" (Martin & Deuze, 2009, p. 278).

Articulation and Actor-Network Theory

The two overarching concepts that I have dealt with in this paper are technology and discourse. It should be noted that even when referring to these concepts individually, there is considerable overlap between the two. Indeed, many of the connections that I hope to draw in this chapter are dependent upon the fact that scholars on both sides realize that these two concepts are not mutually exclusive. In order to describe the technological side of videogames, my primary tool has been actor-network theory, which looks at technologies not as a single artifact or "black box," but as a complex system comprised of physical mechanisms, intended users, technical knowledge, established infrastructure and so forth. Each of these nodes within the network are presumed to have some level of agency, or the ability to exert an influence on other nodes, though certain critical nodes, such as "obligatory points of passage" which connect local networks, such as a company or a development team, with the larger global

network, exert greater influence (Law & Callon, 1994).

One of the significant theories leading to the development of actor-network theory is Law's theory of heterogeneous engineering, which moved away from both purely social constructivist approaches to technological development and pure technological determinism (Law, 1987). To illustrate this point, Law gives the example of the role of Portuguese galley in their expansion around the coast of Africa. The technological advancements that made possible this expansion were not simply the result of a single technological artifact improving incrementally over the course of time, but the result of a number of different technologies interacting together as a complex system capable of associating wind and manpower in a way that enabled ocean travel (p. 115). This system consisted of basic technological artifacts, such as the development of the magnetic compass, developments in design, such as the mixed-rigging ship, and the creation of new technical knowledge, such as the Portuguese sailors' discovery of the *volta*, a route that maximized their use of wind and ocean currents (pp. 118-119). When the ship, the emergent object created by the heterogeneous engineer, encountered a stronger adversary, such as the Atlantic Ocean, the system fell apart and the individual elements were dissociated. Where once there was a ship, there was nothing more than a pile of wood, sails and men at the mercy of the elements (p. 117).

The same methodology that Law applied to Portuguese expansion can be applied to the development of the videogame industry. Atari, for example, can be seen as an emergent object created by the association of various other actors by

a specific heterogeneous engineer, Nolan Bushnell. Bushnell was able to take

existing computer technology and simplify it down to the bare minimum

necessary to run a game. This allowed the computer technology behind games

like *Spacewar!*, which would not be available to consumers for years to come, to

be produced on the mass scale necessary to make videogames into a cultural

force. Legal associations, like the licensing agreement with Magnavox, protected

the company from lawsuits and allowed them to make use of profitable game

designs, such as *Pong*. Economic associations, such as the sale of Atari to

Warner provided the company with the resources it needed to take on more

ambitious and profitable projects, like the Atari VCS. Although all of these

elements contributed to the success of Atari, none of them were particularly

innovative on their own. Even the VCS, which established the home console

market that continues to be the core of the industry today, was neither the first

home console nor the first to use interchangeable game cartridges. It was only

the association of these heterogeneous elements into a single network that

allowed Atari to bring videogames from their relative obscurity in university labs

to mainstream Western culture.

Heterogeneous engineering can also be used to analyze the fall of Atari.

Just as early Portuguese galleys were unable to maintain their network stability

when they left the calm waters of the Mediterranean for the open waters of the

Atlantic, the system that Bushnell had built was unable to cope with the transition

to the Warner corporate culture. The drugs, booze and hot tub board meetings

that were acceptable, or at least a negligible cause of damage, during Atari's

early years caused considerable conflict with Warner executives. It also caused

rifts with other business partners, like Namco, turning them into competitors

(Kent, 2001, pp. 76-77). Talented designers and programmers who felt

appreciated by Bushnell and had been loyal to him were pushed away by the

Warner executives, eventually leading to their disassociation from Atari and their

reconstitution as even more competitors, such as Activision. In the end, Atari

ceased to exist as the industry powerhouse it once was and became merely a

collection of individual programmers, intellectual properties and fragmented

divisions, all of which would go their separate ways and become part of new

networks.

While actor-network theory has allowed me to analyze the technical

systems that make up the videogame industry, articulation theory allows me to

analyze the creation of the discourse and ideology of videogames that was

constructed alongside these technical systems. Articulation theory also uses the

network as its basic model, but uses it to describe the way in which ideas and

concepts are given meanings and how these meanings come into conflict with

one another. As different perspectives on these concepts are expressed by

individual actors, different discourses are articulated, forming a basis for a more

general understanding by the public. Dominant discourses shape the way that

people understand different issues, leading to the interests of certain groups

being served at the expense of others.

Resistance to these hegemonic discourses or ideologies can be achieved

through the process of disarticulation. This generally occurs at the points in

which the dominant discourse begins to break down, known as antagonisms. Antagonisms can be considered flaws in or contradictions to a discourse. Just as an actor must articulate a discourse to begin with, other actors can illuminate these antagonisms and disarticulate the same discourse. Once disarticulation has occurred, a new discourse can be rearticulated, providing a new method of understanding that challenges the dominant ideology.

Using articulation theory, we can return to the days of Atari and see how videogames developed not as a technology, but as a concept. By the time of the founding of Atari, the general public had already been exposed to videogames through Stewart Brand's article in *Rolling Stone*. Brand had articulated videogames as a part of the 1970s counterculture, more like a digital hallucinogen than a form of entertainment for the masses (Turner, 2006, p. 116). This was not a particularly useful discourse for Atari (despite the young company's affinity for recreational drugs) and Bushnell, who was less concerned with videogames as tools of social change and more concerned with their potential for profitability. Atari's discourse would distance videogames from the hackers who created *Spacewar!* and instead associate them with the more familiar amusement park midway games that Bushnell had run during the summers when he was in college (Kent, 2001, p. 29). This discourse firmly located videogames as belonging in taverns, bowling alleys and arcades, rather than in university labs.

While this discourse had many advantages for Atari, it also brought with it a considerable amount of baggage. The arcade games like pinball with which

videogames were now associated had at one time been associated with money laundering, organized crime and gambling (Kent, 2001, p. 50). Although much of that stigma faded over time, many people still associated videogames with sleazy environments and vagrancy among the youth. This limit to the discourse that Atari had articulated would allow for resistance in the form of antivideogame activism, such as that of Ronnie Lamb. Through an active campaign that took her on talk shows like *The Phil Donahue Show*, Lamb was able to rearticulate videogames as an unwholesome activity that encouraged children to waste time and money and exposed them to violence. This movement achieved a reasonable amount of success, with several small cities banning arcades and most shopping mall owners disallowing arcades on their property at the time (p. 119). While most of these successes were temporary, perhaps the more lasting effect of her movement would be the creation of an antivideogame discourse that articulates videogames as a corrupter of the youth and a contributor to idleness.

In order to combat the negative image that videogames has acquired, Atari needed to rearticulate videogames as a more wholesome, family activity. Bushnell founded the Chuck E. Cheese restaurant chain in order to create a more wholesome, family-oriented environment for videogames to be played (Kent, 2001, pp. 119-121). Atari's new Warner executives shifted the company's focus away from arcade games and toward the VCS, porting many of their popular arcade games to the home console (p. 133). Many parents were willing to purchase the home consoles simply to keep their children away from arcades, an attitude that was reinforced by many of Atari's marketing campaigns at the

time (Whitworth & Iverson, 2003). Both the development of the Chuck E. Cheese

franchise and the shift toward home consoles are examples of how discourse is

materialized.

This new discourse, too, faced a number of antagonisms. One of these

antagonisms came in the form of a series of crude pornographic games created

by third-party studios. The most infamous of these games was *Custer's*

Revenge, the premise of which was to help a naked General Custer escape the

battlefield in order to rape a captive Indian woman (Kent, 2001, p. 226). These

games generated a significant amount of public controversy, undermining Atari's

attempts to articulate home videogames as wholesome family activities.

Although major controversies like pornographic games challenged the

credibility of Atari's discourse among parents, perhaps the more damaging

antagonisms were those that were closer to the actual players. While Atari's

discourse promised parents a way to bring their children back from smoke-filled

arcades and into the home, it also promised players the experience of their

favorite arcade games on their own televisions. While some games, like *Space*

Invaders, were converted from arcades to the VCS quite successfully, others

were not. The Atari VCS version of *Pac-Man* was noted for being a

disappointment for many players (Kent, 2001, p. 236). In addition to being

constrained by the technology and rushed during production, *Pac-Man* lacked

much of the cultural context that framed the arcade version (Montfort & Bogost,

2009, pp. 78-79). The loss of confidence created by *Pac-Man* would set the

stage for even greater failure with *E.T.*, which would lead to the downfall of the

company (Kent, 2001, p. 239).

The example of Atari shows the interrelated nature of both the technical sphere and the discursive. The shift in focus from arcade games to console games was indicative of both the changes in videogame discourse at the time as well as the changing organizational structure of the company itself. Similarly, the fall of Atari and subsequent Crash is best understood as not simply a technical phenomenon, but a discursive one as well.

If the technical and the discursive are so intimately linked, it makes sense to analyze these two spheres not in isolation, but together. As mentioned in the introduction, I take a Foucauldian approach to looking at discourse, treating it as being fundamentally linked with social practices and institutions (Foucault 1984, pp. 9-10). Thus, it makes sense to explicitly link the social and technical systems examined with actor-network theory with the discursive systems described with articulation theory, resulting in the formation of a single sociotechnical-discursive network.

Although such a move may seem unorthodox from both an STS standpoint and a critical rhetorical one, it in many ways follows the lead begun by Foucault in his theorization of governance and governing apparatuses. He states that governing apparatuses, or apparatuses of security, are the essential mechanisms for governing a population (Foucault, 1991, p. 102). Although the concept of governmentality is generally applied to national governments, it can be applied more generally to in other situations, as well.

> What does it mean to govern a ship? It means clearly to take charge of the sailors, but also of the boat and its cargo; to take care of a ship means also to reckon with winds, rocks and storms; and it consists in that activity of establishing a relation between the sailors who are to be taken care of and the ship which is to be taken care of, and the cargo which is to be brought safely to port, and all those eventualities like winds, rocks, storms and so on; this is what characterizes the government of a ship. (Foucault, 1991, pp. 93-94).

Foucault's "government of a ship" is strikingly similar to Law's analysis of Portuguese shipbuilding technology. Law argues that the technology is not just the physical artifacts, but their relations to people and knowledge as well. Foucault approaches the topic from the opposite direction, arguing that issues of power and government deal with physical objects as well as with people. This position is perhaps most effectively and succinctly put in Foucault's statement that "one governs things" (Foucault, 1991, p. 93).

Greene (1998) connects the concept of governance more explicitly with articulation theory, describing a governing apparatus as a system that "polices a population, space, and/or object by articulating an ensemble of human technologies into a functioning network of power to improve public welfare" (p. 22). He goes on to describe rhetoric not as a separate aspect of or approach to these systems, but as a technology itself – a technology of deliberation. Articulation, then can be seen as a way to map the effectivity of rhetoric as a technology of deliberation within a Foucauldian apparatus (p. 39). By taking such an approach, mapping out discourse and technology geographically, criticism is able to take on a greater materiality, connecting ideology and affect to real-world action, rather than simply to representation (Greene, 2010, pp. 107-

108).

In the rest of this chapter, I intend to describe the current state of the videogame industry and videogames as a medium by mapping out the relationships between individual actors and discourses. By doing so, I hope to draw attention to significant structures within the network, such as antagonisms, obligatory points of passage and other critical nodes.

Mapping the Industry

When attempting to describe an actor-network, it is important to understand that a configuration of a network is not necessarily universal. As Akrich (1994) notes, the way in which the developers of a technology perceive its network may be considerably different from the way that the users of that technology perceive the same network. This can lead to technologies that do not meet the end users' needs. Akrich refers to these different perspectives on the same actor-network as scripts (pp. 207-209). Thus, the process of mapping the videogame industry will consist of "de-scribing" of a number of different actor-network scripts and then attempting to combine them into a more nuanced map.

As noted in the introduction, many actor-network theorists might take exception to this seemingly literal interpretation of the network metaphor. Indeed, Latour has argued against the use of such graphs noting that they fail to capture the "movement" or the dynamic nature of nodes and connections and that their simplicity belies the complexity of their objects of study (Latour, 2005, pp. 132-133). He does, however, concede that the simplicity of such illustrations makes it

simple for the observer to distinguish between the abstraction of the map and the complexity of reality. As he puts it, "the map is not the territory" (p. 133). Indeed, despite the aversion that some actor-network theorists have for such visual representations, network maps in one form or another have been a part of actor-network studies for quite some time (for examples, see Akera, 2007, p. 421; Law & Callon, 1994, p. 48). Thus, it is important to remember that the following maps (like all maps) are abstractions. The nodes depicted do not encompass all possible actors in the network, nor do the connections depicted preclude interactions between nodes lacking an explicit link between them. Those elements that have been mapped were included because of the significance of their influence upon the rest of the the network. In other words, those nodes that had the most easily observable influence upon other nodes were the most salient actors for the purposes of this analysis.

A natural starting point, then, is to describe the basic industry model from the perspective of the industry. Such a model is common both in industry settings and among many academics who have studied videogame production (See Schoback, 2005, p. 856; Williams, 2002, p. 46). As shown in Figure 5.1, The local network, where the bulk of the development occurs, generally consists of the development studio and the publisher (for clarity, people and organizations have been depicted as elliptical symbols while artifacts and other primarily technical nodes have been depicted as rectangles). The global network consists of groups like platform owners, IP holders, outsourcing studios and players. In most cases, the publisher serves as an obligatory point of passage between the
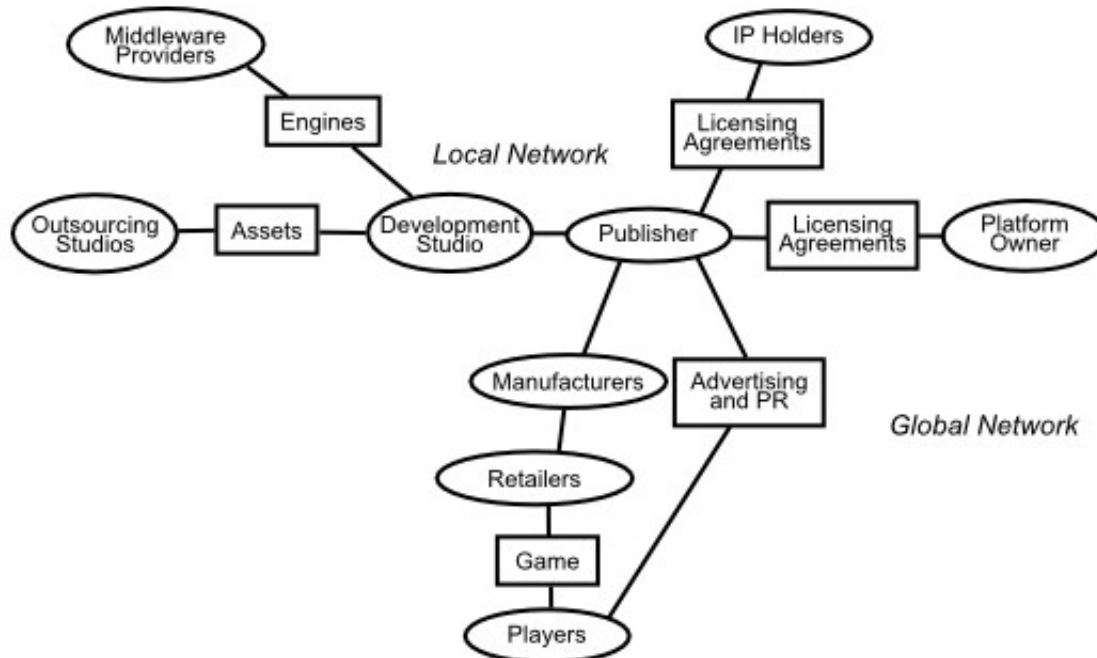
Figure 5.1: *Actor-network map of a typical videogame.*

two networks. The publisher ensures the flow of resources to the developers, including money, rights to intellectual property, and access to manufacturing and distribution channels. The publisher also imposes a structuring influence on the developers, creating deadlines, milestones and other expectations on the local network. Upon completion of the game by the developers, the publishers generally handle all of the marketing and publicity, as well as game's journey through the remaining "vertical levels" of the industry, from manufacturing to distribution to retail (Williams, 2002, p. 46) and ultimately to the players themselves. The publisher's involvement generally isolates the developers from these processes.

While such a model of the industry is consistent with the views of scholars

and analysts, it is also important that this structure is consistent with the views of those that it seeks to describe, rather than simply being imposed upon these groups by outsiders. To achieve this, I once again turn to O'Donnell's (2008) ethnographic work with game developers. He notes that "as far as developers are concerned, publishers and manufacturers control the video game industry" (p. 145) and that "the publisher is their interface with other networks in the game industry" (p. 161). These statements seem consistent with the above model and the role of the publisher as an obligatory point of passage, controlling the access that developers have to the global network of platform owners, manufacturers and players.

Depending on the nature of the development studio and its relationship to its publisher, the actual network could be more or less complex. Many development studios are wholly owned by publishers or platform owners, combining certain nodes or at least strengthening their relationship. Other games may require complex AI or physics engines that must be provided by middleware developers, such as Havok Physics. Developers may also choose to outsource the production of art assets or other parts of the project in order to reduce development times and focus their team on core development tasks.

An example of this typical development cycle is the game *Star Wars Rogue Squadron II: Rogue Leader*, created by Factor 5 for the Nintendo GameCube. In a 2002 postmortem in *Gamasutra*, Factor 5 cofounder Thomas Engel reflected on the development process of the game, highlighting aspects of the process that were successful and aspects that were more problematic.

Throughout the article, the influence of their relationship with LucasArts, their publisher, is apparent. Since LucasArts is a subsidiary of Lucasfilm, holder of the *Star Wars* IP, the developers had a high level of access to the property, as well as access to assets from the films themselves (Engel, 2002). Also, having worked together previously, Factor 5 and LucasArts had strong connections between one another, making LucasArts particularly effective as an obligatory point of passage between Factor 5 and the global network.

While the analysis shown in Figure 5.2 explains much of the success of *Rogue Leader*, a more complete understanding of the game's development requires taking a closer look at the development studio itself and "opening the black box," treating the studio not simply as a node, but as a subnetwork within the greater system (Callon, 1986, pp. 28-30). This reveals other influential nodes
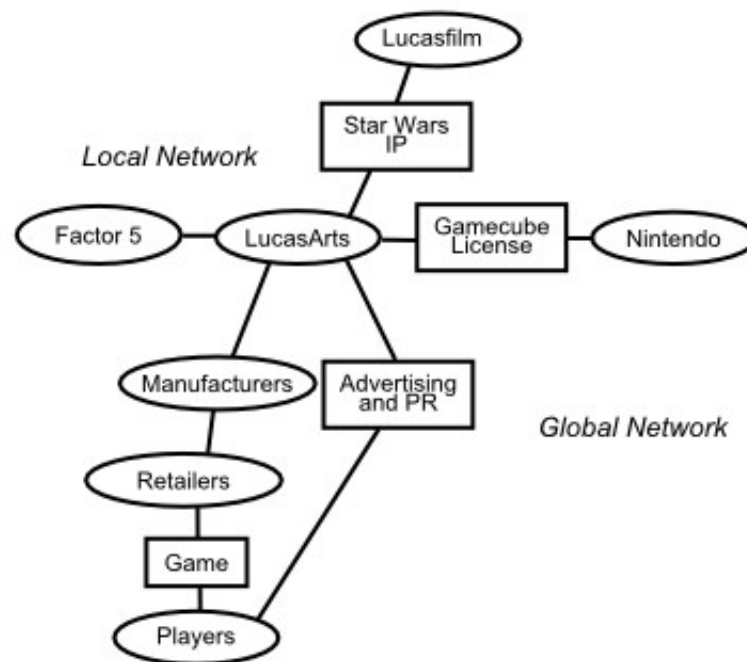

Figure 5.2: *Actor-network map of* Rogue Leader.

and connections. The map in Figure 5.3, then is a more detailed view of the

Factor 5 node in Figure 5.2.

In addition to having a close relationship with LucasArts, Factor 5 had a

close relationship with the GameCube hardware, having some degree of

influence during its development (Engel, 2002). This allowed their programmers

to create their own in-house tools, such as the MusyX audio system, to take

better advantage of the console. The developers also had in-house tools for

level editing and scripting, allowing their level designers to work efficiently,

despite having limited programming abilities.

Engel goes on to discuss even more specific details of the development

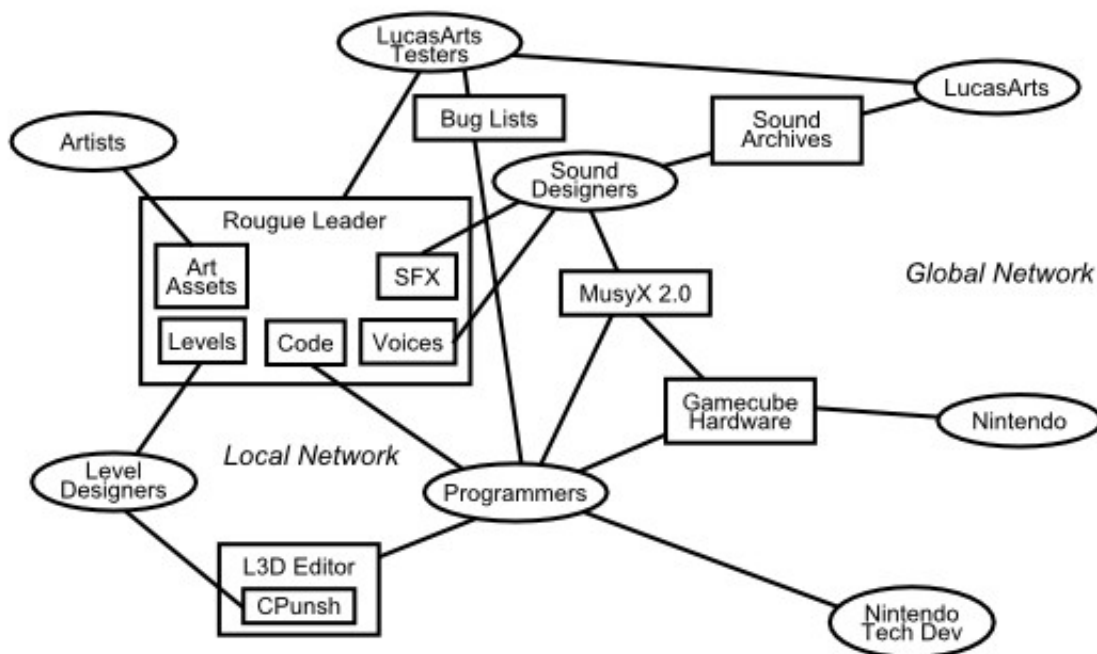process, such as the ways in which the GameCube's two-part memory structure

Figure 5.3: *Actor-network map of Factor 5 during the development of* Rogue
Leader.

influenced the development of the project. With sufficient technical information about the system, it would be possible to unpack the GameCube into another subnetwork, just as with Factor 5. Indeed, if it were useful in our analysis, it would be possible to unpack many of the other nodes as well, allowing us to see, for example, the way in which lead artists and technical artists interact with the rest of the network. For the sake of this analysis, however, I find our current level of detail to be sufficient to describe the game's development.

Just as decreasing the level of abstraction can be useful in exposing subtle interactions between nodes, increasing the level of abstraction can allow us to see more general trends and macrolevel interactions. Moving from the specific to the generic, we can use our basic model of game development to describe the videogame industry as a whole, shown in Figure 5.4. In many cases, generalizing this basic network topology across a number of different organizations is unproblematic. The three major console owners, for example, have very similar economic models and business policies. All three maintain tight control over their consoles through technological and legal systems, all three enter into licensing agreements with outside publishers in order to procure more games for their consoles, and all three take large percentages of the profits from the sale of these games.

In other cases, however, such generalizations cannot be made accurately. Unlike console owners, development studios vary greatly in size, in organizational structure and in their relationships with other entities within the game industry. First-party studios are usually wholly owned by either console
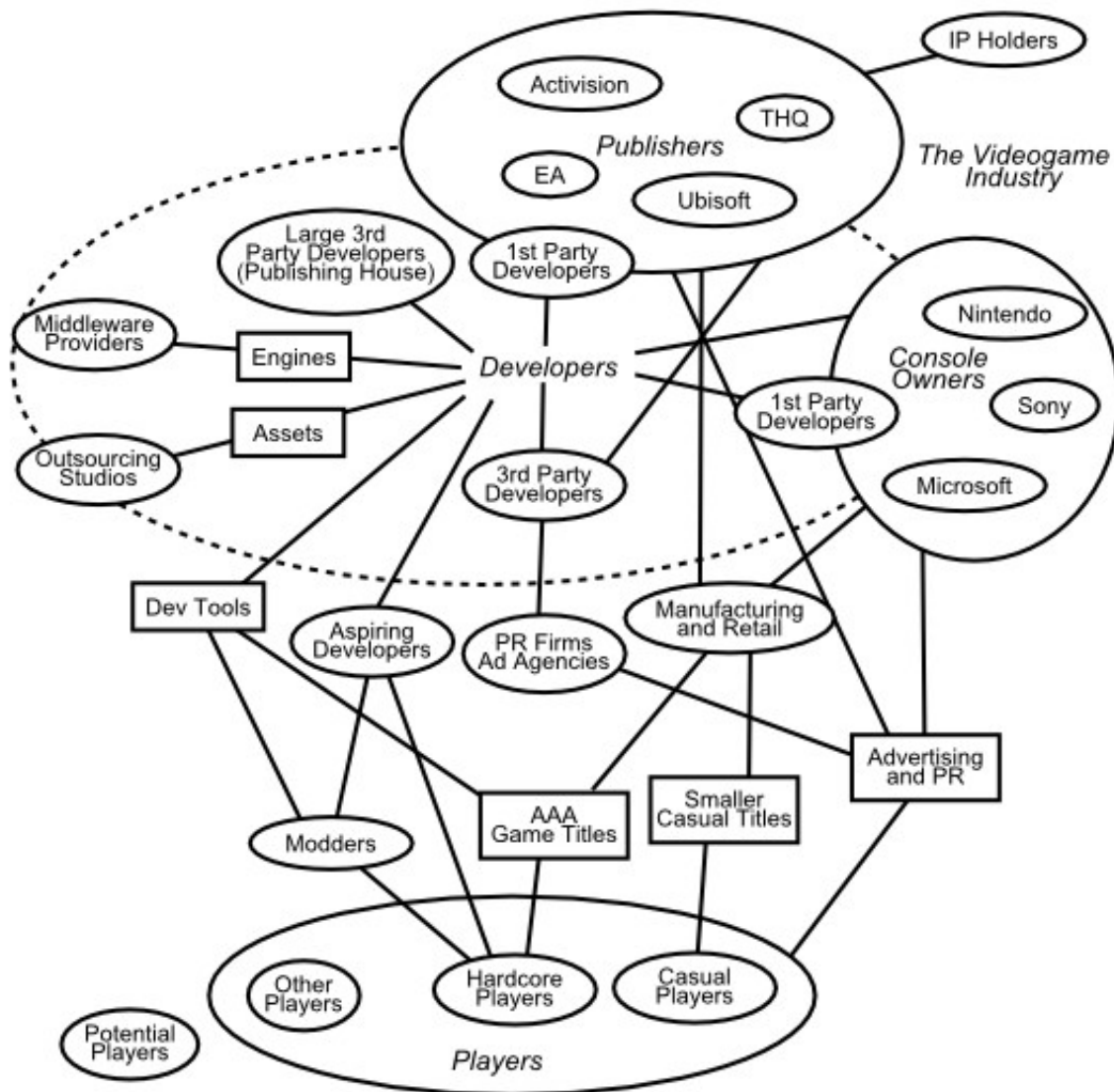
Figure 5.4: *Actor-network map of the mainstream videogame industry.*

manufacturers or larger publishers. They can be created by the parent company,

such as Nintendo EAD, or they can be third-party studios that the parent

acquires, as in the case of Lionhead Studios. Larger third-party studios, such as

Valve, often have the ability to self-publish their games and some of these may

even publish games from other third-party studios.

These different types of development studios also create the need for

other organizations to fill in the gaps in the development process. For example,

large publishers generally have marketing departments that handle media

relations and advertising for upcoming games. A smaller developer trying to self-

publish a game may find it more effective to hire an advertising agency or public

relations firm rather than hiring new employees to take on these responsibilities.

A final aspect of the videogame industry that I consider significant for my

analysis is the relationship between the industry and players. While players are

certainly already part of the network as the end user of the technological artifacts

themselves, players are not only consumers, but are also the main source of new

labor for maintaining the system over time. Most developers are recruited from

among the ranks of hardcore gamers who want to work on other "triple-A" titles.

These aspiring developers often, but not always, become part of the modding

community as part of their attempts to break in to the industry. This source of

potential labor, as well as the considerable value that mods can add to a

commercial game, become part of the motivation for developers to release

development tools for many popular, often hardcore games (Postigo, 2007, p.

311).

With a reasonable model of the videogame industry's sociotechnical

structure, we now have a base structure on which to attach the discursive and

ideological elements discussed in Chapter 3 (these primarily discursive elements

have been depicted as rounded boxes). For the purpose of clarity, some parts of

the network in Figure 5.5 have been abstracted or "black boxed" in order to

emphasize others. Additionally, antagonistic relationships between discourses
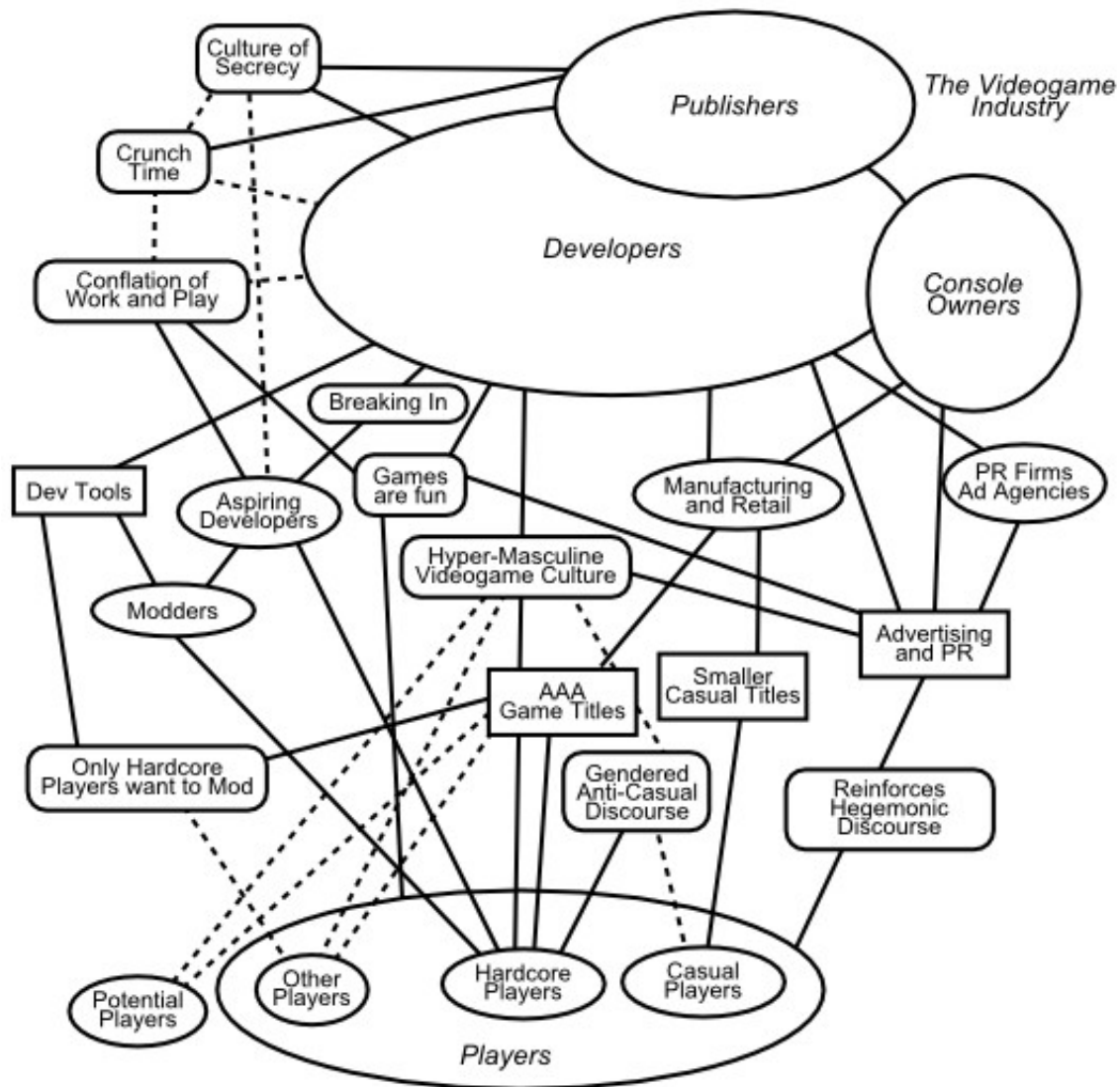
Figure 5.5: *Map of the videogame industry as a sociotechnical-discursive system. Antagonistic relationships are shown with dotted lines.*

and other actors have been noted by the use of dotted lines connecting them, allowing for a visual representation of antagonisms in the network.

This map suggests that there are two main areas of antagonism within videogame discourse. The area in the upper-left portion of the map corresponds to problematic aspects of developer culture, such as those noted by O'Donnell (2008). The area lower in the map corresponds to more general antagonisms in

videogame discourse relating to players. More specifically, these antagonisms relate to players outside the core demographic of players that videogame makers actively target (Kohler, 2008).

The developer-focused area of antagonism has much to do with the developers' relationship to the publisher. Discursive concepts like crunch time, though originating in small development studios like Id, are now largely enforced by publishers' deadlines. While crunch time is theoretically only for the end of a game's development when a project becomes more involved than originally planned for, unrealistic deadlines imposed by publishers in order to increase profitability have normalized perpetual forms of crunch time, as in EA before the EA Spouse case (Hoffman, 2004). Other discursive concepts, such as the need for secrecy, are articulated not just by publishers, but by developers themselves, who may fear others poaching their ideas or software (O'Donnell, 2008, p. 228). Nevertheless, these elements contribute to other antagonisms, making projects in crunch time collapse and maintaining closed networks within organizations. Other discursive elements, such as the conflation of work and play, evolve out of more generalized discourses, such as the basic discourse that videogames are fun to play. Institutional secrecy, however, prevents many aspiring developers from understanding the nature of videogame work. Thus, inaccurate expectations are brought in as new developers enter the industry, and such problems remain largely unaddressed.

The more player-focused antagonisms, as previously mentioned, have to do primarily with groups of players outside the videogame industry's target

audience. Although these players still play videogames, few if any games are created with them in mind and their concerns are often ignored by game makers. In addition to marginalized players, much of the hardcore discourse alienates potential players, who may not play because of the negative social stigma or simply because they do not find the majority of videogames compelling. This is not to say that the videogame industry has made no attempts to bring in new players. Indeed, the huge growth of casual gamers in the last 10 years demonstrates the success of one such move by the industry. Nevertheless, with the exception of Nintendo, who have focused both their console and handheld lines on new markets (Donovan, 2010, pp. 337-338), most major videogame companies have dedicated relatively few resources to these players, establishing small casual games divisions or purchasing existing casual game companies, as with Electronic Arts' acquisition of Pogo (Sandoval, 2001).

As mentioned in Chapter 3, these player-focused antagonisms constitute part of a feedback loop as hardcore gamers enter the industry to become hardcore developers. Just as the industry sees the relatively small subset of hardcore gamer as their most important audience, this same group is also implicitly seen as their most natural source for recruitment. It should not be surprising, then, that while development tools are often released for the purpose of modding hardcore triple A games, few developers spend the time to provide modding tools for games directed at girls (Kafai, Heeter, Denner, & Sun, 2008, p. xvi). This further increases the barriers to entry into the videogame industry and strengthens hegemonic power structures.

Mapping the Indie Scene

Unlike mainstream videogames, which are made with fairly similar production models, independent games vary greatly in all aspects of their production. While some games roughly follow the standard industry model, other games may consist of nothing more than a single developer, self-publishing a game with little outside support. In order to illustrate these differences, I have chosen the game *Super Meat Boy* as a contrasting example to *Rogue Leader,* as shown in Figure 5.6. As with *Rogue Leader*, a postmortem of *Super Meat Boy* was published in *Gamasutra* following its release. Being an independent game, however, *Super Meat Boy* faced different challenges during production, which ultimately shaped the final version of the game.

While *Rogue Leader* was based on intellectual property licensed from an existing franchise, *Super Meat Boy* was an original concept, starting out as a basic prototype developed in Adobe Flash. The game was a joint collaboration between Edmund McMillen, who did the design and artwork, and Johnathan McEntee, who did the programming. The game grew in popularity on several Flash game websites, spreading primarily by word of mouth. When McMillen was approached by Microsoft and Nintendo to create a game for their respective download services, McMillen assembled a new team with Tommy Refenes as his new programmer and Danny Baranowsky providing music (McMillen and Refenes, 2011).

Toward the end of the end of the development cycle, pressure from Microsoft to be part of their "Game Feast" fall promotion pushed the team into
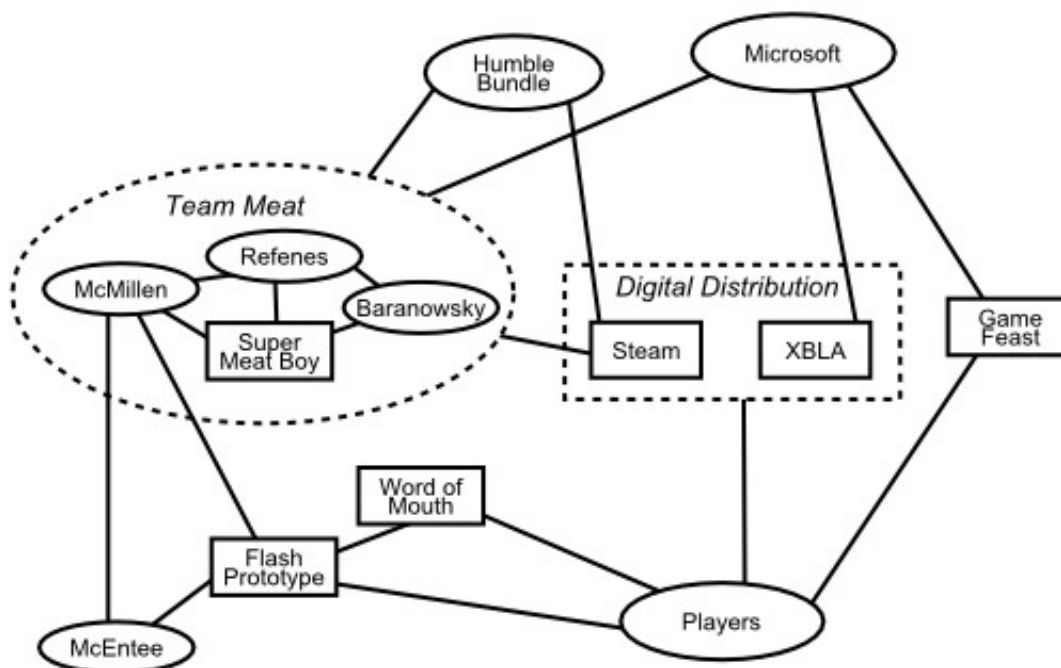
***Figure 5.6:** Actor-network map of* Super Meat Boy.

crunch time. By this time, they had abandoned the WiiWare version of the game

due to size restrictions and had been turned down by several publishers with

regard to a retail Wii version. This made the game's release on the Xbox even

more crucial to their financial success. Although they were able to complete the

game on schedule, Microsoft failed to promote *Super Meat Boy* to the same

extent that they had promoted the other games in the Game Feast. Despite the

lack of advertising, news of the game spread by word-of-mouth, much of which

stemmed from the popularity of the original Flash prototype. In the end, the

game out-performed all the other Game Feast titles by a substantial margin

(McMillen and Refenes, 2011) and would go on to be ported to the PC and Linux

and be part of the fourth Humble Indie Bundle (Humble Bundle, 2011).

　　While there are certain aspects of the development of *Super Meat Boy*

that follow the typical industry model, these aspects brought with them many of the problems that the industry faces. Although Team Meat was not dependent upon a publisher for funding, as many development studios are, their reliance upon Microsoft for advertising and promotion forced them into an unwanted crunch time just the same. While their relationship with platform holders was restrictive, their independence did give them the freedom to drop the WiiWare version when it clashed with their vision of the finished product. Thus, *Super Meat Boy* gives us an example of the complex and often tenuous relationships that independent developers have to the mainstream videogame industry.

Super Meat Boy also highlights many of the unique aspects of independent game development, such as the importance of digital distribution channels. As popular as the game was, the developers were still unable to negotiate a retail version with traditional publishers. The game's success was based purely on downloadable versions, through Xbox Live, Steam and other such services. The game's development also illustrates the malleability of developers and development teams. Lone developers will often collaborate temporarily with other developers for the duration of a single project. These collaborations could become more permanent teams, or they could simply end with the completion of the project.

While the development model used in the production of *Rogue Leader* could be fairly effectively generalized to the industry as a whole, it is much more difficult to make such claims about independent developers as a whole. In addition to developers who develop for more mainstream audiences, there are

also "serious game" developers who develop games for purposes other than simply entertainment and "scratchware" developers, like Auntie Pixelante, who often make games specifically for marginalized groups (Anthropy, 2009). Like many other aspects of independent development, these distinctions are quite malleable, as many successful commercial game developers have released free games as well, often as prototypes for future games or as part of their participation in videogame competitions like Ludum Dare (Persson, 2011b) Independent developers seeking to create commercial games also have a number of additional publishing options. While developers may work with industry publishers, like Microsoft, or independent publishers, like the Humble Bundle, many developers publish their games with nontraditional publishers, such as Adult Swim, a cable television station (Webster, 2011b).

In order to construct a map of the independent games scene similar to the previous map of the industry, I have taken the basic model of *Super Meat Boy* from Figure 5.6 and added many of the variations mentioned above. The resulting map in Figure 5.7, while still an abstraction, seeks to address the complexity of these variations in a useful manner. Perhaps the most salient feature of this map is the sheer number of connections between nodes, particularly among developers. Unlike the industry, which lives by its code of secrecy, independent developers freely exchange ideas, code and even tools on a regular basis. This is generally facilitated by online spaces such as websites, forums, blogs and Twitter. This open exchange can spawn new collaborations, new games, or even larger open source projects. It also drastically changes the
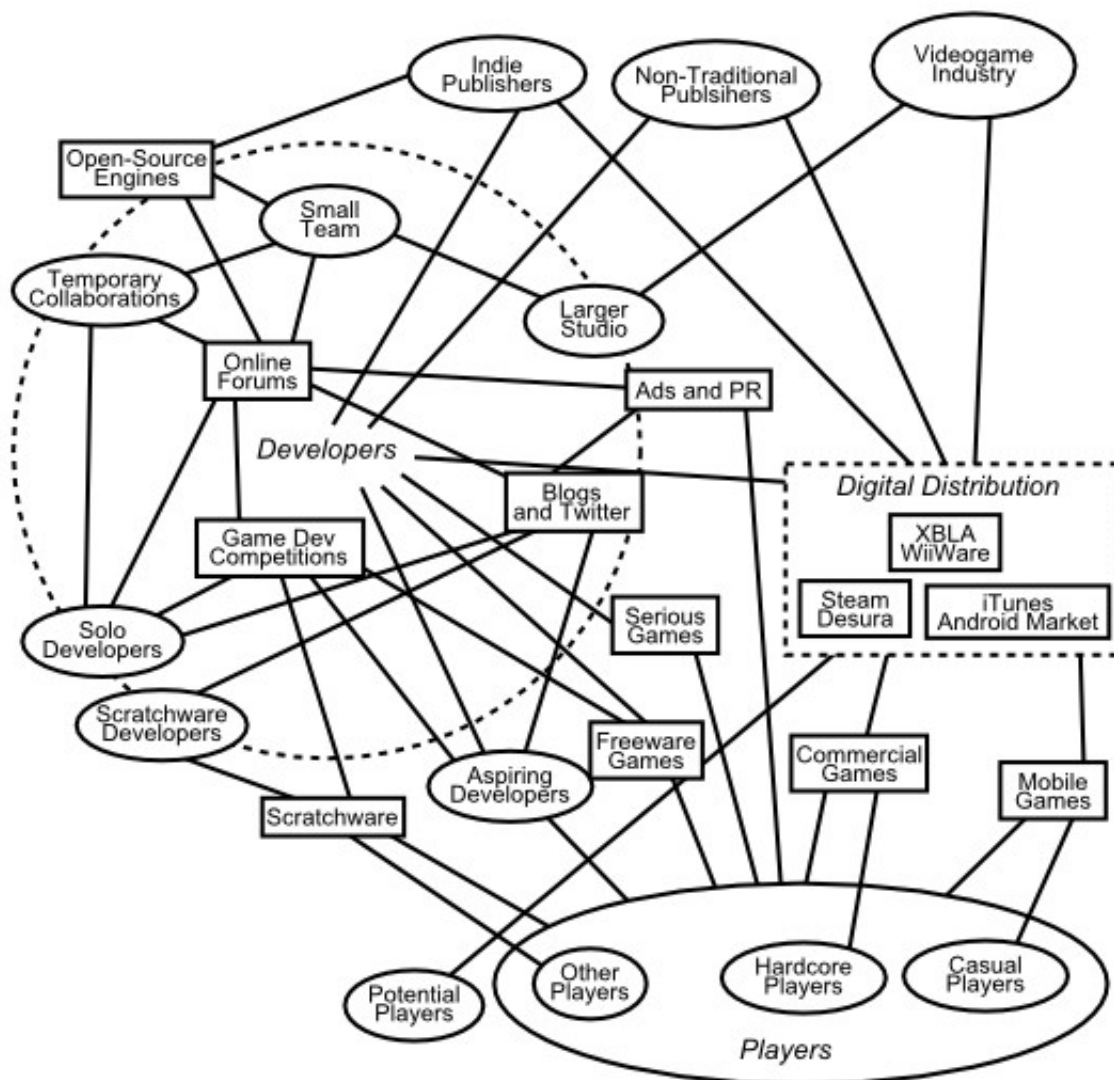
Figure 5.7: *Actor-network map of the independent games scene.*

way in which aspiring game developers enter the field. Whereas breaking in is a

significant part of entering the videogame industry, the distinction between "in"

and "out" is blurred among independent developers. While many developers

have industry experience and may have "broken out" of the industry, others get

their start as independent developers and never work in the industry. Through

the use of open source tools, online communities and ad hoc collaborations, the

barriers to entry are lowered to the point that dedicated individuals can begin creating games with little or no experience.

As in the case of *Super Meat Boy*, digital distribution technologies remain critical nodes in the system, as nearly all commercial games created by independent developers require some form of digital distribution in order for the game to be sold to players while bypassing traditional publishers and manufacturers. Even freeware games require at least a website or a file hosting service in order to reach their audience. Although these forms of distribution tend to be much more accessible than traditional publishing methods, the dominance of several key services make many independent games vulnerable to censorship, as in the case of Apple's censorship of *Phone Story* (Brown 2011). As new services arise, however, new avenues are made available for bypassing corporate censorship.

Having mapped out both the independent games community and the mainstream videogame industry, it is now possible to assemble a vision of the greater games industry mentioned by Martin and Deuze. Again, as in previous examples, many aspects of the various networks in Figure 5.8 have been simplified in order to focus on some of the broader connections between these networks. One such connecting node between independent and industry developers is that of aspiring developers. Though I have already identified aspiring developers as a significant node connecting players and developers, the availability of new paths that lack or at least circumvent the process of breaking in dramatically changes the nature of this group. While the discursive
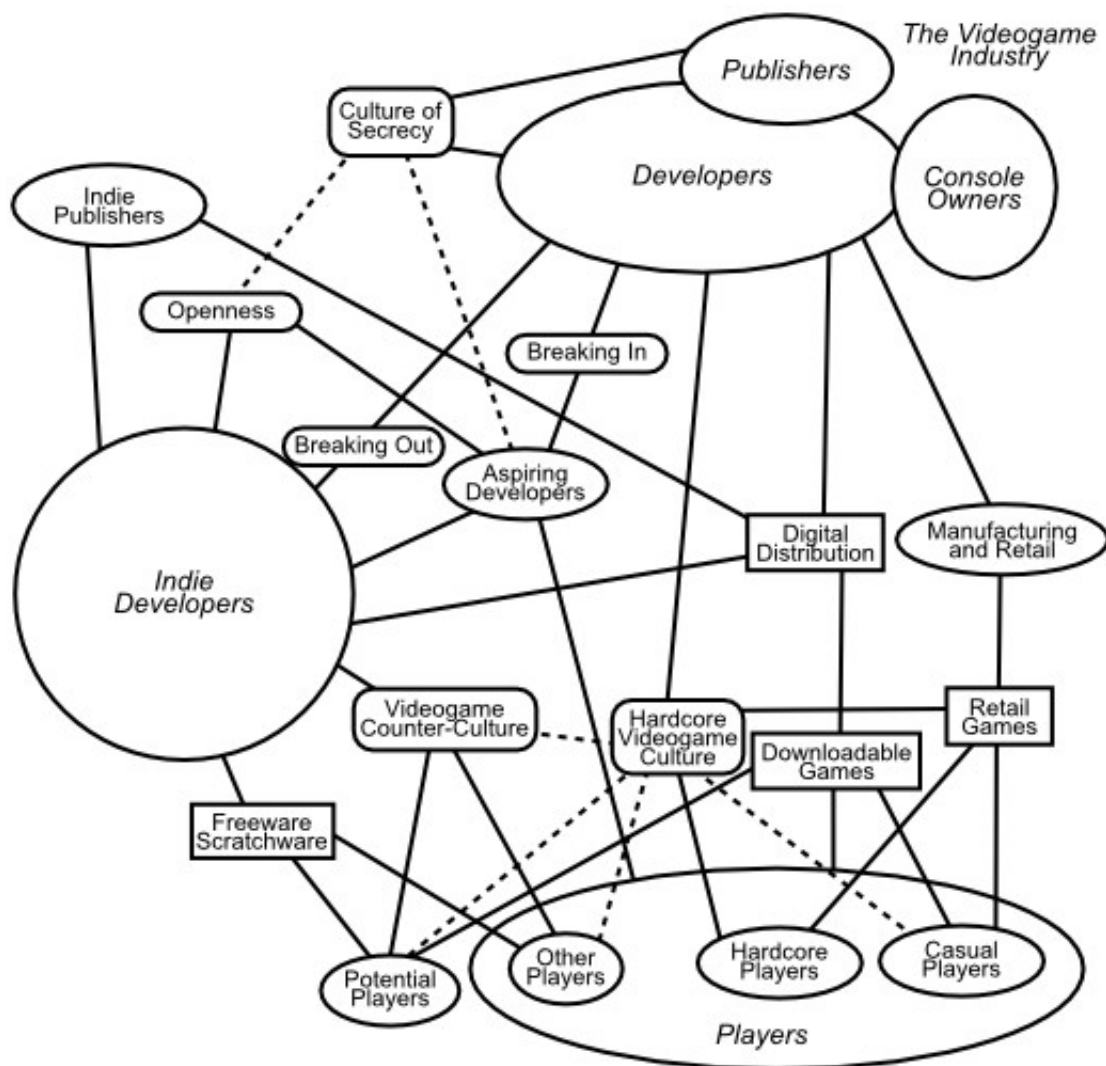
Figure 5.8: *Map of the greater games industry as a sociotechnical-discursive system.*

construction of breaking in prioritizes qualifications and workplace connectivity

above other values, such as diversity (O'Donnell, 2008, p. 54), many segments of

the independent games scene place a great deal of value on creating games

from diverse perspectives, as mentioned in Chapter 4. This expands the field of

aspiring developers from the Ion Storm vision of the most "elite and obsessive

gamers" (Kushner, 2000a) to simply anyone with the drive and creativity to

undertake a game project. The openness of the independent community also provides access to information about game development practice that is not generally available from secretive industry sources. With the addition of the voices independent developers who have "broken out" of the industry, much of the negative cultural influences from the industry's institutionalized secrecy can be mitigated.

Independent developers are also able to take antagonisms and use them as sites for articulating an explicitly anti-industry or antihardcore discourse. Some groups may articulate a very broad anti-industry discourse, such scratchware developers who embrace most of the anti-industry rhetoric of the *Scratchware Manifesto*. Other groups may focus on more specific issues, such as feminist gamers who may focus on issues of gender inequality. These counterhegemonic discourses are often articulated through the use of microblogging services such as Twitter and Tumblr, as well as on blogs and websites.

Following the Maps

Although the visual maps that I have presented in this chapter have some intrinsic value simply in that visual aides are useful in understanding complex systems, the true value of these maps is in their application. Many of the problems that I have addressed so far in this thesis are perpetuated (or even caused) by a limited understanding of the structure of the videogame industry. Groups that could benefit greatly from a more nuanced understanding of these

systems include aspiring developers, industry professionals and even players.

Aspiring developers are the most obvious group that would benefit from an greater understanding of the structure of the videogame industry. As O'Donnell (2008) notes, there are a number of myths that the videogame industry perpetuates about itself, such as the myth that game workers are able to make the games that they want or that they have infinite time and resources to do so (p. 166). These misconceptions lead to employees entering into unfavorable and unsustainable work relationships (pp. 167-169). Indeed, the concept of the naïve young programmer who wants to get a job in the industry to make his dream game has become almost as cliché as the young writer who goes to Hollywood to get his dream script turned into a movie.

While one side of this problem is the culture of secrecy and conflation of work and play that O'Donnell has critiqued, the other side is the misconception that in order to make videogames, one must break in to the videogame industry. This view corresponds roughly with the limited view of the industry depicted in Figure 5.4. Although some aspiring developers may be aware of modding as a potential stepping stone to entering the industry, the industry remains the goal because it is equated with the power to make games. While some aspiring developers may simply have the goal of working on someone else's game, the goal of many (if not most) is to make their own game on their own terms. Although myths may make the industry seem like the perfect place for them, their goals may actually correspond more closely with those of indie developers, whether as a solo developer, as a member of a small team, or even as a

freeware developer. A more complete understanding of the greater games industry, such as that depicted in Figure 5.8, would allow many aspiring developers who do not want an industry lifestyle to realize that there are many other options available for them to make games.

A better understanding of the structure of the industry is also beneficial to those who are already a part of the industry. While many industry professionals still believe in the myths discussed above, even those who are more familiar with the reality of the industry are often not aware of the options available to them. The high rate of burnout and turnover within the industry (O'Donnell, 2008, p. 81), suggest that many veteran developers still see their options as making games in the industry or not making them at all. The influx of new indie developers breaking out of the industry suggests that industry workers may be more likely to be aware of their options than other groups, though increased awareness of these options would benefit those game workers who are disillusioned with the industry, perhaps giving them another option than simply burning out.

Although those who benefit most from a greater understanding of industry structure are those who are marginalized or exploited by the system, even those who are in favorable positions could benefit from this knowledge. Understanding an organization's position within the industry system allows it to more effectively target potential employees who actually want to be there, thus reducing turnover among employees. Also, knowing the limits of discourse and where antagonisms exist allows an organization to adapt and evolve as the market and culture change, rather than merely reacting after the process of rearticulation has

rendered its discourse ineffective.

In addition to impacting content creators, understanding the structure of the videogame industry is also helpful for consumers. Although independent games have become considerably more prominent in recent years, many players are only vaguely aware of them, particularly when it comes to games that are not available through large commercial channels such as Steam and Xbox Live. The more that players (and potential players) are aware of the large and diverse indie game scene and how it relates to the videogame industry, the more that the stereotypes and prejudices that exist in and around videogame culture can begin to be broken down. As more people begin to make games for groups traditionally marginalized by the mainstream industry, it becomes important for these creators to be able to connect with their audience, many of whom may still consider videogames to be a medium exclusively for white men or young boys.

Videogames, as a medium of communication and creative expression are part of a large and complex sociotechnical-discursive system. The ability of this medium to thrive depends on the creative collaborative practice of the individual actors within this system. This creative practice in turn is founded upon the ability of these actors to access the underlying social and technical systems and make use of them (O'Donnell, 2008, p. 297). By understanding the topology of these systems and identifying critical nodes that shape the flow of resources throughout them, it is possible to help game makers more effectively navigate these networks in order to to maximize their ability to harness the medium of videogames for their own purposes.

CHAPTER 6

CONCLUSION

The videogame industry as it exists today is a product of specific

technologies and discourses that shaped it during the last 50 years. General

improvements in computing, such as advances in 3D graphics in the 1990s,

allowed for new kinds of games, but also brought the scope of videogame

development beyond the reach of many of the hombrew independent developers

of the previous decade. Other technological artifacts, such as the 10NES chip,

were designed specifically as technologies of control, with no other purpose than

to prevent actors from accessing the rest of the system except through certain

key actors, effectively rendering these actors as obligatory points of passage.

Discourse played an equally important part in shaping the industry. Some

of this discourse came from outside, such as the conservative antivideogame

discourse of the early 1980s which pushed companies like Atari away from

arcade development and toward the more family friendly home consoles. Other

times, these discourses were articulated from within the industry, such as Id

Software's rearticulation of modders as an important part of their audience, rather

than as mischievous hackers defacing their games.

Throughout this process, with very few exceptions, the social and

technical barriers to entry into the videogame industry continuously rose, preventing many aspiring developers from breaking into the industry. At the same time, the audience on which the videogame industry was focusing shifted to hardcore gamers, to the exclusion of many other groups. Both of these effects contributed to some of the institutional crises that occurred during the early 2000s, such as the *Scratchware Manifesto* and the EA Spouse lawsuit.

As the decade progressed, however, new technological systems and new discourses appeared that made resistance possible in the form of the independent games movement. This resurgence in independent game development has made possible the appearance new developers, players and games that would not have fit with the traditional industry model. Although at one point unknown to anyone but a small subset of PC gamers and other independent developers, indie videogames have grown in exposure to the point that their recognition extends beyond even the boundaries of traditional gaming. At the 2012 Sundance Film Festival, *Indie Game: The Movie*, a crowdfunded documentary following the experiences of a number of prominent independent game developers, made its debut. Not only did the film bring independent games to the attention of a whole new audience, it won an award for best editing and was optioned for a potential series by HBO (Watercutter, 2012). It seems as though independent games are here to stay, and perhaps not a moment too soon.

On January 26, 2012, just days after the premier of *Indie Game: The Movie*, THQ, one of the largest publishers in the videogame industry, filed a

report to the Securities and Exchange Commission indicating that they were laying off 240 of their employees and slashing the pay of many of their executives by 50%. The report also indicated that the company would be discontinuing many of its existing lines of games in order to focus on "its core video game franchises" (US Securities and Exchange Commission, 2012). A few days later, on February 8, the annual DICE (Design, Innovate, Communicate, Entertain) Summit, a conference geared toward gaming executives, opened with a debate over whether or not the videogame industry publishing model is broken. The debate dealt substantially with the problem of THQ and what it means for the industry when a company that makes $800 million in annual revenue still finds their business model unsustainable (Lee, 2012). Michael Pachter, a financial analyst who focuses on the videogame industry, claimed that the current industry model stifles creativity, citing publishers' reluctance to take risks on nonsequels. He predicted that several of the major videogame publishers would die off, leaving only two or three remaining (Kohler, 2012).

Later that day, Tim Schafer, founder of the small development studio Double Fine, announced his plans to crowdfund his latest adventure game using Kickstarter, the same crowdfunding website used to fund *Indie Game: The Movie*. Although the $400,000 he asked for was ambitious, the project managed to gain over a million dollars worth of funding in the first 24 hours alone (Tassi, 2012). Since the funding for the game's development was raised through Kickstarter rather than being provided by a publisher like THQ, Double Fine is free from the normal concessions that come along with funding. Double Fine can

maintain complete creative control over the game and will own the IP once the game is completed. In the end, its only real obligations are to its fans that made the game possible.

With established companies beginning to crumble and experimental projects becoming overnight successes, many people have speculated that we are approaching a turning point in the history of videogames. The question is, what does this mean for the future of videogame studies and for videogames in general?

Ideology, Resistance, Articulation and Actor-Networks

My focus throughout this thesis has been on the intersection of technology and discourse as they relate to videogames as a medium of communication. Chapter 2 described how the interplay between technology and discourse shaped the cultural landscape that we are familiar with today. Although the development of technological systems shaped discourse, as in the example of the Apple II rearticulating computers as a useful tool for the masses rather than a mystical relic of the techno elite, discourse was just as important in shaping the development of technological artifacts. This influence can be seen in technologies such as the Atari VCS, which attempted to distance videogames from the negative discourse associated with video arcades. The VCS, in turn, began to rearticulate videogames as a medium for children, thus showing the complex interrelation that exists between technological and discursive systems.

The creation of these systems inevitably creates flows of power toward

certain groups and away from others. In Chapter 3, I analyzed the current

hegemonic videogame ideology that was created from the processes described

in Chapter 2. This ideology is associated with the concept of the hardcore

gamer, and dominates the discourse of both players and developers. It privileges

young White males and certain forms of games while marginalizing other groups

and devaluing other games (and those who play them) as being merely casual.

As this discourse reaches its limits and antagonisms begin to arise, resistance to

this ideology becomes possible in the form of casual games, modding, and

independent games. This third form of resistance, the independent games

movement, becomes the subject of Chapter 4.

Chapter 4 looks at the independent games movement as a technology-

oriented social movement, which has as its goal a change in the way that

videogames as a technology are used. Independent developers are able to

rearticulate videogame discourse by creating new organizational structures and

economic models that challenge the accepted industry practices. Many of these

developers directly challenge the hardcore videogame ideology by creating

games that target groups and topics that are considered to be outside the

bounds of videogame normalcy.

Finally, Chapter 5 takes the interconnected nature of technological

systems and discursive structures discussed in Chapter 2 and and explicitly

maps their relationships. By building off of actor-network theory's materiality and

structure and adding articulation theory's ability to look at network dynamics like

antagonisms and disarticulation, I was able to create sociotechnical-discursive

maps of the various aspects of the videogame industry, allowing the visualization

of the antagonisms discussed in Chapter 3 and the various ways in which

independent developers are rearticulating videogame discourse at those points,

as discussed in chapter 4.

Theoretical Implications

The work presented in this document suggests a number of implications to

existing theory, particularly to Hess' theory of technology- and product-oriented

movements. Hess theorizes that TPMs arise out of traditional social movements

as the goals of entrepreneurs and the movement begin to align (Hess, 2005, p.

517). These entrepreneurs are able to harness the energy of the social

movement in order to create an alternative technology or product that opposes

existing technologies and products that are problematic to the goals of the

movement. Hess identifies nutritional therapeutics, wind energy, and open

source software as examples of TPMs.

My analysis of the independent games movement suggests that the

process of private-sector symbiosis is more complicated than a simple causal

relationship between social movement and TPM. Many TPMs, such as the

scratchware, modding and shareware movements can be seen as emerging not

from a traditional social movement, but from the open source software

movement, another TPM. Indeed the hacker ethic that is at the heart of the open

source software movement continues on throughout the other three. All of these

movements can also be seen as major influences in the current independent

games movement, which, as mentioned in Chapter 4, can be seen as a TPM as well.

Just as the independent videogame movement suggests a broader understanding of private-sector symbiosis, it also suggests a new way of looking at the process of incorporation and transformation. This phase of the life of a TPM generally refers to the target industry incorporating the innovations of the TPM as they become more widely accepted. In the case of the independent games movement, however, its success has not only inspired traditional industry organizations like Microsoft to become involved with indie games, but has inspired many traditional developers to leave the industry and "go indie." As mentioned in Chapter 4, these former industry developers often bring with them many of the approaches and attitudes common in larger studios. These can be problematic in an independent environment, even to the point of undermining much of the creative freedom that the developers were seeking in the first place. This suggests that the process of incorporation can go both ways, with the TPM taking on aspects of the target industry, even as that industry attempts to change the TPMs products to better fit with its structure.

The view of modding as a TPM also suggests that the concept of object conflicts can also be expanded. While Hess defines object conflicts as being the primarily the result of design choices (Hess, 2005, p. 520), the object conflicts that I have identified between modders and developers occurred not because of a change in the design of the technological artifact itself, but because of a change in the political-legal networks to which the artifact was connected,

namely, the introduction of the EULA. Although the introduction of these agreements did not make any changes to the games or to the moddings tools which developers like Id had already begun making available, they changed the ways in which modders were able to use these tools. It also transformed them from renegade hackers who mischievously defaced games to pseudoemployees whose efforts were both sanctioned by and beneficial to developers. Thus, from an actor-network perspective, object conflicts can be created not only by changes to the design of a product, but by any significant change to the network.

This paper also has theoretical implications for the use of actor-network theory and articulation theory. As discussed at the beginning of Chapter 5, I have attempted to bring these two theories from different disciplines together as a unified approach to analyzing the videogame as a sociotechnical-discursive system. This move has its basis in a number of different theoretical backgrounds, including Foucault's concept of the "governing apparatus" (Foucault, 1991, p. 102) and Greene's view of "rhetoric as technology" (Greene, 1998, p. 39). The advantage of this approach is that it is able to utilize the strengths of both theories together. Articulation theory contributes a number of concepts that allow us to better understand network dynamics, particularly the concept of antagonisms as the limits of discourse and the concept of disarticulation as the process by which hegemonic discourse can be dismantled. Actor-network theory gives us the network structure and the materiality that Greene and others have called for, while also contributing valuable concepts such as obligatory points of passage and actor-network scripts.

This work also adds to the body of literature in the field of videogame studies. Perhaps most significantly is a corollary to O'Donnell's concept of breaking into the industry. While the ever-increasing barriers to entry into the videogame industry have made breaking in a significant discursive element within the culture of the industry, the increasing discontent among developers and rising viability of independent development are making the idea of breaking out or "going indie" a significant concept as well. As high profile success stories like 2D Boy and Tim Schafer become more common, the concept of breaking out will likely become more salient within videogame discourse.

The Future of Videogames

The research presented in this paper suggests a number of practical implications for videogame developers. First, the view of the independent games movement as a TPM emphasizes the interrelated nature of the videogame industry and the independent games movement. As with all TPMs, the success of the movement helps to drive the industry toward the processes of incorporation and transformation. As independent games become a more important part of videogame culture, we should expect the industry to begin to incorporate more technologies into its existing technical systems in the same way that many of the larger industry players have now embraced digital distribution. The transformation of these technologies to meet the needs of the industry will inevitably create object conflicts which may take the form of competing technological artifacts or, as in the case of modding, competing sociopolitical

structures.

This interconnected view of the videogame industry and the independent games movement is also supported by the network analysis conducted in Chapter 5. Many prominent indie games, such as *Super Meat Boy*, still have ties to more traditional industry nodes, which in turn shapes the course of the game's development. Additionally, the indie scene is linked with the industry through the flow of developers who are leaving the industry to work independently. Although cultural problems within the industry often contribute to their leaving, this does not mean that their time in traditional game development roles was not significant. It is not by chance that Tim Schafer and Double Fine's Kickstarter project has earned hundreds of times more than other successful videogame projects on Kickstarter. Long before founding Double Fine, Schafer had gained celebrity within the videogame community through his time at LucasArts, creating such titles as *Day of the Tentacle*, *Full Throttle* and *Grim Fandango*. Indeed, the Kickstarter project itself invokes these early games, hoping to recreate a similar experience in the form of a new point-and-click adventure game (Kickstarter, 2012). Despite the many new paths to entry that independent development provides aspiring developers, industry experience will likely be a major factor in a developer's success for a long time to come.

Although the industry will not be disappearing any time soon, that does not mean that there are not major changes lurking just over the horizon, particularly for publishers. While major publishers like EA and Activision serve as obligatory points of passage for traditional development studios, independent developers

have many more options available to them.   New sociotechnical systems such

as crowdfunding, digital marketplaces and bundles allow developers to bypass

traditional publishers while allowing a much greater degree of interaction with

their audiences. While the videogame industry is certainly beginning to

incorporate many of the technologies associated with the independent games

movement, it seems that developers are adapting much faster than publishers.

In the wake of Double Fine's success, other developers are beginning to turn to

Kickstarter rather than to publishers (Takahashi, 2012). Unless they are able to

incorporate and transform these new funding methods into a form that fits their

existing structures, publishers will likely experience a decline in their influence

over both independent and more traditional developers.

Finally, this paper has implications for groups that have been marginalized

by the hardcore gamer culture that pervades the videogame industry. While the

conservative nature of the industry means that most major publishers are still

unlikely to create new games that go outside their target demographic of young

White males, independent developers' ability to bypass these gatekeepers

means that they can produce a much more diverse range of games. Additionally,

technologies such as open source game engines and digital distribution channels

lower the barriers to entry into videogame development so that marginalized

individuals can become content creators, rather than merely consumers.

Recommendations for Future Research

While I have attempted to be comprehensive in my analysis of the greater games industry, there is still a great deal of territory that I have left uncharted. As every node in an actor-network can be expanded to become a network in itself, the methodologies employed in this study can be applied both to projects more broad in scope as well as to more tightly focused ones. Nodes which I have neglected in this study could easily provide new insights into the complex dynamics of videogame culture.

I also believe that our understanding of independent development culture would be greatly improved by more research into the daily practices of these developers. The ethnographic work conducted by Casey O'Donnell in various game studios has been invaluable to my understanding of developer culture. This paper suggests, however, that the development processes used by independent developers differs sufficiently to warrant similar ethnographic studies of independent developers. Since these development teams could range from a single person to a moderately sized company, there is a considerable amount of research that could be done. Thus, I believe that it would be valuable for future studies of this type to conduct the kind of ethnographic studies that O'Donnell did in traditional studios in independent settings. This research could be even further expanded to look at independent game development outside of the United States.

It is my hope that in addition to informing scholarly research, that this paper might encourage discussion about the role of independent games as

resistance to hegemonic videogame culture and about the potential of

videogames as a medium to be used as tools of resistance. Indeed, pioneering

game designers are already using games to challenge not only issues of

videogame culture, but also those of corporate responsibility, government policy,

gender roles, and many other issues.

I also hope that this kind of research might lead to a greater diversity of

voices utilizing videogames as a form of expression and, therefore, a greater

variety of games to be enjoyed by those who do not fit the narrow industry view

of videogame players. Whether the industry as we know it now survives or not, I

hope that videogames continue to thrive as a vibrant and powerful part of our

media landscape.

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