11-1-2009

Gaming the Network Poetic: Networking and Code in Art Games

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Gaming the Network Poetic: Networking and Code in Art Games

A Thesis
Presented to
the Faculty of Arts, Humanities and Social Sciences
University of Denver

In Partial Fulfillment
of the Requirements for the Degrees
Master of Arts & Master of Fine Arts

by
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November 2009
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ABSTRACT

Videogames have historically used networking either to connect players for competition or cooperation or to provide an ephemeral connection to allow the upload, comparison, or assessment of single-player achievement data. The majority of videogames take place on a screen and on established platforms each of which have physical, technical, and sociocultural constraints that dictate how a player will interact. Recent art games, such as those by Jason Rohrer and the Atari VCS games of Ian Bogost highlight experiments in a more focused use of the medium from concept to interaction, both between the player and the software but also foregrounding the code (both social codes and actual software) of the games. These artists are part of a growing movement of videogame creators that are involved not only as designers but also as cultural critics invested in the analysis of platforms and the distribution of their games.

This thesis documents the development and exhibition of Gaming the Network Poetic, a series of five videogames developed by the author. This was itself an experiment in both the use of networking and in the exhibition of a cohesive art object incorporating these games. The work is then contextualized through the analysis of game-based art movements, the contemporary independent (or “Indie”) games movement, and contemporary software/code-based art. Also, given that much of the theory around videogames is rooted in literary criticism, philosophy, and cultural history, these disciplines are also referenced throughout the discussion.
Further, this thesis will address questions about the aesthetic, mechanical, and audience-related considerations of developing and installing videogames in a contemporary art space that shows mostly static work. What roles does the audience play in such an environment? How can videogames create meaning? How does one communicate emotion through a single videogame? How does the open networking of several videogames quickly add complexity, and how can that complexity be managed? What are the issues involved in choosing particular hardware and software platforms on which to present the work?
ACKNOWLEDGEMENTS

Thanks to Christopher Coleman, Rafael Fajardo, Laleh Mehran, and Adrienne Russell for serving on my committee and offering their unique talents in helping me build, design, promote, and write everything for my MFA show and MA thesis. A multitalented committee for a multifaceted project. For Scott Howard, thanks for your support as an outside chair by attending my opening and continuing to offer encouragement throughout the process. Finally, the P4Games project and Scott Leutenegger deserve special thanks for loaning me the laptops used in the project.

Thanks also to Natalie Nguyen, without whose material and moral support my MFA opening would not have been the success it was.

For Susan Meyer and Craig Robb, this work would not have been built and installed without your help.

Finally, a very special thanks to Ivar Zeile, who believed in the work and promoted it continuously during its run at Plus Gallery.
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Chapter One:

Introduction to *Gaming the Network Poetic*

Videogames are often discussed as an industry, one with a huge revenue stream and potential, an attractive and controversial product, and a ravenous fan-base with dedicated disposable income. News outlets, writers, and academics often begin papers like this one with a reference to the fact that the game industry has begun to earn more revenue than Hollywood, referring to the combined revenues of the major movie studios. Videogames use sex and violence to create drama and sell content in ways similar to the movie and television industries, so the comparison is apt.

Privileging the financial data of the industry makes sense for another reason: videogames require some sort of computer to run, and until recent developments in smaller, cheaper, more portable, or retro computers, the sort of computer required was relatively expensive. This is still the case for the blockbuster videogames that the industry and others tend to champion.

But the financial data of the videogame industry also exists as a quantitative measurement against other forms of expression. The financial clout of the industry is an answer to the question: "Are videogames compelling?" The more interesting question to investigate is, “Why are they compelling?” Why are they so compelling that fans write passionately about them, record their own gameplay footage and remix it into works of
narrative or video art? Why are they so compelling that there are often battles waged over
the ownership and sale of virtual property, over the messages they communicate to
children about gender, and over racism and homophobia in online games? ¹ Why are they
so compelling that children and adults would play hours and even days straight,
endangering their health and the health of others, to play in a virtual world. ²

It is impossible to discuss videogames without acknowledging that they exist as an
industry, but the more interesting conversation lies in considering the ways in which this
compelling medium can and has been used as a vehicle of expression. Rafael Fajardo,
whose collaborative, SWEAT, developed some of the first "Socially-Conscious"
Videogames ³, approaches the question from this angle,

Games are a reduction. Eric Zimmerman — founder of GameLab — believes that
games reduce the possibilities of action, and that, through this reduction, a
visionary imagination is sparked in the player. I'm inclined to think that lighting this
spark is itself a political act. Rather than employing a militant voice that succeeds
only in preaching to the choir, I choose to attempt to engage audiences. ⁴

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1. A New Games Journalism piece called “Bow Nigger” by Ian Shanahan addresses
   this issues specifically through subjective experience of playing online: Ian Shanahan,
2. There are many documented cases of parental and individual neglect resulting in
   injury to the individual player or to others. Some of these cases are documented here:
   Reverend Danger, “The Top 10 Deaths Caused by Video Games” Spike, February 29,
4. Rafael Fajardo, “Pixels, Politics, and Play: Digital Video Games as Social
   archive/Vol3_No2_gaming_fajardo.html.
By exposing the weaknesses of didactic games, Fajardo highlights play as a central ingredient in both the development and experience of all games, but especially those that are interested in communicating the nuances of a particular social issue. Fajardo also suggests that joy, which is perhaps more easily diagnosed, should be an element in the play and response to videogames.

Finally, there is an artistic dimension to videogames that is represented by one of the most exciting movements in and outside of the industry in the past decade. Developers with no formal connection to the game industry, former industry developers, artists, and others have been building their own works. Some of these works are critiques of existing videogames or artistic responses to sociopolitical issues developed inside of a game engine. Others are part of the growing independent (or “Indie”) games movement. Still others aren’t electronic at all but artworks, made in media from painting to sculpture to performance. I will go into these movements in detail in a later section.

It is within this cultural climate that my piece, *Gaming the Network Poetic*, was created, installed, and exhibited. There are two central points of research embedded in this project. First, I investigate the ability of a network of games to communicate themes of anxiety, separation, and family, through their game mechanics and poetic networking. Second, as it was apparent early on in the project that this non-traditional game networking would be difficult to show if the games were put online for play, it became a project whose installation addressed a particular space, in this case a contemporary art gallery.
In the next chapter I will set the context for these two points of research and begin to address them specifically. Also, because the study of games has been slow to develop as a cohesive discipline, games have been studied from several perspectives, but most significantly within literary criticism, sociology, and cultural history. These perspectives on games will be briefly introduced and discussed to provide a deeper context for my work. Finally, because *Gaming the Network Poetic* is positioned as an art piece, games and networks in the history of art are also important to discuss.

In the remaining sections of this introduction I will provide an initial review of literature on perspectives of games and art as well as an art historical context for the acceptance of new media and new perspectives. This review and discussion aims to provide the reader with a starting point for the discussion of videogames in both art historical and digital media contexts.

**Important Terms - Breaking Down the Name**

**Game, Videogame, and Game space**

A game, as defined by Katie Salen and Eric Zimmerman in their landmark game design book, *Rules of Play*, is “a system in which players engage in an artificial conflict, defined by rules, that results in a quantifiable outcome.”

“Videogame” is defined by the *Videogame Style Guide and Reference Manual* as a "Catch-all term for any type of interactive entertainment soft-ware. Always write as one word." Throughout this text, in keeping with the style guide recommendation, I will use "videogame" and "game"
interchangeably, except for the case when the "context makes it hard to distinguish videogames from non-electronic games, such as sports, tabletop or board games."\(^7\)

For the purposes of this paper, I will also use a modified definition of videogame to allow for a wider interpretation that includes the type of work that is typically created by game artists. The reasoning behind this modification is that “videogame” has a meaning beyond a purely entertaining interactive software. The definition brings with it a particular aesthetic history, cultural contexts, social codes, and a series of software and hardware platforms. In other words, videogames are not a subset of games, but a separate medium with some overlap with games in general. The specific modified definition that I propose is: "Catch-all term for any type of interactive software that serves as entertainment or expression." A game space is defined as the virtual space in which the player has control of some actor as part of a videogame. This often means “the screen,” but can also include elements of visual acoustic feedback not contained within the screen.

**Network/Networking**

Networking is used in software, physical, and social contexts to describe *Gaming the Network Poetic*. My initial research focused on the software networking component - what happens when you have networked communication between five disparate videogames? The other two aspects (physical and social) were initially tangential considerations that gained more importance as the project was realized in a physical form and installed in a gallery space. For clarification purposes, I will refer to the context when the concept of networking is discussed in this paper.

\(^7\) Ibid.
Poetic/Poem

The initial consideration of poetry in this project was inspired by Ian Bogost's Game Poems, of which he states: "For me, videogames, like poetry [and photography], are about abstraction and condensation. All three media focus on a denseness of form and meaning. They are often simple and short in form but rich and nuanced in meaning. They focus often on exposing the logics of experiences." (See Appendix A for an image from Thunderstorm, one of the Game Poems)

For the purposes of this introduction, the poetic aspects I am interested in are those of space, images, time, and the way that these three aspects translate between each game through the software network. The space of the screen, the images on them, and the progression of time in each game is intentional, but depending on how people play the games and interact in the gallery space, unexpected or unplanned experiences may emerge. This is my interest in using "Poetic" in the title — I am after a sort of emergent poetics that relies on the software, physical, and social networks surrounding the piece.

Code/Codes

In his book Creative Code, John Maeda talks about a particular transformation of his perspective on the importance of code: “I once held strongly that to know the art of programming — or ‘coding,’ which is the trendier term — is the critical skill for any developing digital artist or designer. Today, I no longer feel this way.” Instead, Maeda suggest that upcoming digital artists have a “passion for discovery.” While a programmer by training, I share Maeda’s desire to move beyond software as the only context in which

8. Bogost, Game Poems.
one considers code. Like the discussion of networking, the kinds of code that I will
discuss in this paper vary in their context. *Gaming the Network Poetic* is in one part the
software “coding” that Maeda refers to above, usually a text-based computer
programming language that is compiled into software programs that run on a computer. It
is in another part social code, influencing both the expectations of interaction and the
expectations of an audience when they hear the term “videogame.” These are the two
codes I will discuss in more detail later, but this is by no means a binary relationship.

**Games and Art - A Literature Review**

My first goal of this survey of literature is to make the argument that videogames
carry meaning outside of their status as “game.” They represent a mode of cultural
expression that is used as much for escapism as it is for building community. To make
this argument, I reference the changing nature of both textual and art historical theory
over the past few decades. These changes are also related to the general transition brought
about by postmodern thought. Because videogames came to prominence as an industry at
the same time as postmodernism was named and recognized, they have wrestled with
transitions similar to those of textual and art history. The emergence of videogames and
the Internet coincide with a period of accelerated transition and availability of ideas, to
the point where the philosophical, artistic, and cultural arguments that previously took
place over centuries can now be reviewed and synthesized (if not deeply understood) in
minutes. In that sense, videogames are a good choice to represent the anxieties and
reconfigurations of societies and families, which is directly related to my project concept.
In concert with the first goal, the second goal of this literature review is to provide a critical framework from which to analyze and understand the influences of videogames and how this medium influences (and is influenced by) sociocultural issues. My final goal is to situate videogames in a historical framework for the use and interpretation of a text or work, so that we may see videogames as an evolution both of a form of expression and of a sociocultural framework that has seen gains in acceptance and eventually approval from fans, parents, institutions, educators, and academics.

Finally, what is usually referred to as the viewer in art or reader of a text will here be termed the player, even though “videogame” has meanings far beyond the interactivity usually given precedence. As a medium it has established a rich aesthetic history that is referenced as much as (and sometimes more than) the actual experience of play. But it is the experience of play coupled with aesthetic decisions that relate to the play experience that allows for the type of communication that I aim for with my work.

Many writers on games, including Ian Bogost, find the question of whether or not games are art tired and irrelevant.\(^9\) It is still important to acknowledge that this has been in continuous question, including a high-profile debate between Roger Ebert and Clive Barker, with Ebert denying games an art status to Barker essentially arguing that Ebert just doesn’t get it.\(^10\) In their debate, they reveal long-held assumptions about what art is and is not, and what videogame designers frequently cite as the as-of-yet-unrealized potential of videogames. Even if they don’t intend to do this, these writers position

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videogames as having a certain specific potential, a platonic ideal that is always out of reach. Barker does this by focusing on videogames as escapism; they are great at allowing us “to take ourselves away from the oppressive facts of our lives and go somewhere where we have our own control.”

Chris Crawford, who published the first book on videogames as an art\textsuperscript{11}, sees the interactive narrative as the holy grail of videogames. He frequently criticizes games that use cutscenes \textsuperscript{12} to tell a story because this causes a rift between the story and game. His ideal is that game and narrative might be unified, with the player’s agency driving the development of a story. \textsuperscript{13} Janet Murray also sees interactive narrative as a potential for the future of videogames, using the Holodeck as the essential experience of interactive fiction. However, her book \textit{Hamlet on the Holodeck} is not about videogames but about interactive fiction, a genre that has a parallel history to videogames that also relies on technology but has considerations and the history of literature to contend with as well. Still, Murray’s writing on immersion and agency can be useful when applied to videogames.\textsuperscript{14}

\textsuperscript{11} \textit{The Art of Computer Game Design} was out of print until Washington State University Vancouver Professor Sue Peabody arranged for the electronic publication of the 1982 original at her university website, http://www.vancouver.wsu.edu/fac/peabody/game-book/Coverpage.html
\textsuperscript{12} Cutscenes are the usually non-interactive movies or animations that play on the screen in a videogame, usually when the player achieves a certain level of progress or reaches a specific location in the game. Cutscenes are sometimes interactive, but this interactivity usually amounts to pressing a button at the right time or having some control over the camera in a 3D cutscene (so the player might be able to look around a scene as a scripted story is unfolding).
\textsuperscript{13} Chris Crawford, \textit{Chris Crawford on Game Design}, 161.
\textsuperscript{14} Murray, \textit{Hamlet on the Holodeck}
The Meaning of Videogames

According to Ian Bogost, “Videogames are an expressive medium. They represent how real and imagined systems work. They invite players to interact with those systems and form judgments about them.” Typically, a videogame is a software that can be played with a physical, tangible interface and is viewed on a screen. The software runs on a particular configuration of computer hardware (e.g. a PC, Mac, Sony Playstation, Nintendo Wii, or Apple iPhone), also known as a platform. In fact, a platform at its most essential is an abstract definition rather than an actual device. Software can also be considered a platform, or can be encapsulated in a platform that also includes pieces of hardware. Bogost and Nick Montfort address this definition in Racing the Beam: The Atari Video Computer System, their recent book on Atari's first home videogame console (later known as the 2600), “A platform is... a particular standard of specification before any particular implementation of it. To be used by people and to take part in our culture directly, a platform must take material form...” If videogames are expressive, then their making is a creative act, but “making” is ambiguous and can occur at several levels in videogames.

The creator of a computer work might design circuits and solder chips. Or, this author might write instructions for the integrated circuits and microprocessors of a particular computer, or write software in a high-level programming language, or

15. Ian Bogost, Persuasive Games, vii.
create 3D models to be added to a virtual world, or edit digital video for embedding in a Web site.\(^\text{17}\)

Here Bogost implies that creativity is distributed in the creation of a successful videogame. Conception, design, programming, building, packaging, shipping, reception, and response are part of the process, and it is here that the history of textual studies can be related to videogames. Steven E Jones’s book, *The Meaning of Videogames*, is helpful in this regard. As a language scholar, Jones situates the study of videogames in the study of textuality (and thus a traditional study of cultural meaning through literature), but also because he recognizes that “the meanings of videogames are constructed and they are collaborative.”\(^\text{18}\) He also references two main schools of thought of early game studies; ludology (a focus on play, rules, and constraints - from *ludus*, the Latin word for game) and narratology (focused on narrative and textual analysis). Ludologists were interested in creating a singular discipline of game studies, while narratologists were interested in viewing games as “one among a whole range of cultural forms of media expression.”\(^\text{19}\)

Jones later clarifies that the focus on the debate was exaggerated, and Gonzalo Frasca (a leading Ludologist) claimed in 2003 that Ludology “was always about studying both game-form and story.”\(^\text{20}\) Regardless of the arguments, Jones is interested in a textuality that recognizes the uniqueness of games but doesn’t alienate them from sociocultural contexts. On the way to this definition, he references Rune Klevjer, who is

\[\text{17. Montfort and Bogost, *Racing the Beam*, 1.}\]
\[\text{18. Jones, *Meaning of Video Games*, 3.}\]
\[\text{19. Ibid., 4.}\]
\[\text{20. Ibid., 5.}\]
interested in “how video games are actually played today, rather than the abstract platonic ideal of gameplay that may underlie them.” Also, “…like literary texts, every game extends outward from itself in many directions.” Klevjer’s comments suggest a distributed understanding of games, incorporating their use and influences into the way they are read as texts. The cooling of the ludology/narratology debate might represent a more nuanced understanding of videogames.

Jones then critiques Julia Kristeva’s intertextuality, described “as a way to express a fundamental quality of language as a system of signs, its dialogic ‘citability’ and the way that all texts are always already referring to and incorporating other texts.” He finds it less than perfect for the more complex, procedural systems that videogames are and prefers to use Gerard Genette’s concept of the paratext to study the whole of videogames. The paratext is a “multilayered system of frames around a text that helps determine its reception” and may include things like the naming of a genre (First-Person Shooter in the case of a videogame), implied audience (Blockbuster or Indie Game), advance reviews or previews of the game, profiles of the game’s designers, and anything else that might effect how the videogame is played, viewed, or interpreted. The paratext relates to Platform Studies, a book series initiated by Ian Bogost and Nick Montfort from which the previously referenced Racing the Beam is the first, which aims to investigate “the relationships between the hardware and software design of computing systems and the creative works produced on those systems.”

22. Ibid.
23. Ibid., 7.
These efforts all attempt to privilege the way that texts and technologies are actually used and experienced, rather than trying to reconstruct an author’s intention for a work. Jones discusses a paradigm shift that has occurred in textual studies since the 1980s. This shift is in part due to the work of D.F. McKenzie and later Jerome McGann, who both theorized the “social text” and focused on the collaborative nature of all texts. Later, David Greetham described his move away from the “Platonist view of the ideality of an irrecoverable originary form…” and instead towards an analysis of the entire social history of a text, the “totality of cultural expression” of any work. A similar transition in the scope of analysis occurred within the discipline of art history after the 1980s, and we may attribute this change in general to the pervasion of postmodern theories into all disciplines at this period in history. In one form or another, the discipline of art history has been oscillating between formalist and contextualist views for centuries.

In a 1991 article featured in *Art Bulletin*, Mieke Bal and Normal Bryson published “Semiotics and Art History: A Discussion of Context and Senders,” which directly addressed the reluctance of many art historians to apply aspects of critical theory to their writing. This reluctance, they argue, came from a narrow view of context that rendered it all but irrelevant. In their analysis, “Context…is a text itself, and it thus consists of signs that require interpretation.” To analyze a work one must analyze both the object and its physical and sociocultural surroundings, “the work as effect and affect, not only as a neatly remote product of an age long gone.”

27. Ibid., 244.
These transitions are significant for videogames because those who study them need this kind of exhaustive, total sociocultural analysis in order to make sense of something as systemically complex as a videogame. In a way - through their existence as procedural systems, as well as their influence on fan communities, consoles (platforms), and social surroundings - they embody the scope of this exhaustive analysis.

**Audience Response & Introspection**

“This book is not about the history of art. It is about the relations between images and people in history.”\(^{28}\) This represents a powerful shift in the scope of art historical discourse, and those attempting to make a blanket classification of videogames as art might do well to read this. The idea of using the response of audiences to critique art at the time Freedberg wrote this book was revolutionary in art history. Part of his motivation was to expose the inherent bias of Western societies against the “primitive” responses of non-Western audiences. These responses are not only to high art, but to images that Western societies are simply more intellectually accustomed through generations of training and development of critical terminology. Even though videogames originated in Western culture, much of that culture still sees videogames and the culture surrounding them as primitive or base, while the mainstream media has no problem regarding them with the same primitive, irrational, or superstitious responses that Freedberg uses to describe the typical Westerner's view of a non-Western response to high art. The responses are somewhat inverted, but the effect is the same – an alienation of cultures from both sides.

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Video games...are consigned to the nerdy margins of the papers, and are pretty much invisible in broadcast media. Video-game fans return the favor: they constitute the demographic group least likely to pay attention to newspapers and are increasingly uninterested in the ‘MSM’, or mainstream media.29

These remarks from John Lanchester about an entire subculture are without evidence and show a similar disregard for a cultural group that Freedberg discusses in relation to the primitivism/Westernism debate. In this case the difference is instead between “popular” and “cultivated.”

It is still valuable to consider what it means to have a cultivated experience with videogames, if only to consider what else might be done with the medium that hasn’t already been tried. When it comes to actually designing videogames, Ian Bogost suggests that even though the games as art debate is irrelevant, we can find common qualities in certain games that have been considered through the lens of art. These qualities are procedural rhetoric, introspection, abstraction of instantial assets, subjective representation, and authorship.30 What they have in common is that they privilege the procedure behind the game as being communicative, including: the use of visual and acoustic assets that are born from the concept and enactment of the game system; a visual representation that can be situated somewhere between abstract and concrete; and the visibility of the artist's hand. Bogost uses the term “Proceduralist” to define this style of videogame, and I will adopt this term to describe components of my work as well.

29. Lanchester, Is it Art?
30. Bogost, Proceduralist Style, 1
On Game Art, Art Games, Games as Art, and Experimental Games

In order to assess a videogame we must not only look at the screen, or the interface, or listen to the sound, or even just play the game, but to fully enumerate and understand all of these aspects and their various modes of communicating. What Montfort and Bogost argue is that all of the technologies that are necessary to play a videogame do not develop in a vacuum but are influenced by cultural as well as technical developments.31

Let's take a step back from the theoretical and assume that one wants to install a videogame in a gallery. If this videogame software exists for several platforms, one needs to decide upon the platform on which to run it. The underlying hardware is different on each platform, and thus the code that makes up the software that represents the game (before it starts running) must also vary. Does one pick the quintessential version of the game (which might require the most expensive hardware platform)? Once the platform is chosen, what kind of screen does one connect it to? Will this screen display the game at the maximum visual resolution or is it displayed at a lower resolution than is optimal? Now, what kind of input device does one connect to the hardware platform in order to interface with the videogame software? What is the audio setup? How do all of these decisions affect the player's experience of the videogame? To be sure, some of these problems are not unique to the display of videogames in a gallery or museum setting. Curators deal with similar problems when exhibiting video, audio, and multimedia work. If we consider videogames as simply a collection of technologies to install in a space,
then they don’t seem very different from video or multimedia works. But if we consider the unique ways that videogames can communicate, it is possible to reconsider the manner that an artist might install and display them in a gallery.

What is unique to videogames is that they produce a procedural rhetoric (in contrast to speech, which creates meaning through verbal rhetoric, literature through written rhetoric or film through visual rhetoric). Procedural rhetoric is defined by Bogost as “the practice of using processes persuasively.” Through interaction with videogames, we experience their rules; interactions with the game are in fact defined by these rules, and thus the ethics of the virtual universe of a given videogame becomes clear through play. How is the player rewarded for his actions? How is he punished? Does the game have a winning condition or does it continue until the player gives up? Videogames communicate these aspects through the procedures (methods, routines, programs) that make up their software. This software also runs on (or is an essential part of) a platform. As one must understand written language in order to read a book, one must understand the language of videogames in order to “read” (fully assess and critique) them. This language includes the platform and procedures (including their cultural and technical origins), and often verbal, written, and visual rhetoric.

What Bogost and Montfort argue in Racing the Beam is that this analysis essentially hasn't happened with videogames. One simply doesn't find a critical analysis of a particular videogame that includes a discussion of the platforms on which it can be played and the connection of its rules to the cultural origins of the platform. 32 Without

32. This isn't as simple as choosing a DVD player on which to play a film on DVD (which may affect color or audio balance). The platform has a direct influence on how the procedures of a game are coded; a direct influence on the game's procedural rhetoric.
this critical analysis, discussions of videogames are essentially limited in scope to the
game space. However, artists have attempted to interrogate cultural and technological
contexts to their game work, many of them working in the videogame art field described
by Clarke and Mitchell, and it may be that these artworks provide an easier entry into
understanding and explaining the platforms, procedures, and various rhetorics of
videogames.

One example of such an art work is *Velvet Strike*, a mod for the popular
multiplayer online first-person shooter *Counter Strike* (See Appendix A for an image).
Mods (or patches) are modifications of the videogame software that players can apply to
a game installed on their personal computer. Frequently, these patches are released by
the videogame's publisher or developer to make improvements to a game, add new
features, or fix bugs. The mods I will discuss here belong to another category: the
“Artistic Computer Game Modification” or “Art Mod” for short. *Velvet Strike* fits this
category. The *Velvet Strike* project description reads, "Velvet-Strike is a collection of
spray paints to use as graffiti on the walls, ceiling, and floor of the popular network
shooter terrorism game ‘Counter-Strike’. Velvet-Strike was conceptualized during the

2009. *Counter-Strike* was itself originally a multiplayer mod for *Half-Life* that proved so
popular that it was commercially published by *Half-Life* publisher Sierra Entertainment/
Vivendi Universal.
35. Recently, closed-console manufacturers like Microsoft, Nintendo and Sony have
allowed companies to issue patches to their games via the online services of the XBox
360, Wii, and Playstation 3, respectively. However, the patching process is closed and the
average console-owner is not allowed to apply their own mods or patches to a game
running on one of these three platforms.
36. Stockburger, *From Appropriation to Approximation*.
beginning of Bush’s ‘War on Terrorism.’ We invite others to submit their own ‘spray-paints’ relating to this theme.”

On its own, the statement doesn't sound profoundly revolutionary, but the project prompted angry responses from players of Counter-Strike. Some of these responses are catalogued by Rebecca Cannon in Meltdown. One player writes, “What a stupid initiative... don't piss off other people with your shit. Just a woman could have think (sic) of making something like Velvet-Strike... if you don't realize that videogame is just a videogame, an that it's a fake world, then GO PLAY WITH YOUR BARBIE.”

This statement highlights the fact that not all players of videogames are interested in artistic interventions in videogames. What the virtual spray paints (the project labels them as “Counter-Military Graffiti for CS”) look like or how they affect the aesthetics of the game space is mostly irrelevant to the players; their frustration was instead caused by the intrusion into their game space, which had the potential to upset the balance of a highly competitive game scenario. If several people join a team and, instead of assisting in defeating the opposing team, spray graffiti around the virtual walls, a player’s ranking and “gamer cred” are in jeopardy.

This highlights an important gulf that still exists to some extent: that between “gamers” and non-gamers. The title “Gamer” or “Hard-core Gamer” apply to the mostly male, traditional videogamers who are interested in keeping the hobby focused on a hard-core audience and resist attempts to make videogames more accessible, fearing that their games will be “dumbed-down.” In his book Die Tryin’, Videogames, Masculinity, Culture, Derek A. Burrill puts hard-core gamers in a category of “digital boyhood,” in

which they continually perform their masculinity through technology - always needing to have the latest gadgets and most powerful computing platforms. Digital boyhood is not limited to males, but is a particular type of masculine performance that plays out in videogame and technological spaces. Burrill reminds us of two of the early theorists on games and play, Johan Huizinga and Roger Caillois, and their focus on the separation of games and life. Burrill suggest that “...play and life are not only mutually constative, but they are also much more intertwined than either Huizinga or Caillois is willing to acknowledge.” Both authors — Caillois and Huizinga — were writing at the height of modernism and were likely trying to nail down the ideal game/play situation or space.

The *Counter Strike* player discussed earlier who was unhappy about his game being infiltrated by artists (and female artists, in particular) brings to mind the hard distinction of the magic circle and adds gender to the conversation. The “digital boy” is the quintessential hard-core gamer, and everyone else is the other. One reason I discuss gender here is because it influences my own construction of self-identity through games. As a former hard-core gamer, I am now interested in interrogating that earlier definition of self through videogames, so it is important to include more audiences than the hard-core gamer, and to do this we have to understand who the hard-core gamer is.

39. Burill, *Die Tryin’*
40. Huizinga, in particular, and his concept of the “magic circle,” which theoretically limits the activities and effects of a game to the defined circle of play. This circle is not necessarily physical, but the agreed-upon space of play defined by the rules and players of the game.
41. Burill, *Die Tryin’,* 38.
42. Although not explicitly mentioned, the digital boy is most likely a white male, as this is another stereotypical embodiment of the hard-core gamer.
The issue of gender and the hard-core gamer in videogames has a counter-point in the art world, that of an entrenched connoisseur of high art, afraid of a similar dumbing-down of the aesthetic purity of art. Hilton Kramer’s critique of the MOMA’s *High/Low* show of 1990 provides such an example.\(^43\) Kramer writes disparagingly of what he views as the removal of aesthetic judgement from the selection and analysis of works, “Mr. Varnedoe (ed. The show's curator) has clearly set the museum on a course that conforms to the practice of supplanting aesthetic categories of thought with those drawn from the social sciences.”\(^44\) While this may be accurate, Kramer shows disdain for this direction in the context of art and the MOMA. In their introduction to *Videogames and Art*, Clarke and Mitchell discuss a lack of a videogame aesthetic in most critical discussions of videogames. These critical discussions are usually reviews, made for the benefit of the buying public, and that focus heavily on game design, whether a game is fun, and whether it is worth the reader's money to purchase. These reviews disregard context in a different way, focusing on only one audience, the traditional videogame player, using fun as the main criteria for judging videogames. One possible reason for this is that the complexity of deeply critiquing a videogame is daunting because of the various contexts involved (platform, procedure, interface, software, etc.), but another possibility is that there is little incentive to venture outside of an established critical method – people who buy games looking for fun make up the primary audience of most game reviewers.

A similar disregard for context is exhibited by John Lanchester in his article for the London Review of Books entitled “Is it Art?”\(^45\) In it, Lancaster introduces videogames by

\(^{43}\) Kramer, *The Varnedoe Debacle*.
\(^{44}\) Ibid., 200.
\(^{45}\) Lanchester, *Is it Art?*. 21
highlighting their economic accomplishments. 2008 was, after all, the year that videogames economically surpassed the music and film industries combined. Following this introduction: “There is no other medium that produces so pure a cultural segregation as video games, so clean-cut a division between the audience and non-audience.” He goes on to assert that “books, films, TV, dance, theatre, music, painting, photography, sculpture” all are relevant to the public, in that the general public is either interested in them or not, but regardless has some notion that they exist. “They are part of our current cultural discourse. Video games aren't.” After an introduction that highlights the economic supremacy of videogames among media, it is simply wrong and short-sighted to suggest that videogames are outside of current cultural discourse. Interestingly, Lanchester goes on to imply that the invisibility of videogames allow them a certain kind of freedom to experiment (one that he doesn't think they take full advantage of).

By simplifying this discussion to a binary judgement, Lanchester's statements disregard context by disregarding the history of binary oppositions that have appeared throughout art and media history. He either ignores or does not seem to realize that there is a huge public audience engaged in what are now called “Casual Games” (usually shorter games that people play for fun, often online, that tend to rely less on high-end technology)\(^46\) or that there is an entire independent game movement that is rapidly innovating, represented by universities, startup companies, and individuals. The Independent Games Festival\(^47\) is about to host its eleventh annual yearly awards show at


the ever-growing Game Developer's Conference. The gamer/non-gamer divide on which he is focused is a fiction. His main justification for this is that the game Bioshock “was a huge hit, and I have yet to encounter anyone who has ever heard of it.” Still, Lanchester makes some good points, the most salient being that games really can do better, and that one of the ways that they can improve artistically is to shed the idea that “difficulty is artistically desirable.” He argues that videogames defend their difficulty because they provide a work-like structure, “full of competitive, repetitive, quantifiable, measured progress towards goals determined by others,” that is familiar to the average player, and that in order to expand beyond this audience, they need to take more risks and shed some of their tight structure. What he's suggesting is that videogames should challenge the player (e.g. Intellectually, physically, or culturally) instead of merely providing mental difficulty. He ends this section with the thought that “Most video games aren’t nearly irresponsible enough.” 48 49

Part of the lack of proper critical coverage of videogames is from a of lack of understanding by the general public. In Should Videogames be Viewed as Art? 50, Brett Martin tells the story of the photographer Oscar Rejlander, one of the few artists of his time to argue that photography was an art. Some of the initial criticism of photography had to do with the ease with which cameras could recreate the work that took hours for landscape painters to create. 51 People also responded differently to photographs that

48. Lanchester, Is it Art?
49. A response of frustration from the player is a legitimate response in an art piece, but would likely be seen as invalidating of the experience (or purchase of the game) by a videogame critic.
50. Martin, Should Videogames be Viewed as Art?.
51. Ibid., 201.
contained nudes, which Rejlander's did, even though nude studies were respected in painting at the time. Photographs were viewed as more true-to-life, and thus some regarded Rejlander's work as pornography.\textsuperscript{52}

Popular responses to videogames today are similar to the responses to photography in Rejlander's day. Sensational news stories like a Fox News report calling Sony's Playstation Portable (PSP) videogame platform the “Playstation Pornable,” blaming portable gaming devices for content accessible through any home Internet connection simply because they can also connect to the Internet.\textsuperscript{53} Not only does the report make the common assumption that all videogames are made for and targeted towards children, but also that “gaming should be fun and entertaining; it shouldn't be a pathway to trouble.”\textsuperscript{54} Similarly sensationalized news reports on videogame violence are common in the media, while similarly violent films are ignored. It is true is that we don't fully understand the effects of violent videogames, but it is also true that most people today are exposed to a large array of images from many different media sources, and a focus on videogames as the only cause of violent and anti-social behavior shows a lack of understanding of not only videogames, but also of how people respond to media in aggregate.

This doesn't necessarily get us any closer to a better understanding of Videogame Art, nor does it prove that the acceptance of videogames as an art form is imminent. What we can see is that public responses to videogames have so far been consistent with responses to previous new technologies and mediums. Going back to Bogost and

\begin{itemize}
  \item \textsuperscript{52} Ibid., 202.
  \item \textsuperscript{54} Ibid.
\end{itemize}
Montfort on videogame consoles: “Only the serious investigation of computing systems as specific machines can reveal the relationships between these systems and creativity, design, expression, and culture.” Note that they don't mention art at all, and it may be true that culture is a more suitable arena within which to discuss videogames.

**Taking a Wider/Narrower View (Fan Art and Culture)**

In the introduction to Fans, Bloggers, and Gamers: Exploring Participatory Culture, media studies Professor Henry Jenkins confesses, “Hello. My name is Henry. I am a fan.” This manner of confession speaks to the cultural moment, not very long ago, “when fans were marginal to the operations of our culture, ridiculed in the media, shrouded with social stigma, pushed underground by legal threats, and often depicted as brainless and inarticulate.” Jenkins also talks about his experience writing a previous book, *Textual Poachers*, that defines fans as “rogue readers,” active in the interpretation and reinterpretation of their favorite fictional works. “A number of fans were nervous about what would happen if their underground culture was exposed to public scrutiny. They didn't love the media stereotypes of 'Trekkies,' but they weren't sure they wanted to open the closet doors either.” The rise of videogames into a powerful industry was paralleled by the rise of the Internet as a communication medium, which allowed fan culture to move from smaller group followings to massive collaborative communities based in online message boards and websites. These parallel developments, like the early

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57. Ibid.  
58. Ibid.
commercial availability of the camera, might have made it harder for videogames as a medium to be accepted as high art, but it allowed an underground culture to flourish and eventually become mainstream.

Gareth Schott and Andrew Burn discuss fan art in relation to fan participation in the online message boards for the *Oddworld* series of videogames. *Oddworld* is actually a full fictionalized universe that happens to have been presented in videogame form thus far (although the collective animations from *Abe's Exoddus* were nominated for an Academy Award in the “Short Animation” category). On the “Oddworld Forums” message boards, artists share their concept drawings of characters and landscapes from the *Oddworld* universe, as well as give advice on various artistic techniques and offer critique of the works, all in a friendly, encouraging, and arguably non-critical way. These fans are actively engaged in adding meaning to the stories they consume, and it is hard to imagine videogames being as popular as they are today without a vibrant fan community that contributes art inspired by the games, game mods, and other forms of appropriation that respond aesthetically to videogames.

It is essential to understand the concept of Fan Art (and why it requires distinction from art in general) because much of the art discussed by Clarke and Mitchell in *Videogames and Art* could either be seen as Fan Art or a close derivation of it. Much of it is inspired by videogames and, far from using them dismissively, celebrates the aesthetics

59. *Oddworld Official Site Page*
60. Schott and Burn, *Fan-Art as a Function of Agency*.
61. An example artist is Mikaël Aguirre, aka Orioto, part of the community at deviantart.com, a website dedicated to artistic community that has sections dedicated to fan art. Aguirre creates striking portraits of memorable images in retro videogames like Mega Man, Metroid, Super Mario World, and others. His work can be seen at his website: Aguirre, *Orioto DeviantArt Portfolio*. 26
of the medium while simultaneously challenging the viewer. Cory Arcangel's *Super Mario Clouds* is one such example.\textsuperscript{62} In this project, Arcangel hacked a *Super Mario Bros.*\textsuperscript{63} videogame cartridge to remove everything except for the sky blue background and the clouds in the sky. Taking one of the most recognizable videogames of all time and removing the main character, sound effects, music, and almost everything else that has any bearing on the way the game is usually experienced creates a surreal moment, but also a moment of appreciation in which the viewer/player recognizes that the clouds are as iconic and recognizable as the character so often associated with the game. The visual aesthetic of *Super Mario Bros.* also becomes clear through this single object, repeatedly scrolling across the screen as a sort of visual landscape.\textsuperscript{64} In their discussion of *Super Mario Clouds*, Clarke and Mitchell situate it in conceptual art, but also use it as a transition into their discussion on modding, noting that videogame art “often uses and subverts the videogame technology itself.”\textsuperscript{65} By describing it in conceptual art, Clarke and Mitchell also hint at the fact that Arcangel’s work has been accepted and praised by the art establishment, and thus he is an example of crossover between fan and high art.

Another project by Arcangel, *Super Mario Movie*, takes the concept of subversion further by focusing on the poetics of digital decay.\textsuperscript{66} *Movie*, like *Clouds*, was achieved by

\begin{flushright}
63. “Super Mario Bros. was the game that Japan's Nintendo Entertainment System such a huge success in the United States. It also made Mario a household name.
64. The fact that the game is a hack to the hardware, and that Arcangel's website for the game offers a full tutorial and source code for those who wish to recreate Super Mario Clouds and put it on their own Nintendo Entertainment System cartridge opens up other interpretations. One possibility is that this game is a giant glitch, as the NES was prone to freeze up or display random visual pieces of a game. This piece is one potential glitch that references the inevitable decay of NES cartridges.
\end{flushright}
modifying an NES cartridge to make it play through a roughly fifteen minute “movie” about Mario's adventures through the same decaying NES cartridge. Because the project is released as a game, it offers a similar commentary as Clouds does on what it means to run a videogame software on a particular videogame platform. In fact, the software running on a videogame platform does not need to be presented as a game (or even as a time-based experience) but can be actualized in a variety of modes, from images to movies to audio.

By exploring the distinction between fan art and high art, we begin to see that the art put forward as “Videogame Art” by Clarke and Mitchell challenges ideas about the nature of videogames while simultaneously promoting the medium. None of the artists argue that videogames should not exist or be recognized as expressive. On the contrary, they seem to be fans at heart. Their work makes the argument that videogames must be recognized as valid expression and that by engaging those who are entrenched on both sides (hard-core gamers and videogame reactionaries) in a conversation about the dialog on games in which they participate (perhaps unconsciously), new conversations are possible about the future of the medium.

Chapter Outlines

For a project like Gaming the Network Poetic, one of the great challenges is the use of abstract visuals and interactions to create an emotionally engaging product. With five games that behaved differently and communicate various data over the network, there was a tradeoff between complexity and clarity. To leave the work completely open, with


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each program able to interpret any data sent by any other program, would have caused an exponential increase in complexity before even beginning to design the games. The choices on the amount and type of networked communication (i.e. what the games sent to each other and how each game interpreted the data it received from the others) to include then became as important as the individual games themselves.

In Chapter Two I will go into the theories behind networking and code, the two central components of *Gaming the Network Poetic*, from social and technological perspectives. How were the games designed to take advantage of already existing technologies and what kinds of social interactions do these technologies allow? Further, I will discuss several theoretical positions on a networked and/or social art, leading up to a consideration of videogames as a potential solution to the problem of making sense of the complexity of contemporary life and its associated technological and social systems and networks.

Chapter Three and Four feature descriptions of the software and hardware design, respectively, behind *Gaming the Network Poetic*. Chapter Five offers a synthesis of the piece in the context of the theories introduced in Chapter Two.

Finally, Chapter Six offers a conclusion and final discussion of *Gaming the Network Poetic*, and some suggestions for future directions for this particular project and platform and for this type of exploration in general.
Chapter Two:

Networking and Code

In addition to a series of art games, *Gaming the Network Poetic* is also a piece of networked art. It requires a computer network to run, and the group of people who play it also form an additional communication network on top of the computer network, both by making decisions in the individual game spaces and by breaking the overall game space of the piece and talking to each other in the social space of the gallery.

The piece also uses code in various ways. First, the computer code that runs each game and the server software is in constant transition from one state to the next. Pieces of data are constantly moving between the games, causing chain reactions that play out over time. Social codes are also evident in the piece through the expectations provided by the videogame, this specific videogame interface, and a contemporary art gallery space. *Gaming the Network Poetic* is finally an art object, but one that contains a situation that depends on a network of games, players, and spectators.

This chapter focuses on the art historical, literary, and media theories behind *Gaming the Network Poetic*. It begins with a discussion of networks and codes, first from social and historical standpoints and precedents in art, then from the perspective of technology and its history. Umberto Eco’s theory of the open work is then considered and analyzed from a modern standpoint, and finally the concept of Relational Aesthetics is
discussed. These theories are then considered in the context of videogames and the “Ludic Age,” to prepare the reader for the specific discussion of *Gaming the Network Poetic* in the next chapter.

**Networked Art and Social Codes**

Craig Saper’s *Networked Art* covers the development of artistic networks throughout the middle twentieth century through participatory art movements that stood outside of the then-dominant high modern art movement. He regularly refers to literary theorist Roland Barthes’ concept of the receivable — a work that is encountered outside of the usual framework of seeing a work or text. Barthes’ initial excitement over the mail art that he received prompted him to identify this category. Saper provides a summary:

> As "receivable," the works examined in this book create intense, intimate situations rather than the polite pleasantness of the "readerly" magazine or the cool detachment of the "writerly" poem. By definition, these works are not for everybody, nor do they make a claim to aesthetic quality. They are produced for, and by, usually small circles of artists, writers, and friends, and the results often arrive in the mail, as mail art.69

68. Saper, *Networked Art*
69. Ibid., 4.

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Because the works are produced for a much smaller audience, the criteria for judgement are very different from that of high art and literature:

Guy Bleus, in an edition of Commonpress, explains that "the main question of mail art-criticism is: 'Is it mail art or not?' This does not imply the act of traditional judging . . . but of recognizing" (Exploring 37). Although one might find fault with this narrow definition, it does sound like Barthes's notion of the receivable in the sense that the critic suspends traditional norms of judgment. 70

There is a parallel here with the development of the videogame industry and criticism. David Thomas, videogame journalist and founder of the International Game Journalists Association (IGJA), recently wrote on the the consideration of videogames as art: “The trouble is, art is about beauty and some sort of unspeakable experience of the Other. Games just need to be fun.” 71 This sentiment is often echoed in game criticism, which can be a problem for those striving for the acceptance of games as a high art form but is no problem for those interested in games as they are. For the most part, mail artists were not interested in fame elevating their art to high art status. The obvious difference with videogames is their massive appeal as entertainments.

The Mail-Art networks that Saper and Barthes refer to were inspired by the Fluxus movement, a sort of anti-art movement of the 1950s and 60s that advocated the destruction of modernist high art and the institutions that supported it. It did this partially

70. Ibid.
71. Thomas, Games Art Not Art, 1.
by advocating that each member take up a useful trade during the day for financial support and leave their evenings free for Fluxus activities, which involved playful, scripted games, chance exercises, and what amounted to instructions (like musical scores) for activities that might generate a work that, in its process or result, destroyed art (either actually or in concept).

The works of Yoko Ono serve as a useful example. Her *Smoke Painting* of 1961 consists of printed text that instructs the participant to destroy a painting, albeit poetically. The text is below, and an image is available in Appendix A.

Light canvas or any finished painting with a cigarette at any time for any length of time.

See the smoke movement.

The painting ends when the whole canvas or painting is gone.⁷²

One influence of Fluxus that remains today is its reliance on a network of participants to perform each work. While mail-art has an intentionally niche appeal, many Fluxus artists were invested, through their explicit position against established art institutions, in direct dialog with these same institutions. This gave their work a higher profile that widened the potential network of participants and allowed this influence to propagate to later art and cultural movements. Saper suggests that the reliance of Fluxus on a network of participants has gone relatively unnoticed: "few authors of histories of new media have noticed visual poetry's and Fluxus's most important contribution: making networking situations into artworks."⁷³

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⁷². Ono, *Smoke Painting*.
These networking situations are described by Saper as sociopoetic: "When aesthetic and poetic decisions embodied in artworks lead to a heightened or changed social situation, one needs to describe these forms as sociopoetic rather than as artworks within particular social contexts. The social situation is part of a sociopoetic experiment." Saper's interest is in describing the subversion of large bureaucracies by creating "intimate bureaucracies" through sociopoetic appropriation of the large bureaucracy's brand. My interest is in using the sociopoetic to describe my work as a poetic system that requires the participation of an audience to be fully realized, which diverges from Saper’s eventual use to describe specific bureaucratic interventions and physical networks of artists. However, the “scoring” of situations and the participation of the audience are essential parts of my work, especially because of its dependence on a fairly complex software and hardware platform and the ability of the audience to engage with that platform.

Networking Technology and Software Code

Networking technology goes back to the invention of the telephone and perhaps further, to the development of early postal systems. However, I would like to focus here on the development of computer networks to provide a technological context to the social network of artists already discussed. The development of the networking protocols that enabled the internetworking of computers and eventually the creation of the Internet

74. Ibid., xiii.
75. It is important to draw a distinction between “scoring” from a musical perspective and keeping score in a videogame or sporting event. I will use “scoring” only when referring to the priming, framing, or scripting that a musical score provides for a performance.
began in the 1960s with the advent of packet switching technology, a major technology behind the ARPANET (Advanced Research Projects Agency Network). ARPANET was initiated by DARPA (Defense Advanced Research Projects Agency) and was the precursor to the Internet that we know today.76

Packet switching technology replaced the circuit switched technology that one might associate with a telephone operator, someone who was responsible for making a connection at the physical, circuit level whenever one called wanted to call another. Instead of requiring a dedicated, direct circuit connection, a packet switched protocol allows for the computers at each end of a data transmission to send and receive their data (broken up and sent in pieces called packets) without first deciding on a dedicated circuit connection to each other. For an analogy, consider a circuit switched connection to be owned (for the time of the connection) by the machines/computers at either end and a packet switched connection rented (as multiple machines can send data simultaneously on the same line).

Initial packet switching protocols evolved into the TCP/IP protocol, a combination of Transmission Control Protocol and Internet Protocol, both developed at DARPA by Robert Kahn with the goal of being a true communications protocol where previous methods of sending and receiving packets acted more like interpreter programs for the specific hardware on which they ran. Below are a few goals of TCP/IP that make it especially interesting to look at considering the social developments in art at the same time.

76. Leiner et al., *Brief History of the Internet*
• Each distinct network would have to stand on its own and no internal changes could be required to any such network to connect it to the Internet.

• Communications would be on a best effort basis. If a packet didn't make it to the final destination, it would shortly be retransmitted from the source.

• Black boxes would be used to connect the networks; these would later be called gateways and routers. There would be no information retained by the gateways about the individual flows of packets passing through them, thereby keeping them simple and avoiding complicated adaptation and recovery from various failure modes.

• There would be no global control at the operations level.”

The decentralized aspects of the Internet are often falsely attributed to the engineers’ intention of designing a network that would be resistant to nuclear attack (i.e. if one city, or node, of the network is destroyed, there are enough nodes on the network to absorb the attack and essentially route around the destroyed city). Leiner et al’s essay does note that “later work on Internetting did emphasize robustness and survivability, including the capability to withstand losses of large portions of the underlying networks,” but this emphasis could still exist without the threat of nuclear war, as it also represents economic, social, and technological interests in keeping the Internet running smoothly.

It is interesting to note that the most economic and efficient means to transmit data is also the most distributed solution. This distribution certainly offered more promise of a democratic network than a centralized, government-controlled network might have, and the technologies (like TCP/IP) that contain assumptions about distribution in their very

77. Leiner et al., Brief History of the Internet 36
code still power the Internet and the majority of networked communication between computers to this day. The four goals of the TCP/IP protocol listed earlier read almost like a manifesto on free speech. To paraphrase: the network will be open, communication will be complete, no information about the content of individual packets will be recorded, and there will be no global control of the network.

This openness and reliance on intermediary computers to deliver a message certainly relates to mail art, and one could argue that the concept of the “receivable” has a digital twin in email and certain net art works, however weakened its effect might be on the receiver due to the pervasiveness (and non-uniqueness) of Internet communication. What these histories, of mail art and Fluxus and of the development of the Internet, share is a structured giving up of control to the senders and receivers of messages. Internet protocols can be viewed as very complex scoring of how to send a message, while mail-art and especially Fluxus work certainly had a protocol and specific aims as a movement. So it is that these simultaneous developments can work together as influencers - Fluxus influenced the reception of interactive and multimedia works and set the stage for a network of audience participants in a work while the advent of internetworking allowed for participants in such a network to be telepresent.

The Open Work

At roughly the same time as the the Fluxus movement and the early development of the Internet, we have “The Poetics of the Open Work,” by Umberto Eco. He initially writes on the open work in the context of developments in avant-garde music in the sixties. On Karlheinz Stockhausen he writes, “the composer presents the performer a
single large sheet of music paper with a series of note groupings. The performer then has to choose among these groupings, first for the one to start the piece and, next, for the successive units in the order in which he elects to weld them together." This kind of work presents an alternative to a concluded, fixed piece that is given to the performer or group of performers by a composer and instead multiplies the formal possibilities of the distribution of the elements of a composition. This kind of scoring is very similar to the work discussed earlier by Craig Saper, but an important difference is that Fluxus work was motivated by a political agenda that included dismantling existing art institutions, while the experimental musicians like Stockhausen and John Cage were interested in using similar techniques to aesthetic and conceptual ends, to expand rather than break down the accepted frames of avant-garde music. This in itself can be framed as a political act, but neither Cage nor Stockhausen professed a desire similar to the Fluxus manifesto in this regard.

Eco clarifies his definition of openness by reminding us that the reception of any work of art is open in the sense that as many perspectives are brought to the work as there are spectators. A traditional work of art, like a painting, “is a complete and closed form in its uniqueness as a balanced organic whole.” Scored musical works, like those of Stockhausen and Cage, are open in a far more tangible way — they are literally incomplete if taken as a linear script of any potential performance rather than a

78. Eco, Poetics of the Open Work, 20.
79. Ibid., 21.
80. Ibid., 22.
suggestive set of instructions. However, this incompleteness is not a suggestion of weakness of the work, but a difference in underlying assumptions about the world and the nature of creative works.

The search for suggestiveness is another characteristic of the open work — a search that opens up the work to “the full emotional and imaginative resources of the interpreter.”81 While not a participatory network on paper, creating a suggestive score creates potential for the work to be opened up to a network of performers. This conceptual arrangement still privileges the author of the work, and Eco highlights the composers and conceptual inventors of the musical pieces he describes — he never names the performers or refers to them as collaborators. It is still important to note that the performer is given the role of full interpretation of the initial set of constraints in the score and that the author has given up control over the eventual performance of the piece.

Finally, Eco raises the physical concept of complementarity, “which rules that it is not possible to indicate the different behaviour patterns of an elementary particle simultaneously.”82 What he suggests with this metaphor is that models must be used to describe these patterns, as there is no accurate score that will provide a snapshot of the elementary particle at any given time. So it is with open works: suggestiveness provides for ideally infinite variation in performance, while also providing certain constraints. One can also think of this in probabilistic terms. Instead of a defined mathematical equation that consistently results in the same value when a given value is used as an input, one must define the probability for each of these values (potential outcomes). This probability

81. Ibid., 27.
82. Ibid., 33.
depends on many variables, including the performer, and instead of representing an exactly defined outcome, it merely represents the likelihood of that outcome occurring.

All of these ideas, point to the consideration of a work as a system dependent on many variables. The responsibility of the artist is to create a situation for many participants (in the case of the open work, performers) to interpret and perform the work using the score as a starting point. Before bringing this conversation back to videogames, I will introduce one more theoretical construct - Relational Aesthetics.

**Relational Aesthetics**

Relational Aesthetics refers to the concept of a relational art, defined by Nicolas Bourriaud as “an art that takes as its theoretical horizon the sphere of human interactions and its social context, rather than the assertion of an autonomous and private symbolic space.”83 The motivation to focus on the social context of artworks comes from the increased urbanization of human populations and thus an increased urbanization of the artistic experience. In other words, Bourriaud suggests that the previously held views of art as aristocratically controlled and displayed are dissolving into an art that must be experienced, but not in traditional spaces or manners.84 This need for an art as direct experience results from the imposed proximity of the urban space, which removes art from consideration as “a space we have to walk through” (referring to the dedicated

84. These comments imply that the contemporary art gallery is a traditional space for experiencing art, but I interpret Bourriaud’s mention of “traditional space or manner” to be an inclusive “or,” so that experiential interventions can occur in traditional spaces, as long as they are of a non-traditional manner (and vice-versa).
spaces that are decorated and filled with art) and placing it firmly into the urban space as the trigger for dialogue.\textsuperscript{85}

The irony of the constructed urban spaces that Bourriaud encounters is that in their design to create specific spaces for human connection, they actually encourage less connection. Humans either quickly become wise to this sort of manipulation, or socialization cannot be planned. Perhaps this is a result of failed modern architecture, but it opens an opportunity for artists to create spaces of specific sociability in contrast with designed social spaces, which have been neutered of their meaning. Much of this loss of meaning comes from the increased mechanization of daily life, which increasingly limits opportunities and spaces for human interaction.

It is thus the artist’s role to create works in a space that “is devoted entirely to interaction. It is a space for the openness that inaugurates all dialog. These artists produce relational space-times, inter-human experiences that try to shake off the constraints of the ideology of mass communications.”\textsuperscript{86} Bourriaud suggests that the aesthetic considerations of modernism are not gone but are less steeped in dogma (so too with the anti-modernist concerns of postmodernism). What he seems to be advocating is an aesthetic value akin to modernism coupled with the understanding of society as increasingly fragmented, which requires the interventions of artists to be done in smaller, more direct bits to communicate effectively. “We no longer try to make progress thanks to conflict and clashes, but by discovering new assemblages, possible relations between distinct units, and by building alliances between different partners.”\textsuperscript{87} This sounds like social research

\textsuperscript{85.} Ibid.
\textsuperscript{86.} Ibid., 166.
\textsuperscript{87.} Ibid.
with an emphasis on experimentation, and because the variables and relations are shifting constantly, the repeatability of an experiment is essential.

Finally, I’d like to consider a question from philosopher Felix Guattari that Bourriaud references, “How can you bring a classroom to life as though it were an artwork?” Bourriaud responds with his own question, “How is aesthetics to be used, and can it possibly be injected into tissues that have been rigidified by the capitalist economy?” It is here that videogames might come into the picture, as videogame researchers are asking related questions about education. James Pual Gee, a sociologist, linguist, and educational researcher is also frustrated by the rigidity of the modern classroom, especially in the United States, and holds up videogames as an example of an experience that can teach through dedicated difficulty, a system of rules to be figured out and tested, and through the way they encourage social interaction and problem-solving around specific topics. Furthermore, he suggests that videogames reverse many cherished beliefs about education. “They show that pleasure and emotional involvement are central to thinking and learning. They show that language has its true home in action, the world, and dialogue, not in dictionaries and texts alone…They show that collaboration and participation with others is essential to engaged thinking and learning.”

Relational Aesthetics can be seen as a continuation of the deconstruction of modernist ideas that is evident in the writings of both Saper and Eco. While Gee is not writing in the context of art or aesthetic history, his comments above echo the concerns of

88. Ibid., 169.
89. Gee, Good Video Games + Good Learning, 2.
Bourriaud, for legitimate social aesthetic experience in the course of environments made rigid by capitalist economy and society.

The Ludic Age

The theories discussed so far have originated from literary criticism, art history, and philosophy but have not directly addressed the current state of the art or game development worlds. Here I wish to bring them together under the umbrella of the “ludic age,” a phrase introduced by Eric Zimmerman at the 2008 Games for Change festival in New York City. (Recall that Ludology describes the study of games and play.) Heather Chaplin foregrounds a short discussion of a Ludic Age with a background on Zimmerman’s activity on gaming literacy, an idea that the new literacy of the twenty-first century is “systems thinking, which is understanding how dynamic systems work, things like the eco-system and global warming - i.e. Big systems made of interrelated parts that constantly change and affect one another. Like a videogame.” Zimmerman, Katie Salen, James Paul Gee, and many other researchers are now conducting research to test the theory that games are the best way to teach systems thinking to people.

The phrases and concepts of the ludic age and gaming literacy are perhaps implicit references to Brian Sutton-Smith’s work in The Ambiguity of Play, in which he suggests the desire for a “play rhetoric” that expresses the variability in the uses of play in literature (for example, in play as metaphor for other things, play with literary structure, play as a plot device, etc.). He also suggests that at the end of the twentieth century we

90. Chaplin, Why we’re living in The Ludic Age.
91. Ibid.
may be witnessing a “ludic turn that begins to match the aesthetic turn at the end of the eighteenth century. Where once art was at the center of moral existence, it now seems possible that play, given all its variable meanings, given the imaginary, will have that central role.” There is anecdotal evidence of this in the prominence of play and games in online social networks and the expansion of the videogame industry to unprecedented numbers of “casual” gamers.

Because play is inherently social, we can draw connections to the previously discussed theories of networked art, the open work, and relational aesthetics, all of which advocate a social component to artmaking and, in the case of relational aesthetics, suggest that the social component or organization actually defines the aesthetics of the work. In the end, the classroom becomes a focus of both Bourriaud and researchers into gaming literacy for the same reason: it is a primary site for the construction of worldview. Both theories gaming literacy and relational aesthetics that effective action, whether in art or other conceptual spheres, depends on the ability to intervene and create instant communities, which itself requires a deep understanding of contemporary social, political, and cultural networks. In other words, this type of intervention requires a deep understanding of systems theory. Even if the concept that videogames are the new art of the twenty-first century does not satisfy the reader, the ludic age provides another theoretical frame from which to view videogames and extrapolate their potential.

92. Sutton-Smith, Ambiguity of Play, 143-44.
Chapter Three:

*Gaming the Network Poetic* — *Software*

*Gaming the Network Poetic* consists of five videogames developed in Processing and networked together using a client-server based software network. The piece itself consists of a constructed mount containing all of the necessary hardware to install the project in any space with sufficient electricity to power the equipment and a sufficiently weight-bearing ceiling. The physical nature of the project will be discussed in the next chapter. Here I wish to give an introduction into the motivations, imagery, and networked connection of the five videogames.

My goal was to developed disparate videogames that communicated in some way over a network. The initial inspiration for this came from an idea to create a genealogical videogame that covered the span of history of my family. In attending the funeral of an aunt, I got into a fascinating discussion with a second cousin who still farmed the same land that my great-grandfather farmed when his family emigrated from Denmark in the early twentieth century.

The challenge of creating a series of games around my family history was captivating and became especially interesting when I considered what might happen if characters could transition between the games, an action that would manifest their correctly-timed persona in the appropriate game universe, depending upon the actions of
the player. If my great-grandmother’s game was about maintaining a farm family, what
would her role be when the player decided to move her to the edge of the screen and thus
to a new game, one in which she might be dead, much older or younger, or take on
different roles?

From this idea came the task of simply starting to build the networking
infrastructure to support such a project. I chose the Processing software, described as “an
open source programming language and environment for people who want to program
images, animation, and interactions.” 93 The reasons for choosing Processing was my
familiarity with the tool, its status as widely used and supported, its open-source nature,
and the relative lack of precedent for using it as a tool for game design.

As I built and tested a networking infrastructure, it became clear that it would be
relatively easy to send and receive simple data within computers on a network, and use
that data in whatever way I wanted in each game program. At the same time, I started
thinking of the games as a symphony with several movements. Considering the games in
this way focused my considerations on a sort of visual consistency, at least so much as a
player of one game might be able to figure out that certain objects, colors, or other
methods of visual feedback had their beginnings in another game.

Because I enjoy the allowances of a minimalist aesthetic to draw attention to the
specific interactions between objects on the screen, the visuals for each game are
intentionally simple but purposefully interactive. Each game takes place in two
dimensions, and three of the games have one or more buttons that trigger an action in the

93. Reas and Fry, Processing Website.
game space. The directional pad on the Logitech gamepads94 that I used functions to move objects about the screen in all but one of the games. While two of the games take place in a similar game world, the player takes on a different perspective in each. With the exception of these two games, the actions, player-character, and perspective vary greatly in each game.

As discussed earlier, the games were motivated by the exploration of the nuances of human relationships. Sometimes communication is direct, sometimes indirect, sometimes active, sometimes passive. I wanted to find a way to create a network of games that behaved in a way that a human family might, with some games behaving more antagonistically than others, and some perhaps passively communicating their positive or negative emotions through the network. While I will go into more discussion of the effects of this in my observations about the project, this theme of each game as an actor in a network or community of games stayed with me while developing the project so it will be important to keep in mind as the individual games are discussed.

Finally, the design process of each game was quite similar, even while providing different results. Initially, I chose five dichotomies related to relationships that I wished to explore with game mechanics. The project’s initial concepts of anxiety, separation, and family influenced these choices. The eventual dichotomies (and unofficial titles to the games) were: Separation/Connection, Anxiety/Relaxation, Self-Sabotage/Self-Esteem, Depression/Joy, and Absence/Presence. I then conducted a mind-mapping session with large butcher paper, brainstorming and writing down every game mechanic that came up. For each dichotomy, I went through the generated game mechanics list and created a list

94. Logitech, *Logitech Precision Gamepad*. 47
of mechanics that might work with the chosen dichotomy. Narrowing down from there was simply personal preference or artistic license. The following sections will provide details on each game. See Appendix B for images of each game.

**Separation/Connection**

The actual mechanic that I chose to work with on *Separation* related directly to this game's dichotomy - the protagonist would be attempting to unite objects while the antagonist would be trying to separate those same objects. The three mechanics that I selected for this game were break, connect, and match. My early sketches featured triangles moving about on the screen and a circle as the protagonist, and this ended up being preserved in the final game.

The player controls a blue/green circle that can move about on the screen in eight directions (up, down, left, right and four diagonals). When the action button is pressed, the circle drops a pellet on the screen (only if it is "full"; if not, the player must wait until the circle fills with color). This pellet serves to attract the triangles that are moving about randomly on the screen (and bouncing off of the edge of the screen, which serve as the borders of this game world). When two triangles have been attracted to a pellet, the begin to rotate inwards towards forming a square. Each triangle is a right isosceles triangle so that when two of them merge together they form a perfect square. Any time during this rotating process (before the triangles merge together), the antagonist may break them apart by merely touching their point of union.

This antagonist is a red arrow, shaped like the angle bracket/brace on a keyboard. In the game, the red arrow can also run into the protagonist, immediately ending the game.
and eliminating the possibility of any not-yet-completed union to affect another game in
the network. Its behavior makes strategic play possible - it follows the movement of
either the protagonist or the closest actively merging pair of triangles, so the player may
intercept it if it starts closing in on one of these merging pairs.

I mention multiple merging pairs because the union of two triangles takes place
over a predetermined amount of time. As soon as the triangles connect, they form the
outline of a square (which is then invulnerable to the red arrow). This outline fills in with
color from the center and, when full, begins to fade. When faded completely, the square
disappears and two new triangles are created.

Absence/Presence

Absence/Presence began as a digging game, loosely inspired by the arcade and
console classic Dig-Dug\(^95\). The mechanics that came out of the brainstorming session
were narrowed to dig, fill, and hide. What I initially imagined was a side-scrolling game\(^96\)
that featured a small-scaled figure moving left and right and digging holes in the surface
to bury these somewhat abstract boxes. The player would not know what purpose the
boxes served, only that the goal was to bury as many of them as possible.

\(^{95}\) Atari Corporation, *Dig Dug*.

\(^{96}\) In a side-scrolling game (or “side-scroller”), the player-character can move in any
number of directions but the gameplay takes place on a flat plane. The game world and
visual background scroll with the player’s movement to the right and left. Typically,
progress in the game is represented by movement towards the right, with some games
only allowing movement in that direction (i.e. Once the player character moves beyond a
certain location, he is unable to return to it. The classic, canonical example of a side-
scroller is Super Mario Bros.: Nintendo, *Super Mario Bros.*
The other aspect to this initial design was that ghosts would frequently appear at the surface and impede the progress of the protagonist. Each ghost would try to steal the boxes as well as hurt the protagonist if they came into contact with each other. The act of burying the boxes would somehow benefit the protagonist and hurt the ghosts.

The design that eventually emerged had some of these aspects but takes place on a flattened sphere, with layers of color emanating from the center. The protagonist, a small stick figure, moves around the circumference of the circle, which represents the surface, always being pulled back by gravity. This protagonist can jump, move left or right, and dig holes in the surface. Blocks appear seemingly randomly in the sky and fall to the surface. Coming in contact with one of the blocks "attaches" it to you (i.e. you pick it up), and moving it close enough to a hole buries it. Once buried, the hole slowly fills in and, when completely full, a flower grows. This flower incorporates the visual element of the red arrow in its petals, but one doesn't know whether the flower is dangerous or benign.

The main antagonists are the ghosts that appear (like the blocks, this appears to be random) on the screen and move quickly towards the protagonist. If they touch the protagonist, the game is over and resets. If they run into a hole, they fall into it and remain there, but the game will still end if the protagonist touches them, so the player must remain careful to avoid them by jumping. The protagonist may also jump over the ghosts, but must eventually contain the ghost in a hole unless she wishes to keep jumping to avoid it. Finally, the blocks bear an aesthetic resemblance to the blocks in Anxiety, having the same sketchy, dream-like look with outlines that shake and tremble.
Self-Sabotage/Self-Esteem

*Self-Sabotage* represents a shift in perspective from *Separation/Connection*. Although it features the same basic visuals (with a different color palette), the protagonist in *Self-Sabotage* is the now-blue arrow, which has the same available actions as the red arrow in *Separation* - it can break the forming unions of triangles and end the game by hitting the circle.

The central mechanic that came out of my brainstorming - knowing that I wanted this game to take place in a similar game world as *Separation* - was racing. This motivated a change in the speed of the blue wedge to be much slower than its counterpart red arrow in *Separation*. This makes the game a potentially frustrating experience until the player develops a strategy that takes advantage of the triangles and circle bouncing off of the walls at a predictable angle.

The protagonist circle from *Separation* becomes the antagonist here, quickly moving around the screen with an initially random direction and repeatedly dropping pellets (one whenever it is "full"). The movement of these objects has no connection to *Separation* - the similarity is only visual, although the movement of the blue arrow causes an event in *Separation* that I will discuss later in this chapter. The formation of full blocks also has an effect on another game.

Finally, the color scheme was developed not as a strict negative of the colors in *Separation*, but as a darker, harsher version of *Separation*. The colors of the various objects in the game were chosen either to stand out against the dark background or to fade into it, thus the frequent use of almost-neon or muddy colors.
Anxiety/Relaxation

Anxiety was initially drawn based on the classic falling dream, with a figure falling down on the screen, walled in on either side with dangerous spikes at the bottom of the pit. The player would be able to cultivate a garden at the bottom or sides of the pit in order to grow large leaves for the figure to fall onto and be safe. These leaves might be vulnerable to forces from the other games.

What developed was somewhat similar to this idea, with the falling figure but without the growing dynamic. The mechanics that I brainstormed were narrowed down to fall, plant, grow, and blow (as the wind, another aspect of my initial design). Falling became the central dynamic, and the wind became manifest as an unseen force controlled by the player of the game. Falling is automatic in the game, as gravity is a constant. The player exerts force on the falling figure by pressing left and right on the control pad. Up and down also exert force in addition to gravity (if pressing down) and in opposition to gravity (if pressing up).

Like the other games, there are no specific instructions given for this game, but the loose goal is to maintain the life of the falling figure by creating a safe place for it to land. If there is no help from other games, the figure will be doomed to death for the first few falls. Each time the figure perishes it leaves behind a small block that fades out after its randomly assigned time expires. These blocks can be stacked to create a place to land the figure. The other effects of this game depend on what it receives and gives to the others. I will go into these details at the end of this chapter.

Finally, the visuals were given the shaky drawing effect to create a dream-like game space. While none of the games have realistic visuals, the fact that this one features a
falling figure brings it closer to reality. Also, because this game uses a software engine that simulates physics, the falling and movement of the figure and blocks has an added level of realism. I created the rest of the visuals to pull the game space back from reality. The red spikes are meant to reference the red arrow from *Separation/Connection*, here again playing the role of antagonist along with gravity.

**Depression/Joy**

*Depression* began with the central mechanic of giving. The initial design was close to what was finally created, but this is less a game and more an interactive visual piece (although that could be said about all of the other games, and I've also addressed this in the earlier discussion of the open work).

The aesthetic of the game is brown and desert-like, with a background, flat ground, and a darker brown square in the upper-center portion of the screen. There is one action available to the player: pressing the action button drops one smaller square off of the corner of the larger main square. Pressing the button again drops another square. If the player exhausts the capacity of the large square before the game's timer resets, the square continues to shed smaller squares but also begins to build itself back up above the position of the original square.

Sometimes there may be trees present on the screen and, the action of dropping smaller squares down on the screen (and into the ground) grows these trees (similarly constructed, but taller than the flowers in *Absence*) outward from the center, making their canopies larger.
Five Movements of a Symphony

The word “symphony” was used behind the scenes to describe these games not to bring up considerations of music or sound within the games but as a loose metaphor through which to understand the relationship of each game to the others. Within a symphony there are various motifs that can make an acoustic reference to the other movements in the full symphony and can serve to unify the movements into a whole. The ideas of motifs and movements that made the symphony a useful metaphor as Gaming the Network Poetic was developed. The motifs can also be thought of as a lexicon or visual grammar. With that in mind, the five main visual motifs that repeated were: the red arrow, the triangle, the square, the circle, and the figure. The relationships, movements, and appearances of these motifs in Gaming the Network Poetic are explained below.

The Red Arrow

The red arrow appears most actively in Separation as the antagonist, moving after the circle protagonist and breaking up the forming unions of triangles. It also appears as a sort of antagonist (the spikes) in Anxiety. Finally, it appears in both Absence and Depression as the petals on the abstract flowers and leaves on the abstract trees, respectively. This appearance as both antagonist and in an ambiguous role was intended to open up its role in the piece as a whole.

The Triangle

The triangle shape appears, in one form or another, in all of the individual games. Sometimes it appears as a red or blue arrow, and other times as the benign triangles that
are trying to connect and form a union in both Separation and Self-Sabotage. The only time the player takes control is when he is playing Self-Sabotage, where the blue triangle’s movement is also translated to Separation as a “ghost” blue triangle that appears when someone is playing Self-Sabotage and disappears otherwise. Existing also in Separation, it follows the movements of the player in Self-Sabotage to a certain degree of accuracy.

The Square

The square also appears in every game. In Separation, it is the benign eventual form of the union of two triangles. When this union is complete and filled with color, it fades out and is transmitted to Anxiety, where it retains its size and falls to the bottom of the screen to serve as an additional cushion for the falling figure. In Self-Sabotage, the squares that form from a union of two triangles are sent to Absence, where they become smaller squares that fall to the surface of the world to be picked up and buried into the ground by the protagonist figure. Any block created in Anxiety has a timer that causes it to eventually fade away, sometimes endangering the resting figure. In Absence, when the square is buried, it eventually grows into a flower. This flower then becomes a tree in Depression. Finally, in Depression, the player has one choice of action which is to shed smaller squares to the ground from its larger self. When trees are present, these squares serve as a kind of fertilizer and grow the canopy of the trees.
The Figure

The figure appears in only two games. In Anxiety, he falls either to safety or death. The player should bring him to safety, but if no larger blocks are being transmitted from Separation at the time, he will need to sacrifice a few figures to create a bed for the falling figure to land and stay in. Either that, or the player will need to hold the controller and apply a force indefinitely to keep the figure alive. Either way, it is a question of continual maintenance. In Absence, the figure moves around the globe, picks up boxes, and plants them into the ground to grow flowers. A ghost figure is created in Absence any time the figure in Anxiety perishes, and these ghosts characters follow the protagonist in Absence relentlessly (although they can be trapped by falling into a hole in the ground).

The Circle

The circle exists as both protagonist and antagonist in Separation and Self-Sabotage, respectively. It can also drop pellets that attract the floating triangles and eventually bring them together in a union. Its role in Absence is slightly more ambiguous. In addition to the compelling visual of the layered planet, the circle in the middle of the planet changes color based on the distance of the falling figure in Anxiety from perishing.

On Mechanic as Metaphor

Finally I want to reiterate that, although my initial motivation for creating these games was to explore a specific narrative (that of family history and/or history of conflict within a family), Gaming the Network Poetic is eventually about creating the social space within which to connect and respond to the work and to others actively playing the piece.
Emily Short, in her analysis of a presentation by game designer Jonathan Blow, points out that “the mechanic-as-metaphor approach usually works better as a meditation on some theme than as a means to story-telling exactly.” What Short is likely talking about are elements that serve as actors or devices in the gameplay but also have a meaning when compared with the rest of the individual games.

97. Short, *Challenge, Conflicts, Storytelling*. 57
Chapter Four:

*Gaming the Network Poetic — Hardware*

**Physical Construction**

The physical construction of *Gaming the Network Poetic* consists, most prominently, of a pentagonal box whose circumscribed circle is roughly 44 inches in diameter, with sides roughly 26 inches long and 12 inches high. In essence, it is a large hanging box with properly spaced holes to mount any monitor adhering to the VESA mount standard, which places holes in a square of 100mm apart at each corner of the square. The box was built with lengths of 2x2 pine-wood with a plywood base. To create opaque walls for the box and to create a clean look for the gallery, each face of the pentagon was covered with a quarter-inch thick, twelve-inch high piece of masonite. Each face was then covered with a quarter-inch thick, twelve and a half inch high piece of opaque white lucite plastic. There are black screws at each corner of the lucite for basic attachment to the masonite, but since the monitors also serve to hold the sides together, these screws are mostly decorative and create visual contrast with the clean, white surface. Pictures of the box at various stages of construction can be found in Appendix C.

The box was made to hold the five Macbook computers that I obtained on loan for this project, a network switch for networking the computers, two surge protectors to power everything, and the cables involved in connecting the monitors and controllers to
each computer. The computers are Macbook laptops, the first unibody aluminum models with 2.0 GHz Intel Core Duo Processors and 2GB of RAM. The displays used are Samsung 21.5 inch displays with 1920x1080 (1080p) resolution. Finally, the gamepads chosen were Logitech Precision 10-button PC gamepads. Because Processing does not support gamepads in its default configuration, I found a software solution that allowed the gamepads to control the games. USB Overdrive ended up being a good choice, as it supported the mapping of buttons on the joystick to keys on the keyboard, which Processing can easily read.

Arrangement

The initial designs for Gaming the Network Poetic featured two possible configurations. In one, the monitors were hung individually from the ceiling with the Macbook laptops somehow mounted to the back of them and each gamepad somehow mounted to the front of the monitor/laptop assembly. In the second design, the monitors were still hung from the ceiling but each laptop was placed on the floor below the corresponding monitor in small wooden boxes. Both of these designs featured the monitors facing inwards in a circular arrangement, with one specific point of entry into the circle where two monitors were further apart than the others. I also purchased a Mimo monitor — for early experimentation with the idea of attaching a smaller screen to the back of each main monitor to show a partial section or all of the game being played from

98. Macbook Specifications
99. Samsung, Monitor
100. Logitech Precision Gamepad
101. Montalcini, USB Overdrive
102. Mimo Monitors
the outside of the circle. This was meant to be an exploration of spectatorship outside of the network of videogames — a player on the inside might take on more social risk than spectators on the outside. I gave up on the small monitors because they could not accomplish what I wanted of them, but the final configuration still supported a discussion of spectatorship and participation. Images of early mockups can be seen in Appendix E.

My eventual decision to construct a box out of wood and mount all of the monitors on it, facing out, had to do with communicating an openness that I thought was necessary through my original design. The desire for creating an open space within which to play was partially due to my previous experiences of installing videogames in a gallery space. In installations of two of my previous art games, the two games were placed directly next to each other (as monitors on pedestals with a keyboard mounted on the front of each pedestal). Players tended to focus on their own games (and not necessarily engaging in dialog with the other player). I had hoped for the juxtaposition of the games to create a situation for dialog. The pentagonal shape of Gaming the Network Poetic allows for circular movement around the piece while still allowing for the games to occupy their own space. The pentagonal shape allows each player to be just on the periphery of the two players next to her, creating the simultaneously communal and solitary experience that I was aiming for. Finally, the decision to hang the piece from the ceiling, which was accomplished by using airplane wire and drywall toggle bolts, was also motivated by the creation of an openness to the work. Screens are usually placed on pedestals or mounted to walls, but I was interested in placing an object directly in the middle of the space to create a social space literally around it without making it look like the usual collection of screens in a gallery space.
Chapter Five:

Synthesis

In Chapter Two, I introduced a chronology of theories of networks, openness, aesthetics, and games. Now that the reader has been given a more specific explanation of Gaming the Network Poetic, I will return once again to these theories with the goals of contextualizing my work and weaving together a theory on games and art that will allow for focused critique of contemporary videogames and game-based art. Even if we are on the verge of a ludic turn and art is in the process of taking a backseat to games and play as primary forms of cultural expression, the discipline of art history will continue. So why not just assume that a ludic turn has already taken place and integrate videogames into the art historical discussion. What, then, would one have to consider when studying a work in the medium of videogame?

Starting in general terms, one would need to observe the text and context of a piece. In the case of videogames and Gaming the Network Poetic in particular, the text can be thought of as the private symbolic space of the game. The context, then, describes anything outside of the metaphorical game space — the location (including specific characteristics of the local environment), the hardware and software platforms, and the interface. This chapter will elaborate on each of these concepts and wrap up with a detailed consideration of the sum of the experience of Gaming the Network Poetic.
Minimalism and Emotion (The Symbolic Space as Text)

For a piece about human emotions and behavior, Gaming the Network Poetic is somewhat devoid of emotion on initial glance. It certainly does not engage the viewer on a visceral level. While my intent was not to mimic the emotional responses of anxiety, separation, etc., the visuals are so abstract that players may not feel the stakes of their interactions. My goal was to leave it up to the player to discover the ways that the games interrelate. One other possible reason for the feeling of low stakes when interacting with the piece is the lack of apparent progress in most of the games. With the exception of Absence, each game either resets or remains in a sort of equilibrium, never truly advancing to a new level. For example, in Separation, as soon as a square is formed, two new triangles appear on the screen to replace the two triangles it took to form the square. This potentially limits the appeal of each individual game, but it also serves to prompt the player to move on to the next game so that she may find more clues about how the play of their fellow players is affecting her. In this sense, the depth and levels are represented by the player’s movement around the physical piece, transitioning to each new game, rather than an explicit progression in the software.

While the visual elements of Gaming the Network Poetic are often purely formal in order to focus the player’s attention on the game mechanics and interactions between the pieces, the minimalist aesthetic choices made it difficult to communicate specific emotional concepts and ideas to my audience. There are many possible reasons for this. Audiences may not be ready to — or have the procedural vocabulary to — make sense of the pure mechanics of a visually abstract game as communicative beyond the sense of progress that one might feel as actions are completed and goals are met. Another
possibility is that communication does not begin or end with the game mechanic, but that it is only one aspect of many that may influence the player’s perception of meaning in the videogame (i.e. The context of the mechanic is just as important as the mechanic itself). Yet another option is that the expectations of a pure aesthetic or transcendent experience of a formal or modernist work of art are so embedded in our experience of this style of imagery that it is difficult to separate these expectations from a particular new application of a minimalist style (in this case, to a network of videogames).

It is likely that a combination of these options is at work, especially without a more focused framing of the meaning of each game through an individual title or similar device. The artist statement (See Appendix F) next to the title of the piece on the wall was the only framing that visitors to Plus Gallery received. This statement hints at the concept of solving a puzzle as the sixth game, as well as the concept that this puzzle represents human communication — there is something for the viewers and players to figure out among themselves. In this sense, the visuals serve to open up the possibilities of interpretation to include what the viewers and players as a group might create through their social interaction. While this limits some of my control as the artist of the piece, it also expands the possibilities for dialog around it.

**Context - Social**

When Nicolas Bourriaud defines a relational art, he explicitly removes the “private symbolic space” from consideration. His definition is focused entirely on the configuration, aesthetics, and social aspects of human interaction. My exploration of
relationships in *Gaming the Network Poetic* explicitly includes a private symbolic space and is thus an extension to Bourriaud’s definition. When referencing “relational art” and “relational aesthetics” I will assume this extended definition.

The private symbolic space of *Gaming the Network Poetic* is enumerated and explained in detail in the previous chapter, so my focus here is to argue that this symbolic space is merely visual unless the spectator becomes an active participant, and that more active participants equates to expanded possibilities for potential narratives. I use narrative loosely, as none of the individual games in *Gaming the Network Poetic* has an explicit narrative, but the various visual and interactive metaphors can combine with and within the social space of the participants to create or activate potential narratives. In addition, part of the social interaction in the space actually takes place through the computer network. This communication is framed by the game space and limited by the specific interactions available between the games, but it immediately takes on an aspect of human communication as soon as player one realizes that player two’s actions in his game space affect events in player one’s game.

The addition of interactivity, in this case a mediated human interaction through the game network, causes the private symbolic space to become public. This doesn’t invalidate Bourriaud’s theory of a relational art, but begs for a modification of the definition to include the ability of an audience to activate a private symbolic space and allow the narrative metaphors of this space to merge with the immediate social space to create a physically and virtually-mediated social space for human interaction. In a videogame, the symbolic space of the game is backed up by a software system that allows certain interactions to take place within the game space. Instead of a private symbolic
space, there is a private procedural space that the players and spectators do not have access to in *Gaming the Network Poetic*.

From this perspective, the work is closed, but from most other perspectives, especially regarding the openness of the specific participation of the audience, *Gaming the Network Poetic* is very open. The combination of the artist statement, visuals, and white paint on the “action” buttons on each controller serve as a sort of minimal score to the piece, with the rest of the interaction dictated by the private procedural space, audience, and physical configuration of the piece and surrounding space. The lack of progress in each individual game also contributes to the openness of the work, as does the concept that different audiences will leave the piece in different states, which amounts to an audience-based footprint that can be interacted with by subsequent audiences. This footprint is allowed only through the openness of the piece — traditional games might reset (and indeed some, but not all, of the individual games of *Gaming the Network Poetic* do this) to a default state, but instead there is a sense of encountering something already played and in a constant state of flux, much like a human community or network.

**Context - Location**

Because I was interested in creating a cohesive art object, the social space that I am interested in is the art gallery. *Gaming the Network Poetic* functions as an intervention into this often-static space. Because this intervention takes place in a contemporary art space, the implied scoring of the space includes expected behavior and interaction in an art gallery space.
Plus Gallery, the installation/exhibition space for *Gaming the Network Poetic*, is a respected gallery, based in Denver, Colorado, that highlights contemporary art and also represents artists working in the diverse media of contemporary art. It advertises itself as “Denver’s Leading Progressive Contemporary Art Gallery.” There was a mutual benefit to showing a work in this space. Plus Gallery director and owner, Ivar Zeile had been interested in showing an electronic media work for an extended period of time and I was interested in showing videogames in a contemporary art space. He found my proposal a good fit for the space.

Although progressive in many ways, Plus Gallery (and especially the second floor viewing room where my work was installed) is a traditional white box gallery that stays in business based on sales of unique, original works of art. The walls are white, and most of the work is hung on these walls rather than taking up floor space. This influenced my creation of the game visuals as well as the decision to create a clean, smooth, white physical object. My hope was to create games that were easy to interact with but also functioned as moving paintings or animations when nobody was interacting with them, so that spectators or those not comfortable with picking up a videogame controller would be able to experience the piece from a different perspective.

The process of scoring the piece so that there was enough of a template for viewers and players alike was difficult. On one hand, I did not want to give away the entire project by explaining the connections between each game. On the other hand, I wanted to give enough information so that gamers and non-gamers alike would be able to pick up the controllers and figure out what to do. The only information provided was the title of

the show and my name along with an artist statement that described the piece as a whole (I did not list instructions or explanations for the individual games). The controllers were mounted to the side of the monitors with velcro and were painted with white nail polish on the buttons that were used by each game. By specifically engaging a contemporary art space and audience, there is conceptual and aesthetic expectation to contend with. These influenced my decisions to add white plastic to the piece to create a piece as clean and seamless as possible.

The gallery space also brings to mind the artist as commodity — a persona that increases the sale potential of any given work of art. This is not a characteristic usually applied to videogames, as the majority of videogames (even those with charismatic design leaders) are not associated with one person. By contrast, the artist or designer persona is far more prominent in independent games, as the teams are smaller and frequently made up of just one person. By simultaneously being the work of a single artist and the only major work in Plus Gallery that is not for sale or labeled with a price tag, *Gaming the Network Poetic* stands out as open in another way. It does not represent an object out of reach to the casual visitor, nor does it represent something to acquire and hang in a living space or store as a collector’s item. It is far closer to the experience of an arcade without the usual competitive element and male-dominated atmosphere.

**Openness - In Software, Hardware, and Space**

Another area that the work is open is in the choice of software tools used to build it. As I mentioned earlier, Processing is an open-source programming environment for artists. As an example of its openess, I was able to take advantage of the existing
knowledge-base of the Processing community. This community posts code examples, tutorials, and answers questions when newer users ask them. The nature of open-source projects is that they are distributed, much like the Internet itself, and that they provide a template for participation by people around the world. In these ways they are very similar to the networked art work and, in that sense, this openness becomes part of any project built in Processing. The code one writes, whether released to the public or not, literally embodies the kind of distributed openness of the Internet and networked art — every program contains within it the history of Processing.

Artists who work with open-source tools often release the source-code for their works to the community. Jason Rohrer, whose game *Between* is a networked, two-player game that features a poetic collaboration between the two players, is one of the few game developers who also espouse the ethics of open-source software. He publishes the source-code to all of his games on his website “so that others can learn from my work and make use of my source code in their own projects. I also release all of my software in compiled binary form (in other words, "ready-to-run") as free web downloads (free as in "without cost"). I am strongly committed to giving my software away for free to everyone.”

Rohrer uses the C++ programming language, which has a very high learning curve, as his primary programming tool.

Programs like Processing, which target artists and non-traditional programmers, have a far lower learning curve and focus on allowing people to create digital output with their programs quickly. With a few exceptions, Processing has not been used to produce full games. This might be in part due to its identity as a “sketching” program. Processing

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104. Rohrer, Personal Website

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refers to its programs as sketches and positions itself as a tool that allows users to quickly create and experiment with ideas. Another possibility is that Processing is based on Java, which is often seen as inferior to Adobe’s Flash platform (which is expensive and proprietary) in terms of speed and reliability, which is almost always the choice for game developers looking to create games to be played in a web browser.

This hasn’t stopped some from creating interesting games in Processing. Wayfarer is described by Ben Hemmendinger, its creator, as “a developing roguelike game with retro, quasi-3D graphics.” Roguelikes are role-playing games that usually involve dungeon exploration, instant death, and randomization to increase variety in the game space. This game shows that games written in Processing can be visually and technically complex, and was rewarded for its efforts by being featured in the Processing online exhibition, a regularly-updated online collection of notable Processing works chosen by the Processing creative community. Another group of artists, The Croopier create games in Processing and Java based on political concepts and ideas. These games are closer in scope to the individual games in Gaming the Network Poetic, and they do form a sort of collection, referred to as “The Independent Game Situation Archive”.

My main focus with Gaming the Network Poetic, while also making my source code available at the end of the project, is on an openness of the physical installation of the games and an open space around this installation. Although it was installed in an art gallery, the piece could also be located in other, less traditional art contexts and still function as a piece around which a group can gather and interact, both through the

105. Hemmendinger, Wayfarer.
107. The Croopier, Independent Game Situation Archive
software and with each other. While the idea of openness discussed by Eco is focused on participation or performance of a piece, I’ve extended it here to cover the way a piece occupies a physical space. By keeping it off of the floor and minimally intrusive, *Gaming the Network Poetic* becomes less threatening — less a piece of furniture and more a temporary object in the space.

**The Sum of the Experience**

While there are precedents for art games that explore the nature of human relationships, *Gaming the Network Poetic* is the first that takes this task on by creating a networked experiment with semi-disparate games representing various human emotions or actors in a community. It succeeded in creating an instant community around the piece and was greatly helped by being positioned in the middle of a room. Throughout the opening and during other times I’ve been in the space with players, it is the centerpiece of conversation. An especially exciting event happens when children and young adults play with older generations. The younger people tend to serve as interpreters to the elders, figuring out the connections between the games and sharing them with others.

This can be seen as peripheral evidence of the development of systems thinking already in children who have grown up with computers from an early age, but also to the natural curiosity and playful nature of children who have a thirst to learn and figure things out. Perhaps they are already living in the ludic age, and the rest of us are just catching up. This is merely a suggestion, and the ludic age or ludic turn as a concept and idea is far from proven or culturally validated. Even if it is not useful as fact, we can still use it to understand the prevalence of videogames as an entertainment medium, and
especially why artists have found such an interest in videogames that they wish to push
and pull and experiment with them to see what messages come out the other end.

If we are indeed entering a ludic age, then videogames will continue to exist as
entertainment objects, but will prompt more study, more attempts to define a
communicative vocabulary around them, and more artistic interventions and movements.
This has been happening for some time, but recent official recognition of such
experiences like the 2009 Independent Game Festival’s highest award being given to
Blueberry Garden\textsuperscript{108}, a legitimate “art game” that violates several canonized rules of good
videogame design\textsuperscript{109}. Jason Rohrer’s Between, mentioned earlier, is hosted exclusively by
esquire.com\textsuperscript{110} (See Appendix A for an image). These may be floundering experiments in
a field attempting to find definition, but they suggest further experimentation and
excitement to come.

Finally, a challenge that the piece faced, and continues to face, is the gap between
those willing to take the time to discover and truly play within game spaces. This was not
problem for the younger people who visited Gaming the Network Poetic, but adults
seemed to struggle to embrace the action of letting go — of time constraints, assumptions
about experiences of art, assumptions of others in the space, or assumptions about
interacting with games or computers — required to fully experience this piece. The time
required to have an engaging experience with Gaming the Network Poetic is fairly short,
but letting go of the previously mentioned assumptions takes a combination of time and

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\textsuperscript{108} Svedäng, Blueberry Garden.
\textsuperscript{109} Blueberry Garden is very short, does not specifically communicate the goal or
the actions available to the player, and features little to no explicit feedback about how
the player is progressing through the game
\textsuperscript{110} Rohrer, Between: A New Video Game.
\end{flushleft}
effort that is unique to each individual. Perhaps there is a stigma associated with play in a serious space like an art gallery that impedes the progress of letting go. Or perhaps this stigma is generalized to adulthood, and those willing to engage it are better prepared for the ludic age that we may or may not be entering.
Chapter Six:

Observations, Conclusions, and Future Directions

Observations

From my time in the gallery during the opening and subsequent visits, the most obvious observation is that *Gaming the Network Poetic* is meant for a group of people to play simultaneously. An acquaintance of mine went to see the show by himself and told me the story of being at Plus Gallery trying to figure out what was happening with three controllers in his hands, all while moving around the pentagon to see the different screens at once. The story was different during the opening, with people moving from one game to the next while at the same time talking with each other about what was happening in their respective games.

Another interesting observation from the opening is that people really did break down into groups of observers who were not interested in picking up any controls (for various reasons) and those who wanted to play the games. One player told me that he thought the games were frustrating, but that as soon as he put down the controllers and walked around the piece to view the players, he had a completely new experience. Instead of playing the games, he socialized with players and non-players alike about how the piece was working in that space, which was much more enjoyable for him. Although frustration is a valid response to an art work, I found it interesting that the social
configuration allowed players and spectators to reconfigure their own relationship to the piece and people, creating a more desirable result for themselves.

A couple of humbling observations had to do with a bug in *Absence* that caused the figure to eventually be able to escape the force of gravity of the planet surface and disappear into space. This didn’t cause the game to end, it simply kept running until it either crashed the computer or was shut down at the end of the day. Other critiques generated questions of the physical juxtaposition of *Separation* and *Self-Sabotage*. Should they have been right next to each other? Also, there may have been additional ways to communicate the shift in perspective rather than merely using a different color scheme and changing the shape that the player controls. In general, each game only held people’s attention for a short amount of time, possibly because each lacks a singular sense of progress. This was an intentional decision motivated by the desire to keep the system running constantly, but there are other possible solutions to this. One example would be the addition of visual indications of progress while keeping the indicators as a coherent part of each game space, rather than slapping on a graph or text to communicate the data. Accomplishing this might require using something like color or opacity of certain objects changing over time to indicate progress.

Finally, while the construction of the hanging box was sound, the manner in which it was hung coupled with the use of velcro on the side of the monitors as a mounting solution for the controllers caused the whole piece to swing whenever it was lightly pushed. When putting controllers back onto the monitors, it is hard not to push slightly on the monitor, which starts the whole assembly swinging. One possible solution would have been to attach the wires to the ceiling at wider points rather than just above the box.
Conclusion & Future Directions

This thesis is based on the exhibition at Plus Gallery, the first of what I hope to be a long line of experiments of this kind. What is exciting is that I now have an open platform on which to run future experiments. That Plus Gallery, one of the most respected contemporary art galleries in Denver, had an interest in showing and promoting an experimental videogame work was exciting enough, but it is also notable that it received a dedicated space for exhibition when videogames usually exist primarily in the screen. I believe that this point came through clearly, and that people responded to the games being installed as one piece.

My goals for the next iteration of this particular project are to impart a greater sense of responsibility to each player by creating feedback mechanisms that are subtle but integrated into the current symbolic language of the games. These feedback mechanisms will communicate the status of other players on the network of games in various ways. The quickest way to accomplish this will be to add complexity to the games. The current iteration only has a handful of data transfers happening at any given time, but a more complex version would have five times as many. This will require small iterations and subsequent testing.

Another interest is in using this hardware/software platform for a different project entirely, or expanding to include more screens, larger screens, smaller screens different computers, fewer screens, and so on. It could also scale in the opposite direction by deploying a network of games on mobile devices and collecting, interpreting, and sending data on a centralized server. In the end, my motivations for continuing to work on this platform mirror my motivation for starting the project in the first place: to built a poetic
network of videogames, experiment with its ability to communicate ideas about human relationships, and to engage players in the formation and observation of those relationships through both the game space and in the physical, social space around the games.
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Appendix A: Images of Selected, Referenced Artworks

Ian Bogost, *Thunderstorm* (from his Game Poems), 2009

SMOKE PAINTING

Light canvas or any finished painting with a cigarette at any time for any length of time. See the smoke movement. The painting ends when the whole canvas or painting is gone.

1961 summer

Yoko Ono, *Smoke Painting*, 1961

Image Capture from The Croopier's Website, 2009
Erik Svedäng, *Blueberry Garden*, 2009

Jason Rohrer, *Between*, 2008
Appendix B: *Gaming the Network Poetic* — Game Screen Shots

*Separation/Connection*

*Absence/Presence*
Anxiety/Relaxation

Self-Sabotage/Self-Esteem
Depression/Joy
Appendix C: *Gaming the Network Poetic* — Construction Process

Initial Structure
Installing the bottom of the box
Gluing on the layer of masonite
Appendix D: *Gaming the Network Poetic* — Images from Plus Gallery

Plus Gallery 1 (Photo by Joshua Lawton)
Plus Gallery 2 (Photo by Joshua Lawton)
Plus Gallery 3, View from Above the Box (Photo by Joshua Lawton)
Appendix E: Images of Early Sketches/Models

Early Installation Model 1
Appendix F: Advertising and Promotional Materials

Promotional Card, Front (design by Natalie Nguyen)

Promotional Card, Rear (design by Natalie Nguyen)
GAMING THE NETWORK POETIC

Five networked videogames by Joshua Fishburn

UNIVERSITY OF DENVER / ELECTRONIC MEDIA ARTS DESIGN
MFA THESIS EXHIBITION / JOSHUA FISHBURN

Opening Reception / Friday, October 9, 2009 / 7:00 – 9:00 p.m.
Continues through November 14th
Plus Gallery / Second Floor viewing room
2501 Larimer Street / Denver, CO 80205

www.plusgallery.com / 303.296.0927
Wednesday - Saturday / Noon - 6 p.m. or by appointment

www.joshiselectric.com

Promotional Flyer (design by Natalie Nguyen)
FOR IMMEDIATE RELEASE

Videogames Play on Human Relationships

Denver, CO, September 16, 2009 — Starting October 9th, Plus Gallery will present Gaming the Network Poetic, a collection of five networked videogames developed around notions of anxiety, separation, and family. This newest project by internationally exhibited new media artist Joshua Fishburn takes videogames as a captivating human experience and extends them into a series of intimate portraits of intra-family relationships.

“I am always thinking about ways that videogames can both hide and expose their data, so using them to consider human relationships was a no-brainer,” says Fishburn, adding that the presentation of these games in a circular arrangement was a direct result of the theme of the project. Feeling competitive? Play the spoiler and make it tough for the other players. Want to cooperate? Conspire with your neighbor to boost both of your chances. Want to just watch? “Even the spectator can partake without picking up a controller as these games are designed to be moving and creating compelling images even when nobody is playing.”

The games themselves range from a kinetic puzzle game inspired by retro vector graphics to a sketch-like action game. They mix the nostalgic memory of the artist with the theme of each portrait. The games are designed to be easy to pick up and play and are presented in a unique, open configuration that invites the viewers to walk around the entire collection.

Gaming the Network Poetic will be installed on the 2nd Floor of Plus Gallery and remain on view through November 14th. The gallery will host an opening reception for Joshua Fishburn on Friday, October 9th from 7-9pm. Images of the project and models of the installation are available upon request.

Joshua Fishburn is a new media artist and candidate for a Master of Fine Arts Degree in Electronic Media Arts Design (eMAD) at the University of Denver. He has shown work at galleries in Denver, Colorado, São Paulo and Rio de Janeiro, Brazil. He is also a videogame designer and educator.

Plus Gallery is located at 2501 Larimer Street, directly east of the Benjamin Moore Paint Factory Lofts and five blocks north of Lodo. It is open Wednesday through Saturday from noon to 6pm, or by appointment. Plus Gallery is open for citywide First Fridays from 6-8pm. Admission is free. Limited curbside parking is available directly south and East of the building. Metered parking spaces are usually available to the west of the building. The vacant lot to the south of the building may be used for parking in the evening until the lot begins to be redeveloped.

###
Gaming the Network Poetic

Artist Statement

I have been making experimental games for the past four years and have been occupied with problems of anxiety, separation, and family in these and my other work for at least as long. *Gaming the Network Poetic* creates a reflective space for the player/viewer to contemplate anxiety, separation, and family by addressing them in a poetic manner. A sixth game, arising from the intercommunication of the other five, is a puzzle: meant to represent *human* communication, it involves figuring out how the play of each game affects the behavior of the others. The computer network (and the overall Internet) knows how to do one thing very well: send pieces of information perfectly from one machine to another. Humans are not so direct or perfect, so the network of these games is made imperfect to reflect the nuance of human relationships.

Most networked videogames either directly connect players for competition or cooperation, or provide an ephemeral connection to allow the upload and comparison of single-player data. My interest is in a poetic network, one that addresses the project concept notions of anxiety, separation, and family to a group of viewer-players through the experience of playing the videogames. A player of one of the games will likely play alone, towards the unique goals and rewards of the individual game. And yet the five games are networked: the player's actions in one have bearing on the gameplay of the other four, such that the player cannot escape the presence of the others. *Gaming the Network Poetic* is at once solitary, and communal. Extending the communal aspect with considerations for the presentation of the games in a gallery setting. The passive viewer can experience *Gaming the Network Poetic* without picking up a controller, but like those who are outside of a conflict will come away with a different perspective.

Artist Statement for Plus Gallery
Model with screenshots from the games