WORKS OF GAME

ON THE AESTHETICS OF GAMES AND ART

playfulTHINKING SERIES

John Sharp

Works of Game

Playful Thinking

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Works of Game

On the Aesthetics of Games and Art

John Sharp

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On Thinking Playfully

Many people (we series editors included) find video games exhilarating, but it can be just as interesting to ponder why that is so. What do video games do? What can they be used for? How do they work? How do they relate to the rest of the world? Why is play both so important and so powerful?

Playful Thinking is a series of short, readable, and argumentative books that share some playfulness and excitement with the games that they are about. Each book in the series is small enough to fit in a backpack or coat pocket, and combines depth with readability for any reader interested in playing more thoughtfully or thinking more playfully. This includes, but is by no means limited to, academics, game makers, and curious players.

So, we are casting our net wide. Each book in our series provides a blend of new insights and interesting arguments with overviews of knowledge from game studies and other areas. You will see this reflected not just in the range of titles in our series, but in the range of authors creating them. Our basic assumption is simple: video games are such a flourishing medium that any new perspective on them is likely to show us something unseen or forgotten, including those from such "unconventional" voices as artists, philosophers, or specialists in other industries or fields of study. These books will be bridge-builders, cross-pollinating both areas with new knowledge and new ways of thinking.

At its heart, this is what *Playful Thinking* is all about: new ways of thinking about games, and new ways of using games to think about the rest of the world.

Preface

The communities within which I live, work, and play all have very different ideas about games and art. In many ways, this is the reason I have written this book: to think through the ways in which they differ, and what that means for both games and art. Coming to terms with these sometimes contradictory conceptions, and sorting through them to understand the commonalities and differences, has been challenging but ultimately rewarding.

Since beginning this book, I have had the opportunity to teach at the Savannah College of Art and Design–Atlanta, the Georgia Institute of Technology, and Parsons The New School for Design. Knowingly or not, colleagues and students from all three institutions have assisted in the writing of this book. At SCAD-Atlanta, I would like to highlight the support of Matthew Maloney and Teresa Griffis. At Georgia Tech, Ian Bogost, Janet Murray, and Celia Pearce all provided insight as I worked through the ideas contained here. And at Parsons, Colleen Macklin has been an enthusiastic sounding board throughout the process.

The MIT Press and the Playful Thinking series editors have been patient and supportive as I have worked on this manuscript. Thanks therefore go to Doug Sery, Susan Buckley, Virginia

Crossman, Jesper Juul, Geoffrey Long, and William Uricchio. The anonymous reviewers who provided feedback on my proposal and manuscript helped me see ways to strengthen and focus the book. Whoever you all are, thank you.

Some of the ideas in this book were developed and honed in a number of talks: at the 2009, 2010, 2011, and 2012 Game Developers Conferences; the 2010 IndieCade International Festival of Independent Games; the 2010 and 2012 Foundations of Digital Games conferences; the 2010 and 2013 Art History of Games symposia; and the 2011 and 2013 Digital Games Research Association conferences. I also had the opportunity to give talks based on the in-progress manuscript at the NYU Game Center and the Phoenix Art Museum. Thank you to everyone who attended these talks.

This book is the unlikely product of the influence and inspiration of a Trecento art historian, a museum director, a scholar of nineteenth-century American art, and a scholar of African art. During my time studying with them, Andrew Ladis, William U. Eiland, Sarah Burns, and Patrick McNaughton opened my eyes to the ways that art, art history, and scholarship can enrich our lives. I would like to dedicate this book to the memory of Andrew Ladis for his tutelage and friendship.

John Sharp
Brooklyn, NY
Spring, 2014

1 Introduction

Games, Art, and the Gap Between

A few years ago, I found myself in front of Bill Viola and the University of Southern California Game Innovation Lab's *The Night Journey* (2008, figure 1.1) in a gallery of the Museum of the Moving Image. After waiting for a couple to finish their play session, I took a seat at a small table, picked up the PlayStation Sixaxis controller, and played the game. The basic goal of *The Night Journey* is to locate and then meditate at a series of sacred yet mundane sites scattered among the forests, plains, mountains, and deserts of the gameworld. Beyond the two joysticks used to look and move, there is only one other button available to the player. Holding down the "X" button on the controller triggers, after a lengthy delay, videos characteristic of Viola's video works. These moments of reflection are the core experience of the game. There is no shooting, no running and jumping, nor any other typical activities associated with videogames—simply walking, seeing, and reflecting.

Seeing and playing the game in a museum context was revealing for me. My previous encounters with *The Night Journey* were always within the confines of the game community where the

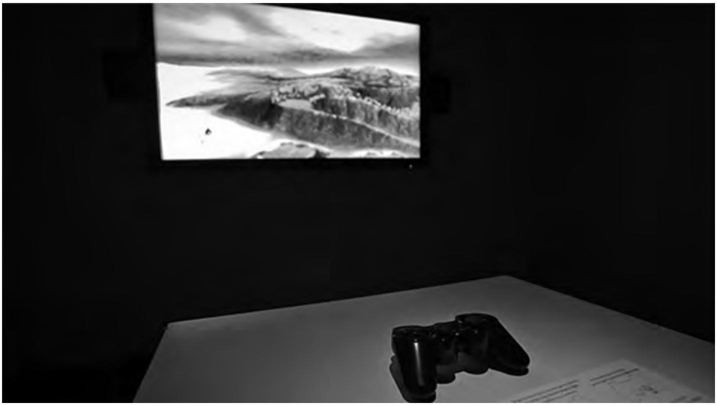


Figure 1.1
Installation view of *The Night Journey* in the Museum of the Moving Image exhibition "Virtual Reality." Courtesy of the Museum of the Moving Image. Photograph by David Love.

game stood out for its rejection of gameplay tropes. Here, at the Museum of the Moving Image, where the game was displayed as part of a media art exhibition and thus more likely to be seen by those more familiar with the concerns of artistic practice, I realized there was a whole other set of ways in which *The Night Journey* stood out. The ideas and practices central to Viola's artistic practice—the exploration of themes of spirituality and contemplation, the manipulation of the video image, slow, meditative pacing—are all present in *The Night Journey* (figure 1.2). But the work is a game, and not video art, Viola's usual medium. By moving at a decidedly contemplative pace through a series of landscape vignettes, and by asking the player to pause and reflect, the game metaphorically models a spiritual journey through the standard three-dimensional (3D) videogame interaction model of moving and looking. Viola and the USC team elegantly transposed Viola's artistic interests and techniques to the form of videogames.

After playing the game for a few minutes with a friend, I got up and continued moving through the exhibition. I began to wonder how people might make sense of *The Night Journey.* It is an *artists' game*, or a work that synthesizes the conventions of both contemporary artistic practice and games. Of course, there is a rich, if under-considered, history of games and/as art in the twentieth century—the surrealist's use of games like Exquisite Corpse, Duchamp's obsession with chess, and Fluxus event scores and boxes, to name a few.[1] These examples demonstrate a range of ways in which games and art have intersected: games as creative process; gameplay as performative beauty; game-like

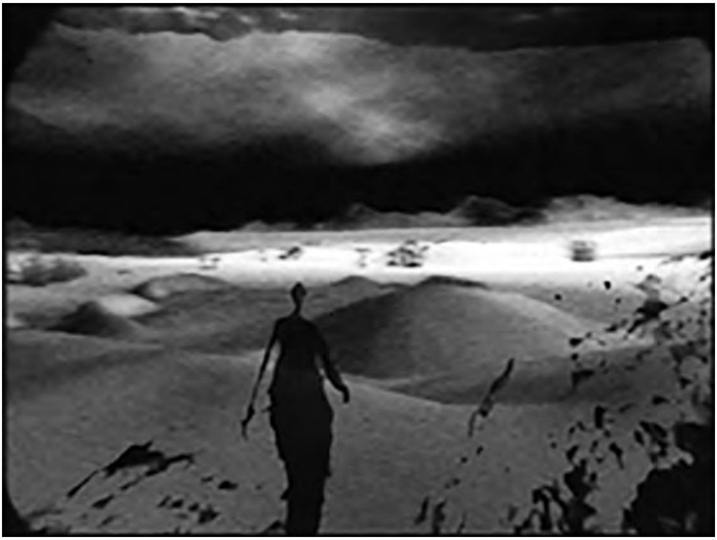


Figure 1.2
The player moving through the landscape in *The Night Journey*.

rules for purely aesthetic audience experiences; games as toolset and cultural index. However, the form games take when conceptualized, created, and experienced within the art world differs from what most game players and game developers recognize as games. And the things that artists, curators, critics, and the art-going public value about games are not the same as those valued by game developers, the game press, and game players. Yet *The Night Journey* equally embodies values important to both communities.

Standing in the Museum of the Moving Image, a question began to take shape: as an artists' game, is this work an anomaly in its combination of qualities typically found in either videogames or contemporary art, but almost never in both?

Affordances: Conceptual, Formal, and Experiential

The idea of affordances can aid us in thinking about the different ways games and art are conceptualized, created, experienced, and evaluated by their communities of practice.[2] The concept of affordances was originally introduced by James Gibson in his 1977 essay "The Theory of Affordances"[3] and later popularized by Donald Norman in his seminal human–computer interaction/user experience text *The Design of Everyday Things*.[4] Put simply, affordances are the qualities of an object that suggest its use. A classic example is the screwdriver: it has a handle, which suggests gripping, and it has a tip with either a single thin edge or a cross that suggests insertion into a corresponding shape. The "screwdriverness" of the object communicates to its viewer ideas about what it can and cannot do.

Affordances are typically used to describe what people expect of objects. I would like to apply this concept to something more ethereal—the ways people think about cultural forms like painting, film, literature, or, for our purposes, games and contemporary art. The basic idea of affordances can be extended to include subtle but important expectations a community brings to the evaluation of what one can and cannot do with a cultural form, and what they should or should not expect from the experiences that the form's artifacts provide. There are three core affordances at play here: the conceptual, the formal, and the experiential.

Conceptual affordances define the things for which a community of practice believes the cultural form can be used. Take painting, for example: in Europe starting in the late thirteenth century and continuing to various degrees into the nineteenth century, the conceptual affordance of painting was first and foremost the illusionistic representation of the visible world. This was put to a variety of purposes including instruction, entertainment, propaganda, and storytelling. The conceptual affordances of a cultural form, in other words, are formed by the assumptions about what one can and cannot do when creating an artifact of that type.

The formal affordances of a cultural form speak to the means by which the conceptual goals can be materialized. What tools are necessary to make it? What should it be made of? What are the best practices for creating the work? What are the techniques and principles that lead to the best works? Formal affordances include the tools, techniques, and methods with which creators produce works that meet the community's expectations. Formal affordances also speak to the formal elements, or the grammar and idiom, of the form. To continue the example, the formal affordances of painting included a panel or canvas, pigment, a suspension medium, and brushes, but also color, line, composition, shape, and texture. If a painting is intended to provide religious instruction, then it should take an appropriate material form—say, a large panel to hang above an altar where it can be seen clearly from a distance. Color should be used symbolically, to provide contrast, and simply to provide pleasure. The painting should essentialize the story and present it using a composition that guides the eye. The persons, objects, and locations should be represented authentically or, when stylized, in ways that make the lesson clearer.

The relationship between conceptual and formal affordances is tight, as formal affordances are heavily framed by the expectations embedded in what the community conceives as the use of the cultural form, which in turn is framed by the material properties and craft skills used to produce such artifacts.

Finally, experiential affordances are the kinds of experiences an audience anticipates having through the consumption of its community's artifacts. The experiential expectations emerge from the conceptual. For the communities that viewed painting as a means of representing things real, imagined, and aspired to, the experiential affordances of painting were concretely framed by two factors: looking and context. To experience a painting is to see an image, something represented, that in turn gives the viewer access to its various uses—instruction, pleasure, diplomacy, and so on—and to the emotional responses it can inspire—pleasure, unease, pride, meditation, and so forth. Where the work is experienced also plays into its experiential affordances. Paintings were viewed in churches, chapels, the homes of the wealthy, in public spaces, and, later, in galleries. Each of these contexts provided a different set of experiential affordances that framed how the viewer experienced the painting. Experiencing a painting in a church might have meant the viewer used the image as a vehicle for accessing a religious figure, or as an aid for prayer. Experiencing a painting in a gallery might have meant infrequent visits of short durations in order to study or simply enjoy the work.

Viewed together, conceptual, formal, and experiential affordances provide a framework for thinking about how communities of practice approach a cultural form. Communities create, maintain, and revise aesthetic criteria through which and by which they experience and understand the works they produce. This, in turn, leads to the critical reception of and response to the works by the communities—in audience reception, criticism, and, ultimately, the historic legacy of the artifacts and their creators.

To make sense of the conceptual, formal, and experiential affordances of games, we must identify how the various communities of practice approach games as a cultural form. Given its status as the most common game referent in the art world since at least Duchamp, chess is worth considering for a moment. For game players and game makers, chess has many desirable attributes: the rigorous competition of an abstract strategy game; the elegant, balanced relationship between the movements of the pieces (king, queens, rooks, knights, bishops, and pawns) and their interactions in developing offensive and defensive strategies; the deep analysis that is key to mastering the game; and the surprising number of cultural niches within which the game is played—school teams, Internet forums, chess-by-mail, parks and their public tables rife with hustlers, learners, and masters alike. For artists, chess is valued for different reasons. The game is a cultural trope that can stand in for war, political structures, patriarchies, synthetic binary constructs, and so on. Chess can also function for artists as a space within which artistic interventions can be conducted, leaving the game playable but secondary to other experiences.

The two communities therefore see very different things when they consider the game of chess. For game-minded communities, chess is a thing unto itself, whereas for art-minded communities, chess is an idea space and a material from which art can be made.

Games, Game Art, and Artgames

Looking at a set of three seemingly similar works—Nintendo's *Super Mario Bros.* (1985), Jonathan Blow's *Braid* (2008, published under the company name, Number None, Inc.), and Myfanwy Ashmore's *Super Mario Trilogy* (2006)—will further delineate the radically different intentions of artists and game makers and allow us to see the diverse conceptual, formal, and experiential expectations of these communities.

In the nearly thirty years since the release of Shigeru Miyamoto's *Super Mario Bros.* (figure 1.3), videogames have become graphically richer and been extended to a bewildering range of play experiences. Still, *Super Mario Bros.* provides a useful baseline for what a videogame is. All the core components of a game are present: a goal for the player to achieve, actions with which the player can pursue the goal, and resistance thwarting the player's progress toward the goal, all contained within a play space.[5] More often than not, these are all given an internal logic by a story that grounds the location, the player, and the player's actions. The framing story of *Super Mario Bros.* is simple: Mario hopes to free Princess Toadstool from Bowser, king of the Mushroom Kingdom. This simplistic story effectively establishes the goal of the game: move across the platform from left to right

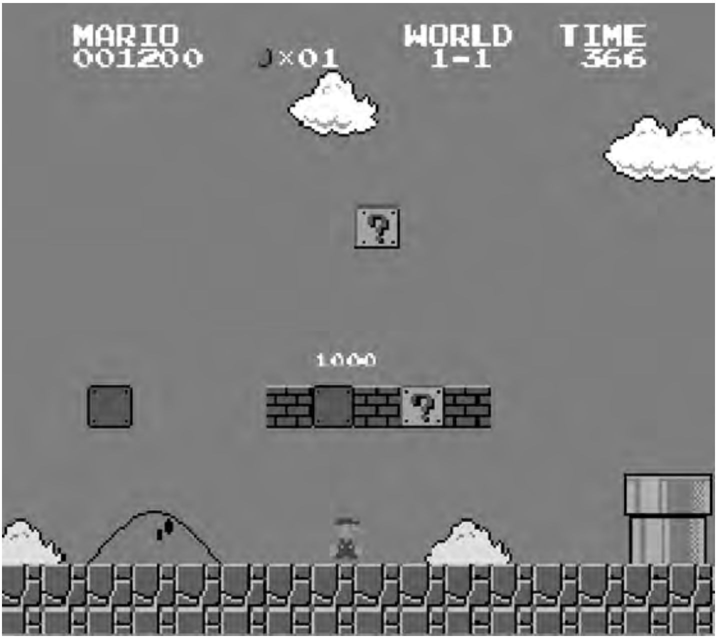


Figure 1.3
Super Mario Bros. Nintendo.

until reaching the flagpole at the far right where Mario hopes to find his princess.

The player has two means of controlling her in-game Mario: she can make Mario run from side to side, and she can make him jump. With the right skill, the player can combine these basic actions into more powerful abilities like jumping while running in order to leap over obstacles. As the game unfolds, a number of sub-goals appear, including collecting coins and jumping to hit objects that contain special capabilities that further equip the player in her pursuit of the princess. The environment itself provides resistance, as it is a veritable obstacle course populated by stairs to be climbed, pipes to be jumped over, and floating brick walls to touch or climb. There are also a number of enemies impeding Mario's progress—the mushroom-like goombas and turtle-esque koopas, both of whom will kill Mario should he be touched by them. Finally, a time limit for getting Mario across the platform adds an additional challenge.

Super Mario Bros. was designed to provide a pleasurable play experience. With its simple fantasy storyworld (and an even simpler conception of gender roles), the videogame was clearly intended as an entertainment product. The vast majority of videogames are created to meet similar expectations. But what happens if a game maker wants to create a game with artistic intentions? That is to say, what happens when a game maker uses the language and idiom of games and their play as a medium for expression?

In *Braid*, we see a game that, on the surface, operates within the tried-and-true platformer genre popularized by *Super Mario Bros*. *Braid* tells the story of Tim, a young man whose princess has been taken by a monster. Like Mario, Tim must move through an obstacle course of sorts in order to rescue her. Where things start to move away from tried-and-true game-based entertainment is the way *Braid* handles player health. Rather than players "dying" because of in-game mistakes, *Braid* allows the player to rewind time to erase Tim's errors made through the player's actions. Running, jumping, climbing, and collecting are standard issue for the platformer game genre, and *Braid* makes use of them all. But for the most part, the execution of these moves is trivial. The challenge, and the deeper experience, happens through the manipulation of time.

Braid's relationship to traditional platformers, and how it bends the idiom, is best seen in the level "Jumpman" (figure

1.4) from the game's fourth world. The level's title, and a portion of its environment and play, refer to the 1980 arcade classic *Donkey Kong*—the game in which Mario first appeared under the name Jumpman.[6] As in the original arcade videogame, enemies descend a series of angled platforms, thwarting Tim's progress in reaching his princess. In this world, the passage of time is tied to Tim's movements. When Tim moves left to right, time moves as usual. When he moves up and down, time freezes save for Tim's own movement. And when Tim moves right to left, time moves backward. This provides the player the in-game challenge of learning, and then using, the laws of the world in order to achieve Tim's goals of seeking out his princess while collecting the puzzle pieces that unlock access to the game's last world.

Beyond the game's mechanical inputs and the outputs they trigger, there is a whole other level of exploration within *Braid*. Along the way, story elements suggest that Tim has regrets and wishes things had gone differently with the princess. As the

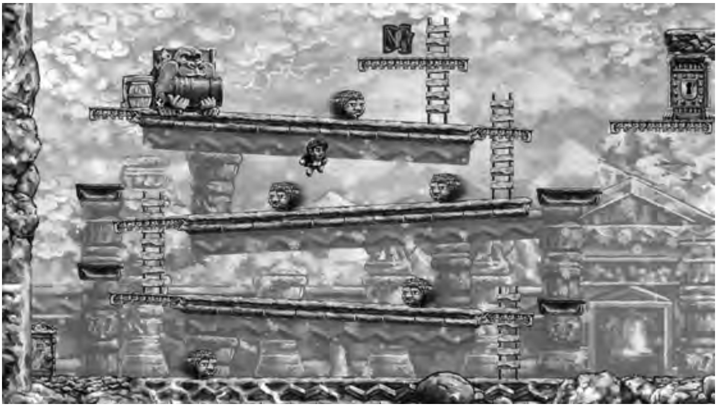


Figure 1.4
The "Jumpman" level from *Braid*. Number None, Inc.

player progresses through the game, she discovers that Tim is in fact the monster from which the princess ran. Though the player can unwind most of Tim's mistakes, the biggest mistakes cannot be fixed so easily.

There is something deeply poetic about the game. The built-in flexibility and forgiveness of *Braid* allows us to undo the errors of our in-game ways, in stark contrast with our lived experience. Yet the game also lets us consider that some mistakes cannot be corrected or forgiven. Through the story and the challenges presented by the game, the player explores both a ludic and a conceptual space within which she can consider the role of time in her life and think about her regrets.

Braid is by all definitions a game, but one that strives to do more than entertain. This videogame very much fits into the tradition of *artgames*,[7] the term coined by the independent game maker[8] Jason Rohrer around 2005. He used the name to create a connection between this new approach to game making and art rock and art film. Like musicians and filmmakers working with artistic (rather than commercial and/or populist) intentions, those making artgames strove to expand the expressive possibilities of games. Artgames used the innate properties of games—among them interactivity, player goals, and obstacles providing challenge for the player—to create revealing and reflective play experiences.

Most artists, however, do not see games as a medium for expression in the same way Blow and Rohrer do. Instead, many contemporary artists approach games as tools and raw materials from which works of art can be made. Take Myfanwy Ashmore's *Super Mario Trilogy*, a set of three modifications to the original *Super Mario Bros.* Nintendo Entertainment System game. In *Mario Battle No. 1* (2000, figure 1.5), Mario travels through a world devoid of enemies, power ups, coins, and environmental obstacles. All that is left for Mario to do is travel along the platform; he can run, he can jump, but without resistance beyond the timer, Mario only passes time until his death. In *Mario Doing Time* (2004), the second work in the trilogy, Mario again finds himself in a world that lacks the typical goals and resistance. This time, however, Ashmore has extended the wall behind Mario to a height that imprisons the little fellow. And so, he can once more walk and jump, but only in an incarcerated futility as the timer counts down to his death. In the third work, *Mario Is Drowning* (2004), we find Mario in an underwater swimming

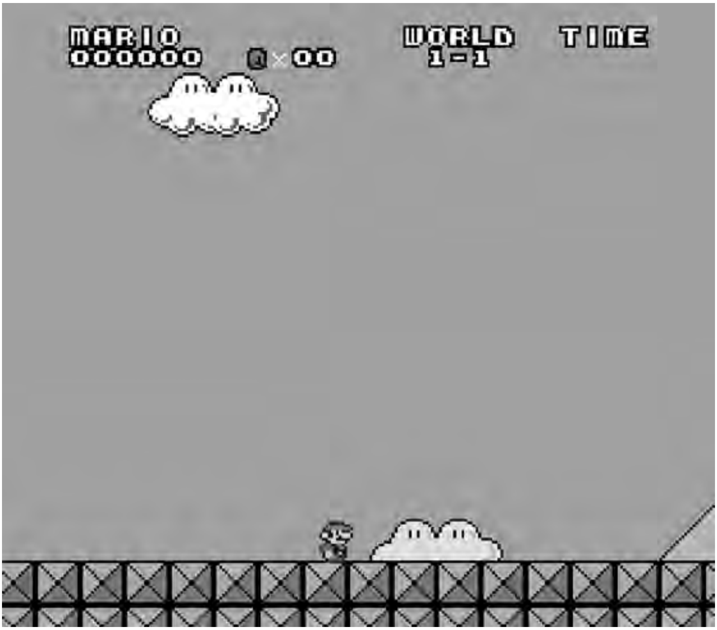


Figure 1.5
Mario Battle No. 1. Myfanwy Ashmore. Image courtesy of the artist.

level swimming around with no real purpose. *Super Mario Trilogy* is a trio of existential meditations, a ludic take on Samuel Beckett's *Waiting for Godot* (1953). Rather than engaging with games as a cultural form, Ashmore used a game and its technologies as raw materials to produce an artwork that critiques games while exploring existential ideas about life and its meaning in a humorous yet poignant way.

Ashmore's trilogy is yet another approach to games, that of *game art*.[9] Put simply, game art is art made of games.[10] One tool for understanding game art is found in Nicolas Bourriaud's conception of postproduction art.[11] Bourriaud presents an aesthetics for artworks made from cultural objects existing for one set of purposes that are assigned new meaning and use value by artists as part of their own practice. In this light, the craft of game making is as relevant to game art as the craft of house painting was to Pollock and his drip paintings or the craft of plumbing was to Duchamp and his creation of *Fountain* (1917). The craft of game art is not in the traditional, functional application of the tools and techniques for producing games, nor is it in the design of play experiences. Artists creating game art approach games as tool sets and cultural tropes rather than as a medium or craft unto itself. For Ashmore, *Super Mario Bros*. was a work to be taken apart and repurposed in order to create a new work with a very different set of creative goals than those found in the original game. The properties still present from the original are there for a reason, whether to draw on the cultural status and meaning of the original or to subvert and reimagine their use value. And those that were removed were not central to Myfanwy's concerns.

By comparing *Super Mario Bros.*, *Braid*, and *Super Mario Trilogy*, we can see how games are approached in very different ways by the game industry, artgame makers, and artists. For the game industry, games are entertainment products. For those making artgames, games are a medium for artistic expression and experiential understanding. For those making game art, games are a means of questioning, critiquing, and exploring unexpected potentials. And so, when a game maker speaks of games, she is often imagining a creative potential radically different from a contemporary artist. And when a game player, even one interested in games outside the commercial mainstream, looks at a game, she sees something quite different than a viewer familiar with the contemporary art scene.

Over the last few years, games, and especially videogames, have received attention from art galleries and museums. Of course, this is nothing new, as twenty-five years have passed since “Hot Circuits: A Video Arcade,” the first American museum exhibition of videogames, opened at the Museum of the Moving Image.[12] Still, there is much confusion about the relationship between games and art. The Smithsonian Museum of Art’s “The Art of Video Games” exhibition used the “A” word indiscriminately, sometimes meaning the visual component of videogames, sometimes referencing the craft of game development, and sometimes to suggest, in a hand-wavy way, that “games are important.” The Museum of Modern Art has made two rounds of videogame acquisitions, but these were done within the Architecture and Design department, and not the Media and Performance Art department. And the court decision that decided games are afforded first amendment protections has provided only legal—not cultural—legitimacy to games as speech.[13] The subtleties of how games and art overlap, combine, conflict, and otherwise interact are still largely unexplored.

A goal for this book emerges: I hope to investigate the way game makers and artists conceptualize and create game-based artworks.[14]

Structure

The bulk of this book is composed of three sets of case studies, each covering a loosely connected community of practice. The first section, Game Art, looks at how videogames and their tools have been approached as a form of popular culture from which content and subject matter can be drawn, and as a set of tools and processes with which artworks can be created. The game art case studies are Julian Oliver, Cory Arcangel, and JODI, the collaboration of Joan Heemskerk and Dirk Paesmans. The second section, Artgames, looks at the artgame movement of the first decade of the twenty-first century. Artgame makers explored territory traditionally relegated to poetry, painting, literature, or film. Jason Rohrer, Brenda Romero, and Jonathan Blow are the three game makers discussed in this section. The third section, Artists' Games, looks at a group of artists and game makers with more synthetic conceptions of games as an artistic medium. The work of Blast Theory, Mary Flanagan, and the collaboration of Nathalie Pozzi and Eric Zimmerman suggests that it is indeed possible to create pieces that satisfy the aesthetic and critical values of both the contemporary art and game communities. Finally, in the book's conclusion, I consider some ramifications of this new synthetic aesthetic that merges the values of contemporary art and games.

I have tried to draw equally from my training as an art historian, my experience as a curator, my time as a game studies scholar, and my experience as a game maker in order to explore and articulate the overlaps between games and art. Crossing the borders between these communities of practice presents challenges. Readers will bring their own understanding of games and contemporary art. And so, some chapters will seem rudimentary to game makers and game players but foreign to those from the media art and art criticism communities. In other places, the opposite will be true. Some works, concepts, and historical precedents might seem obvious to some, while completely new to others.

Many readers will note differences in my terminology compared to what they might expect. For example, some artists working with games refer to their work as *art games*, but that is also what independent game makers who approach their work as an art form call what they make. Similar semantic shifts happen throughout the book in places that I hope will clarify rather than confuse.

One note on terminology warrants mention here. The terms game and videogame appear frequently throughout the book. I use videogames to indicate computer games, game consoles, and other forms of screen-based games. I use game to more generally reference the broader cultural form. Sometimes, you will also see boardgame or cardgame in order to bring as much clarity as possible to the form of game under discussion.

2 Game Art

In 1997, the art historian Hubert Damisch curated the exhibition "Moves: Chess and Playing Cards with the Museum," the fifth in a series of themed exhibitions drawing from the permanent collection of the Museum Boijmans Van Beuningen in Rotterdam, the Netherlands (figure 2.1). The game of chess and the cardgames themselves were not playable in the exhibition; they were in-play as organizing principles and thematic material. The first part of the show included paintings, sculptures, and other art objects arranged on a large chess board. This drew out relationships between the artworks not unlike those between pieces in a game of chess. The second part of the exhibition was drawn from the museum's works-on-paper collection; here, Damisch grouped the works in overlapping sets organized by card hands like a full house, or four-of-a-kind.[1] Damisch's "Moves" exhibition crystallizes how games are often perceived and used within the contemporary art community. Games are not always approached as a cultural form unto itself, but instead as a cultural phenomenon that can be used, like any other aspect of culture, to inform, inspire, or create art.

Even when an artist modifies a game, as we saw with Ashmore's *Super Mario Trilogy,* the new conceptual, formal, and

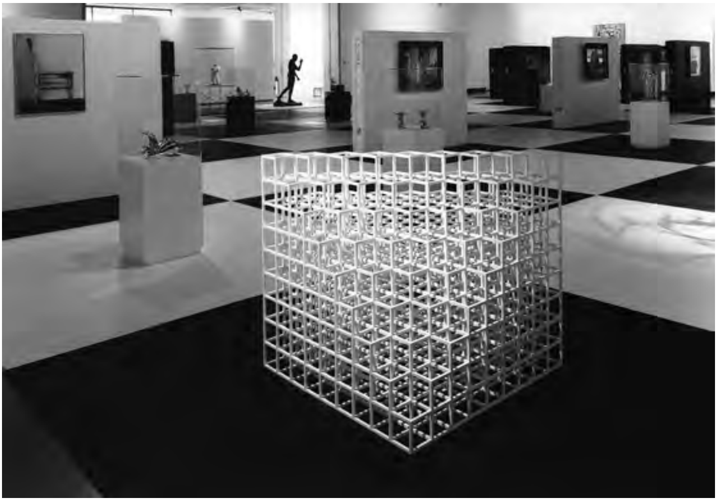


Figure 2.1
View of exhibition “Moves: Chess and Playing Cards with the Museum” at the Museum Boijmans Van Beuningen, Rotterdam, the Netherlands. Image courtesy of the Museum Boijmans Van Beuningen.

experiential affordances differ from those of the game industry and game players. Chess is the best place to look as, ever since Duchamp’s early forays into the game,[2] it has been a recurring motif in art. The Japanese Fluxus artist Takako Saito’s Fluxchess[3] series is a useful example. The series included the works *Smell Chess* (1965), *Spice Chess* (1965), *Weight Chess* (1965), and *Liquor Chess* (1975). Traditionally, each type of play piece communicates its identity through traditional representations—the rounded shape of a pawn, the horse for the rook, the bishop shaped like the tip of a bishop’s miter. In Saito’s Fluxchess series, the pieces’ identities are communicated through their weight (*Weight Chess*); through their taste, color, and viscosity (*Liquor*

Chess); through their odor (*Smell Chess*); or through their color, texture, and smell (*Spice Chess*). Saito's Fluxchess engages with chess not as a game alone (though the game is still playable in all instances) but as a space within which to explore sensory perception and meaning-making. The works also critique war, power structures, and class, all the while entering a dialog with artistic traditions reaching back to at least Dada and Duchamp.

Saito's Fluxchess series was part of the sea change that began with conceptual art[4] and its privileging of ideas over form. Starting in the 1960s, the contemporary art community moved from medium specificity toward a multimodal, fluid conception of art making that relocated the material and conceptual focus from craft skill and materiality to conceptual embodiment. No longer were the traditional craft skills associated with painting, sculpture, printmaking, and the like prized. Instead, the emphasis was on ideas. This was most aptly embodied in Sol LeWitt's "Paragraphs on Conceptual Art."[5] One of the more revealing statements in LeWitt's essay broke with nearly all conceptions of art that preceded it—"The idea becomes a machine that makes the art." If the ideas are the work, where do we now locate the craft of art? How are ideas made material? If the idea dictates the form, what is left to value and experience in the art object?

Conceptual art opened up artistic practice to permit a variety of approaches that diverged from traditional approaches to medium, craft, and purpose. Art could now be made of anything—and not only in a way that questioned art and its internal workings in the spirit of Duchamp's *Fountain*, but to any artistic end the artist desired.

Some thirty years after this shift in artistic values, the game art movement began within the larger field of media art.[6] The game art phenomenon is not a movement per se but rather an unaffiliated group of media artists using games to make works of art. In the early days, game art was almost exclusively computer- and screen-based, and often produced with game-making tools. The first work of game art was Orhan Kipcak and Reini Urban's *Ars Doom* (1995, figure 2.2).[7] What makes *Ars Doom* stand out is its use of game technologies, specifically the *Doom II* game engine, to create a work of art.[8] The "space-marines-in-hell" theme of the *Doom* game series was replaced by a recreation of the Bruckner House, the location of Ars Electronica for which the piece was commissioned. Players moved through the virtual exhibition hall "critiquing" the specially commissioned works found on the walls of *Ars Doom*. To critique a work, the player used one of three weapons, each in the spirit of a different artist—shooting blood inspired by Herman Nitsche, making paint marks based on Arnulf Rainer's paintings, or flipping works upside down in the manner of Georg Baselitz.

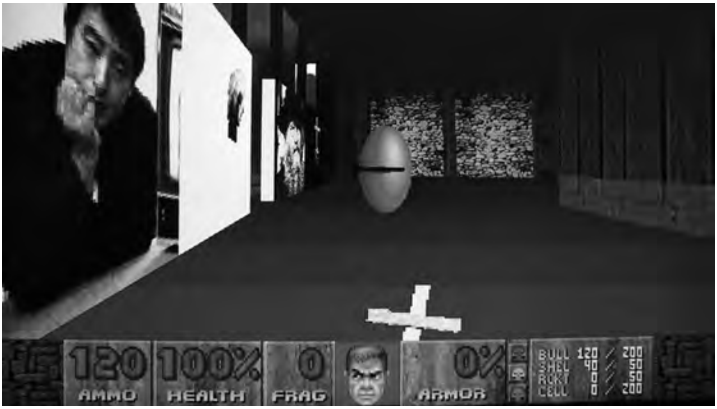


Figure 2.2
Orhan Kipcak and Reini Urban, *Ars Doom*.

Ars Doom points to a central characteristic of game art—the appropriation of the tools of the game industry for artistic purpose. The work turned the core play activities of the first-person shooter—looking, navigating, and shooting—into the means by which art viewers moved through a gallery space and evaluated works of art. Nascent PC gamer culture and its visual and cultural tropes—the low-fidelity graphics, the violent imagery, and so on—were used to comment on both game culture and the art world and their respective customs and mores.

In the years following Kipcak and Urban's *Ars Doom,* game art became a viable if under-appreciated subset of media art. Three artists in particular stand out for the ways in which they incorporate games into their artistic practice: Julian Oliver, Cory Arcangel, and JODI. Julian Oliver is an artist whose work sometimes bends and breaks entertainment technologies in order to produce still images and films. Cory Arcangel operates within a space defined by the appropriation of disposable popular culture and the technologies that generate and support it. And JODI is the collaboration of Joan Heemskerk and Dirk Paesmans, a pair of European artists that find the seams and creases in technologies in order to turn them against themselves.

Case Study: Julian Oliver and Painting with Games

Julian Oliver's *ioq3aPaint* (2010, figure 2.3) is one of the more straightforward examples of game art. Instead of using id Software's *Quake 3* (1999) game engine to make 3D videogames or even interactive artworks like *Ars Doom*, Oliver exploited a well-known bug in the game engine to produce colorful, quasi-abstract images and videos.[9] *ioq3aPaint* is thus a clear example of game art—Oliver, an artist, manipulated a game technology to produce visual art.

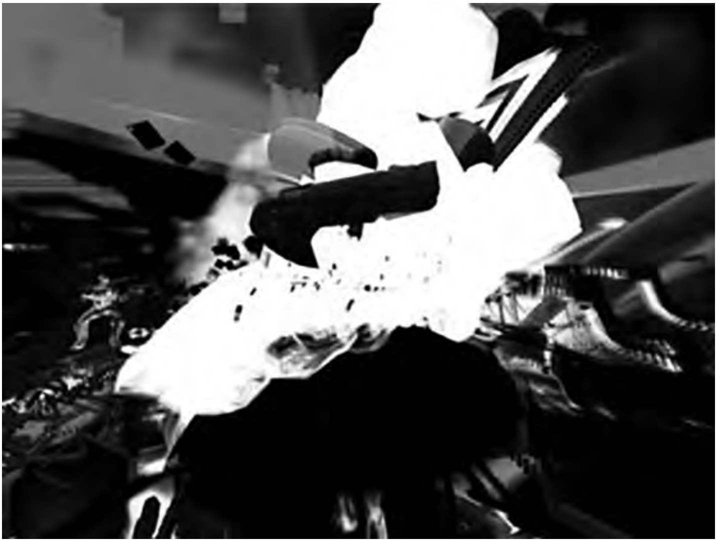


Figure 2.3
Julian Oliver, still from *ioq3aPaint* series.

The output from *ioq3aPaint* is at once works of visual art that stand on their own and also records of the process of their creation in the spirit of Jackson Pollock's abstract expressionist action paintings. The bug in the *Quake 3* game engine's screen-drawing techniques could be manipulated to create visual artifacts that blurred and almost smeared the 3D objects within the game engine, in the process creating near-abstract images. To do this, Oliver created a series of software bots that moved through the game environment, the results of which were captured as either video or still images. To capture an image or video, the user looked at the run-time gameworld through the eyes of a player-controlled camera, as if they were a player in the game. They would then use the mouse and WASD keys to move inside the game space, switch from bot to bot, and make screen grabs or videos from any bot's vantage point.

The resulting images feel more like graphics for a rave or the cover art for an electronica album than anything relating to a videogame. The images are abstract yet dimensional, a swirl of color fragmented by glimpses of digital artifacts inside the gameworld. There is little "gameness" left in the images of *ioq3aPaint*, only imagery that would have no obvious connection to games at all if the viewer was not familiar with how videogames were made.

Oliver's work with the *Quake 3* engine very much continues in the tradition of artists exploring technologies for artistic purpose. Back in the 1950s, artists like Ben Laposky and Herbert Franke explored the potential of images captured from electronic devices like oscilloscopes as an aesthetic exploration of the technologies. Later, in the 1960s, artists like John Whitney Sr. and Michael Noll wrote software in order to procedurally generate artworks using military and industrial electronics and computers. And then later in the 1960s and into the 1970s, artists like Kenneth Knowlton and Stan VanDerBeek similarly investigated the potential of computer-aided animation to produce time-based works of art.

Robert Rauschenberg, an important mid-century artist exploring the boundaries of artistic practice and output, spoke to painting with unexpected technologies and materials:

> [I] was unable to divorce paint, as it was traditionally, from the fact that it was just another material. Paint has a character, a quality, it has a physical, recognizable body and I just couldn't cultivate in myself that other kind of illusionary quality that I would have had to have believed in in order to have gone in a different direction. … after you recognize that the canvas you're painting on is simply another rag then it doesn't matter whether you use stuffed chickens or electric light bulbs or pure forms.[10]

Rauschenberg did not see a difference between using paint or light bulbs to create his paintings. To him, the demystifying of the materials of painting—pigment, suspension, canvas—was essential. Oliver's work continues in this tradition, but he paints with a game engine instead of physical objects.

Rauschenberg reimagined painting as post-representational, beyond the traditions of static, illusionary image making dating back to Medieval Europe. Works like *First Landing Jump* (1961, figure 2.4) exemplify Rauschenberg's Combine Paintings (the term coined for this new approach to art making) and their use of everyday objects and materials in unexpected ways.[11] The painting both flattens and dimensionalizes the space through the inclusion of materials like leather, metal sheeting, and paint, along with found objects like a speaker, a board, and a wheel. Rauschenberg's Combine Paintings were not a reflection or conception of what the world looked like, but rather what the world *was*. It was material culture and its objects abstracted from their everyday contexts and reimagined in ways that denied use value and the pictorial traditions of image making. Yet they were still paintings.

Oliver likewise built *ioq3aPaint* out of the raw materials from a world and a culture—that of the *Quake 3* game engine and the 3D geometry of the walls, floors, ceilings, the objects inside those rooms, and the creatures inhabiting those spaces. As was noted by Domenico Quaranta in his interview with Oliver,[12] the method and tools are often evident in the images. In much of *ioq3aPaint's* output (figure 2.5), you can see hints of the representational gameworld and its objects—bits of the bots, glimpses of the geometric planes defining the spaces they inhabit, even the player's weapons. The images are sculpted via code from the plasticity of the *Quake 3* universe, reenvisioned by the exploitation of rendering bugs, and flattened into images in their final form.

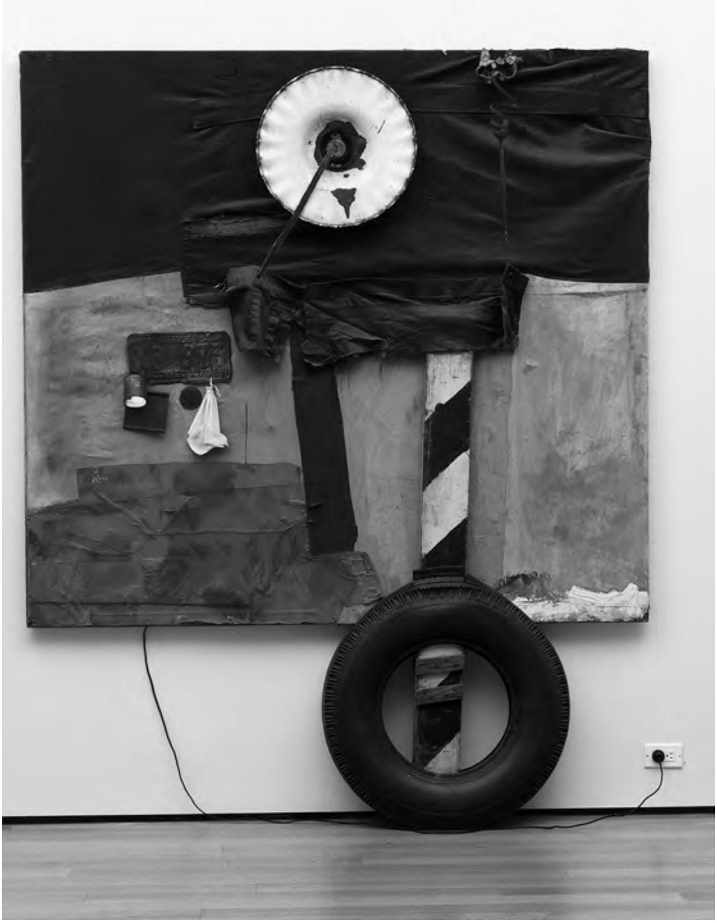


Figure 2.4

Robert Rauschenberg, *First Landing Jump*, 1961. Cloth, metal, leather, electric fixture, cable, and oil paint on composition board, with automobile tire and wood plank, 7′ 5 1/8″ x 6′ x 8 7/8″. Gift of Philip Johnson. Digital image © The Museum of Modern Art/Licensed by SCALA/Art Resource, New York.

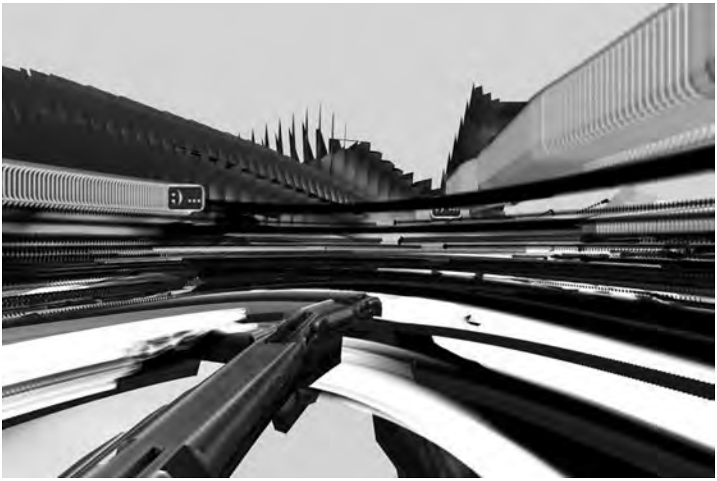


Figure 2.5
Julian Oliver, still from *ioq3aPaint* series.

For Rauschenberg, rules were there to be broken. Even the methods of abstraction in the mid-twentieth century failed Rauschenberg. Precision of line, compositional expectations, color harmonies—none of these were relevant to Rauschenberg's image making. What was relevant was the substance of the objects—volume, texture, shape, yes, but also the confusion of seeing utilitarian or mundane objects in unexpected contexts and combinations. Rauschenberg's work is in many ways an exploration of visuality—the biological and mental processes by which images are seen by humans, but also the broader theoretical framework for engaging with the world via sight.[13] Rauschenberg's Combine Paintings like *First Landing Jump* played with the ways vision flattens and makes images of everything seen.

ioq3aPaint denies and outright ignores rules in ways similar to but different from Rauschenberg's work. Rather than acknowledge the paradox of dimensional objects always being seen as two-dimensional images, Oliver flattened the synthetically dimensional world of game engines. Instead of pursuing the typical simulated dimensional realities of game engines, Oliver chose to create 2D abstractions within the geometric structures of 3D image making. By negating the illusion of representational and navigable spaces at the heart of 3D game engines, Oliver draws attention to their output as alienated abstractions.

In the end, *ioq3aPaint* is a series of images and films. Were the viewer to simply look at the images without learning how they were made, the images would remain just that—two-dimensional pictorial artworks. That they were made from games would be as relevant to the experience as knowing the kind of brush used by Pollock would be to appreciating his drip paintings.

Case Study: Cory Arcangel and the Appropriation of Games

When Julian Oliver exploited the *Quake* 3 game engine to produce images, he was working with the engine as a tool of artistic production in a very traditional sense—he produced pictures and videos, both mainstays of art making. But when Cory Arcangel engages with videogames, it is more fully in the spirit of postproduction art—he works with all sorts of disposable pop culture, from bubble gum pop to Internet memes to videogames, in order to create artworks. His work does not deeply engage with game design and its traditional focus on designing player experience. Instead, games are just another piece of technology-based culture to play with. *Since You Been Gone* (2010), in which a series of boom boxes play CDs of Kelly Clarkson's song of the same name, is indicative of Arcangel's work and its appropriation of other cultural forms. In this case, the work is made of popular music and its technologies of consumption, but it is not a work of pop music.

Arcangel is best known for *Super Mario Clouds* (2002, figure 2.6), a hack of a *Super Mario Brothers 3* game cartridge for the Nintendo Entertainment System (NES). He describes the work as a "Mod of NES game *Mario Brothers* … minus the game."[14] There are two components to the project; the first part is a webpage with instructions for making a modified version of the original game in which all visual elements but the sky and clouds are

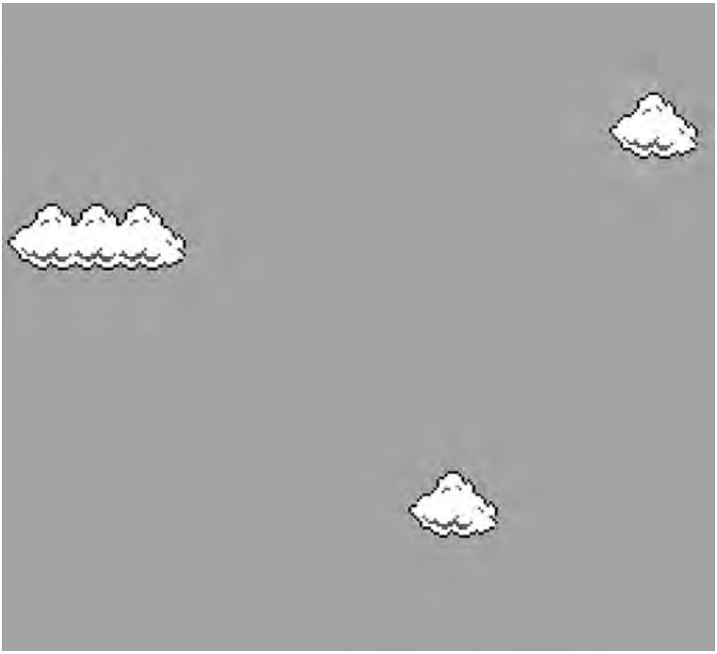


Figure 2.6
Cory Arcangel, still from *Super Mario Clouds*. © Cory Arcangel. Image courtesy of Cory Arcangel.

removed.[15] The second part, the installation (figure 2.7), was originally displayed at the Whitney Biennial in 2004. In this form, *Super Mario Clouds* was composed of the NES game system playing (and displaying) the modified cartridge, an NES game controller, and a large screen on which the modified game was displayed. *Super Mario Clouds* resembles Ashmore's *Super Mario Battle No. 1* in basic ways, but it uses *Super Mario Bros.*, the shared material, to different ends. While Ashmore leaves Mario to wander a barren path, Arcangel removes Mario and everything else but the clouds, rendering it more a landscape than a videogame.[16]

In *Super Mario Clouds*, Arcangel deeply modifies, if not outright denies, the gameness of the original videogame. This act

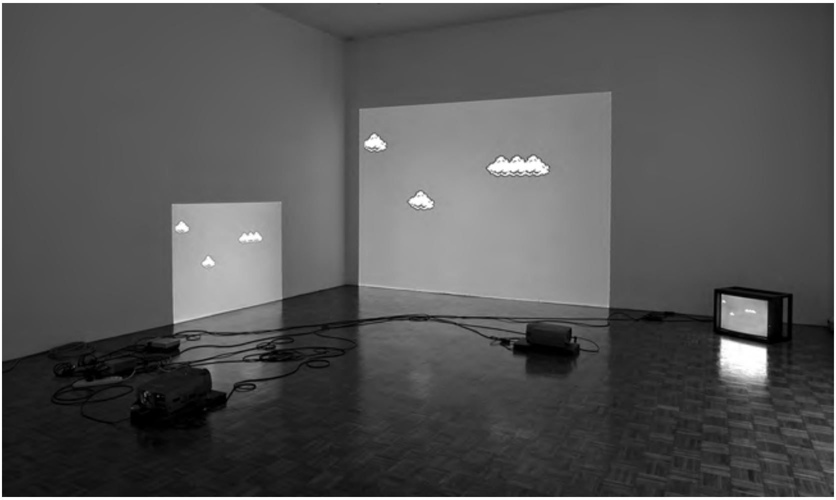


Figure 2.7
Cory Arcangel and Beige, *Super Mario Clouds*. Installation view, Synthetic, Whitney Museum of American Art, 2009. © Cory Arcangel. Image courtesy of Cory Arcangel.

of playing with the original use value of a game is similar to the appropriations of Andy Warhol. Warhol's work borrowed conceptually and materially from graphic design and advertising, but also from the mechanical crafts of printing, film, and video. In the process of changing the use value of the techniques, tropes, and modes of production, Warhol denied one set of meanings and uses and replaced them with another.

The detached irony in Warhol's art made the image-driven work more than just homages to American popular, material, and media cultures. Take, for example, *Campbell's Soup Cans* (1962, figure 2.8), a series of thirty-two silkscreen paintings. While the nominal subjects of the paintings are the thirty-two flavors of soup manufactured by the Campbell Soup Company, the work more broadly reflected on American culture of the mid-twentieth century, its economic ecosystem, its image- and brand-driven culture, and its homogeneity. Looking toward the art world, the paintings also questioned the commerce-driven nature of the fine art gallery system and the status of high and low art forms.

Arcangel smartly picked *Super Mario Bros.*, a game close to the heart of gamers who grew up in the NES era; like Warhol's soup cans, the game stands in for a time and place that draws out a distinct nostalgia for childhood and early gaming experiences. Arcangel appropriated the conceptual, material, and technical affordances of videogames and reframed them in order to produce a work of art that no longer retained the characteristics present prior to his intervention.

Arcangel moved beyond—and quite literally targeted—Warholian appropriation in *I Shot Andy Warhol* (2002, figure 2.9), a modification of the NES game *Hogan's Alley* (1984). The game's "bad guy" characters are replaced with representations of Andy

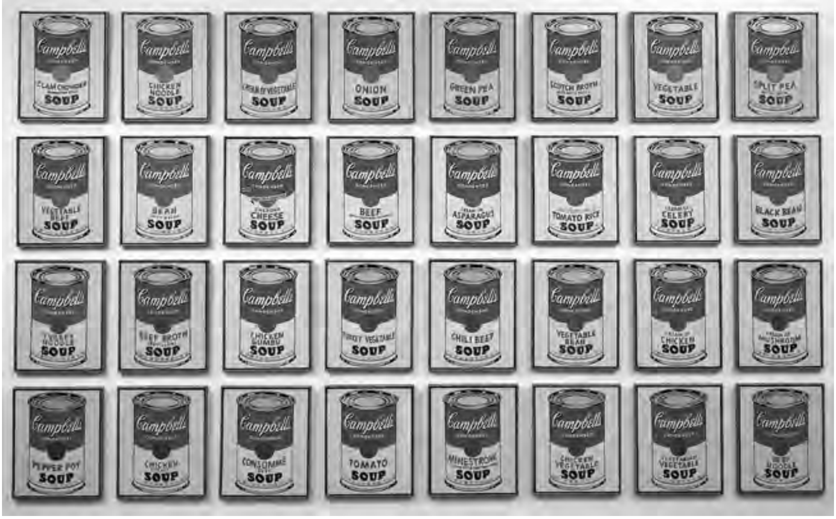


Figure 2.8
Andy Warhol, *Campbell's Soup Cans*, installation view. © 2014 The Andy Warhol Foundation for the Visual Arts, Inc./Artists Rights Society (ARS), New York.

Warhol, while the "good guy" characters are replaced with likenesses of Pope John Paul II, Colonel Sanders, and the rapper Flavor Flav.[17] In *I Shot Andy Warhol*, the appropriation takes two forms—the target-shooting videogame, and the use of cultural icons from a wide spectrum of life including religion, art, fast food, and music. The work remains playable, but that is no longer the point. The substitution of the popular figures for the original characters transforms the game into conceptual art that can be experienced through seeing and even talking. The implications of both acts of appropriation work together to comment on popular culture writ broadly and the fine art world in particular. By making the pope, Flavor Flav, and Colonel Sanders

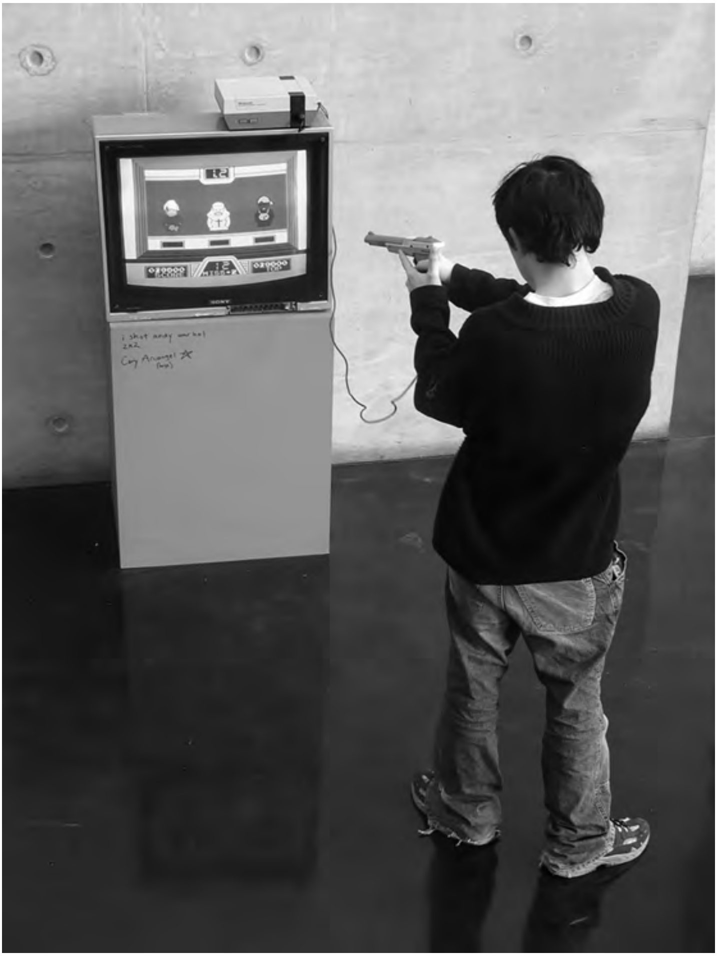

i shot andy warhol
2x2
Cory Arcangel
SCORE
SONY

Figure 2.9
Cory Arcangel, *I Shot Andy Warhol*. Installation view, Liverpool Biennial, 2004. Photo: Michael Connor. © Cory Arcangel. Image courtesy Cory Arcangel.

the "innocents" and Warhol the bad guy, Arcangel is setting up a whimsical critique of the fine art world and its relationship to popular culture in the post-Warhol era. Perhaps more deftly, *I Shot Andy Warhol* also explores the media hype around videogames and real-world violence, putting the player in the role of a would-be celebrity assassin, not unlike Valerie Solanas, who shot Warhol in 1968 (which also ties back nicely to the phenomenon of art celebrity).

Sherrie Levine's series of rephotographed art photos provide another frame for considering Arcangel's game-based appropriations. Her most famous work is the 1979 project *After Walker Evans*, in which she rephotographed Evans's photography collection *First and Last* (1938, published 1978). By using similar technologies to appropriate and reimagine the original photo series, Levine simultaneously demystifies and remystifies the use value and aesthetic considerations of photography. What, exactly, the viewer is looking at is unclear—a photograph of an artwork framed as a new artwork? A portrait of an artwork? A copy of an image that was already a copy by virtue of the photographic process?

Whereas Levine produced her photographs using the methodologies of art documentation in order to produce new works of art, Arcangel used computer hacking techniques to reimagine console games from the last twenty years. The most obvious case is *Super Mario Clouds*. By hacking the game chip to remove all graphics save the clouds, Arcangel turns the game into, all at once, a landscape painting, a piece of video art, and a DIY hacking project.

By releasing the means of production as a web-based tutorial, Arcangel neutered the technological power and control of the game industry. On his website, the *Super Mario Clouds* page prominently displays a photograph (figure 2.10) of a hacked *Super Mario Bros.* cartridge with a piece of tape across the game's logo on which is scrawled, "Super Mario Clouds." This gesture uses the commercial product, not unlike recording over a commercially released audio cassette of VHS tape.[18] Just below the masking tape is a crudely removed section of the cartridge

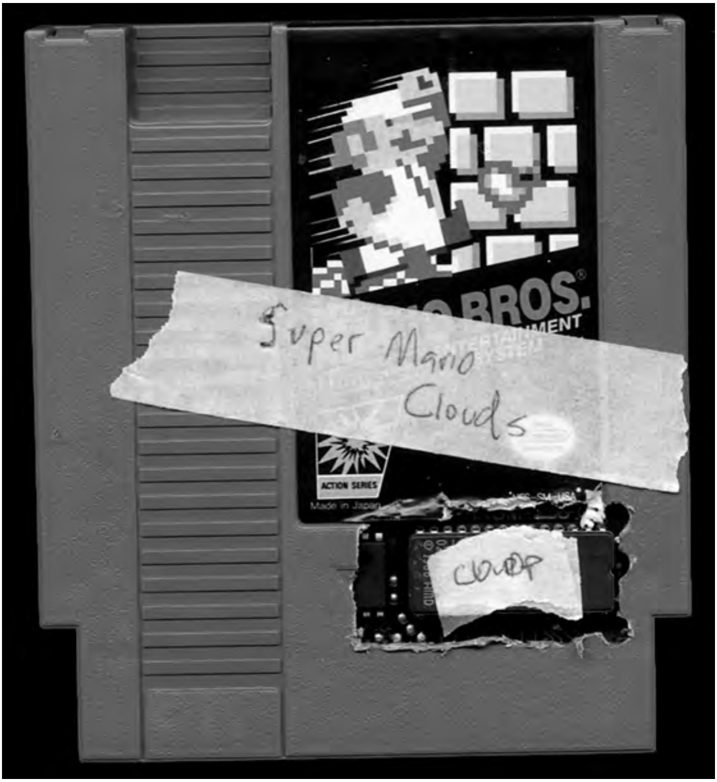

BROS.
Super Mario Clouds
ACTION SERIES
Made in Japan
NES-SM-USA

Figure 2.10
Cory Arcangel, *Super Mario Clouds* modified cartridge; handmade hacked *Super Mario Brothers* cartridge for Nintendo NES video game system.

shell exposing the chip Arcangel replaced in order to remove all the graphics save the clouds. By emphasizing the hacking of the commercial, big-company entertainment product in a low-fidelity manner, Arcangel appropriates the technologies of product in a way not so different from Warhol's screen printing of the Campbell's Soup cans. Taking into account the DIY hacking instructions provided on Arcangel's site, the project encourages others to spread the piece, in the process questioning ideas about game technologies and the placement of value on the output of the game industry, as well as the role of artist and artistic output in ways similar to Levine's work.

In *Beat the Champ* (2011, figure 2.11), the appropriation is of yet another kind. Arcangel selected ten bowling videogames published for console game systems, from the Atari Video Computer System (1976) through the more recent Nintendo GameCube (2001). Each game was transformed into a self-playing machine in which the player character perpetually throws gutter balls. The ten games, all looping through gutter ball after gutter ball, are displayed on large screens positioned side by side with the game systems and controllers arranged nearby on tables.[19] By selecting a genre of sports simulation games from across twenty-five years of the videogame console era, Arcangel explores both the advance of videogames and their technologies, and the ways they reflect and absorb popular culture trends and norms.

The piece becomes completely and yet not at all about its surface subject, bowling. Hacking the games to throw only gutter balls shows a denial of the gameness of the game in a sense, and yet plays with and tweaks the traditions of game design. Both the traditions of bowling and bowling-simulation videogames treat gutter balls as a particularly mortifying action—they are the domain of novices and never professionals or experienced

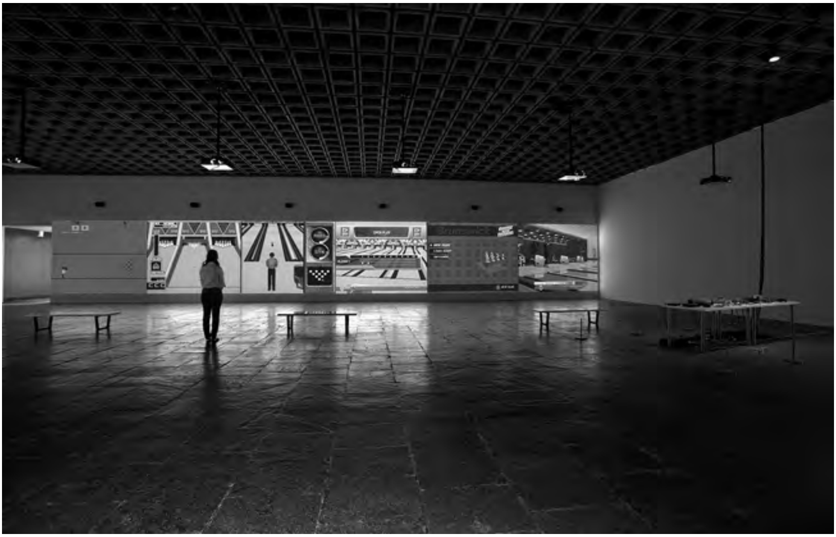


Figure 2.11

Cory Arcangel, *Various Self Playing Bowling Games*, 2011. Installation view, Pro Tools, the Whitney Museum of American Art, New York, 2011. Photo: Adam Reich. Co-commissioned by the Whitney Museum of American Art, New York, and the Barbican Gallery, London. © Cory Arcangel. Image courtesy of Cory Arcangel.

players. The spectacle of only gutter balls is as likely to produce pleasure as it is frustration.

The overall effect of the installation is something akin to a room full of possessed jack-in-the-boxes, or a less self-destructive *Homage to New York* (1960, figure 2.12), Jean Tinguely's large-scale mechanical sculpture.[20] *Beat the Champ* has a similar impotence as the ten hacked videogames throw one gutter ball after another. Tinguely also provides a reference for hacking as an appropriation technique—he hacked musical instruments, bicycles, and all sort of machines and materials in his kinetic sculptures.

The artistic goals of Warhol, Levine, Tinguely, and Arcangel vary as far as the expressive intention of their appropriations. Each uses another medium in unexpected ways: Warhol and mass media and its production; Levine and the photographic process and fine art multiples; Tinguely and the dark fantasia of machines turning on themselves; Arcangel and games and hacking. Arcangel extends the Warholian lens to the affective, logical absurdities of media culture. Like Levine, by placing his work within seemingly contradictory traditions—hacker culture, Internet meme culture, and media art—Arcangel allows us to see the unexpected in the mundane. And like Tinguely, he reminds us of the absurdity of it all, as we stand with our hands tucked in our pockets, watching it all go by.

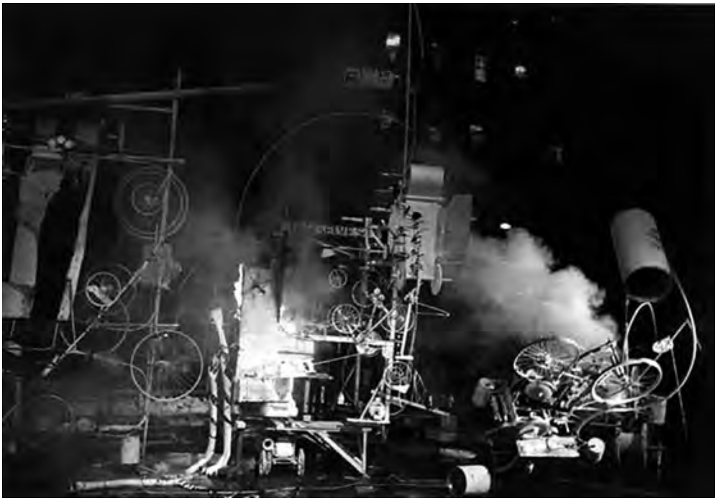


Figure 2.12
Jean Tinguely, *Homage to New York*.

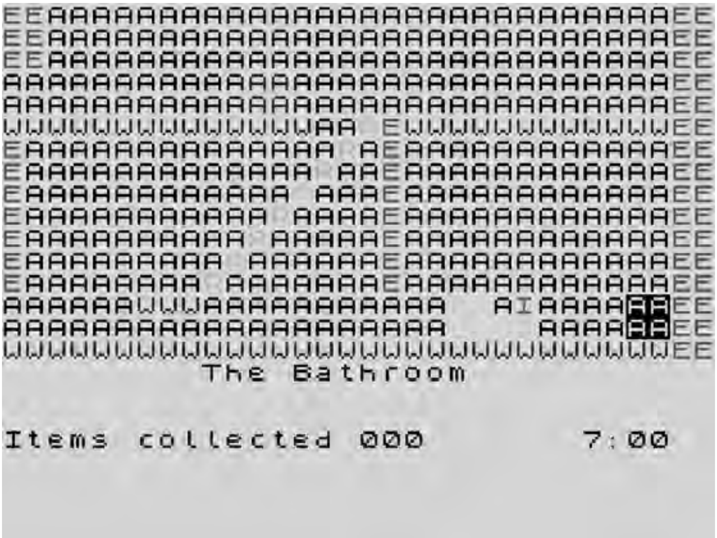
Case Study: JODI and the Disruption of Games

Back around 2010, the academic and indie game communities enjoyed creating game analogs to John Cage's *4′33″* (1952). It was a curious task, as the famous musical score involves not a single note of music—the musicians hold, but do not play, their instruments for four minutes and thirty-three seconds. Attempts to transpose this to videogames have included a game that starts over any time the player presses a button and a game that takes the player on a circuitous path of frustrating error messages and installation requests that never reach the play of the game. Humorous one-liners, yes, but mostly the attempts to transpose Cage's piece to games fall short of the effect *4′33″* had on the music world. Cage questioned almost everything about music: the roles of the composer and the musician, the context within which music is played and heard, the status of recorded music, and, of course, the role and experience of the listener. In other words, through *4′33″*, Cage intervened in and disrupted the cultural processes of music.

Closer to *4′33″* are JODI's aggressive interventions in games. Working with a range of digital media, JODI overturns the processes and technologies of creation and reception in order to negate and disrupt our understanding of digital media and its entertainment experiences. Some of their work brings this critical eye to the disruption of videogames, their play, and the technologies that produce them.

Jet Set Willy Variations ©1984 (2002, figure 2.13), a series of variations on the 1984 Sinclair ZX Spectrum game *Jet Set Willy* (1984), embodies JODI's approach to videogames. The original game's developers wrote the game in the BASIC programming language, long a mainstay of hobbyist programming. JODI took the original code and rewrote portions of it to produce a suite of variations, each manipulating the game in a different way, sometimes enlarging characters, sometimes covering the screen in text, and sometimes displaying color bars. The collected variations explored the ways that the primary sensory interface of videogames—the screen and its images—could be manipulated to disorient the play experience.

Jet Set Willy Variations ©1984 was a disruption, in a material way, of the form and experience of the original videogame. First, by making it a series of variations, JODI merged the old home-brew game-making community tradition of writing modified versions of games with the high-brow notion of musical variations, a mainstay of classical music. By manipulating the code,



```
             The Bathroom

Items collected 000          7:00
```

Figure 2.13
JODI, still from *Jet Set Willy Variations ©1984*.

the material from which a videogame is made, JODI aggressively disrupted the use value of the game. This code manipulation led to experiential disruptions, and the game's material handles—its visual representations—impeded interpretation and play.

A similar work is JODI's *SOD* (2002 figure 2.14), a modification of id Software's *Wolfenstein 3D* (1992, figure 2.15). Conceptually, the choice of *Wolfenstein 3D* as the game for modification is an interesting one. *Wolfenstein 3D*, a first-person shooter, holds an important place in the history of videogames as the first 3D game that provided players with the sensation of fluidly navigating three-dimensional space. *SOD* visually manipulated *Wolfenstein 3D* to the point that it became almost unrecognizable. Those familiar with the original game, however, might still recognize the sound effects of *Wolfenstein 3D*. They may also notice that the game's controls—the means by which the player interacts with the game and strives to achieve the game's goals—remain

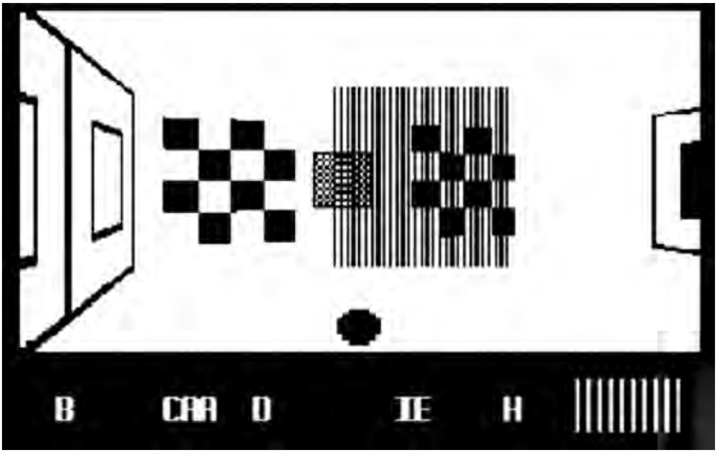


Figure 2.14
JODI, *SOD*.

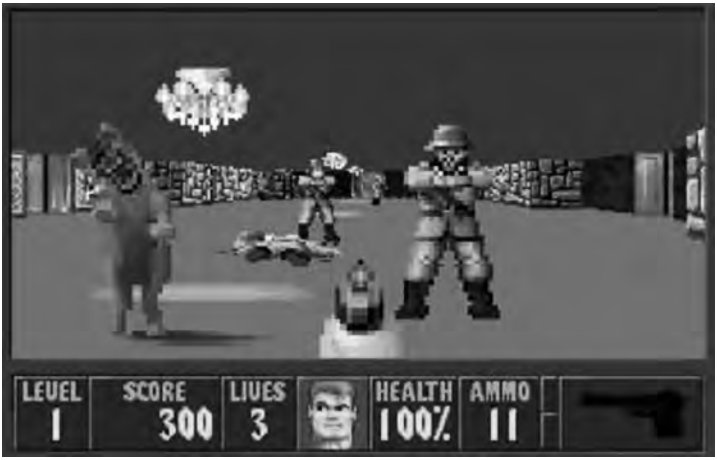


Figure 2.15
id Software, *Wolfenstein 3D*.

intact. But due to the radical transformation of the game's original 8-bit graphics into stark monochromatic images, the play experience is disrupted. In the process, the player becomes a viewer left alienated from the typical play experience. Whereas *Wolfenstein 3D*'s designers carefully constructed a feedback loop between player input and the game's visual and auditory responses, JODI intentionally disorients and obscures.

While Cage removed the sound but left the framework for performing and listening in place, JODI removed the illusion of representational space but left everything else about *Wolfenstein 3D* alone. And as Cage forced a reconsideration of music by removing the music, so JODI forces a reconsideration of videogames by removing playability through graphical disruption.

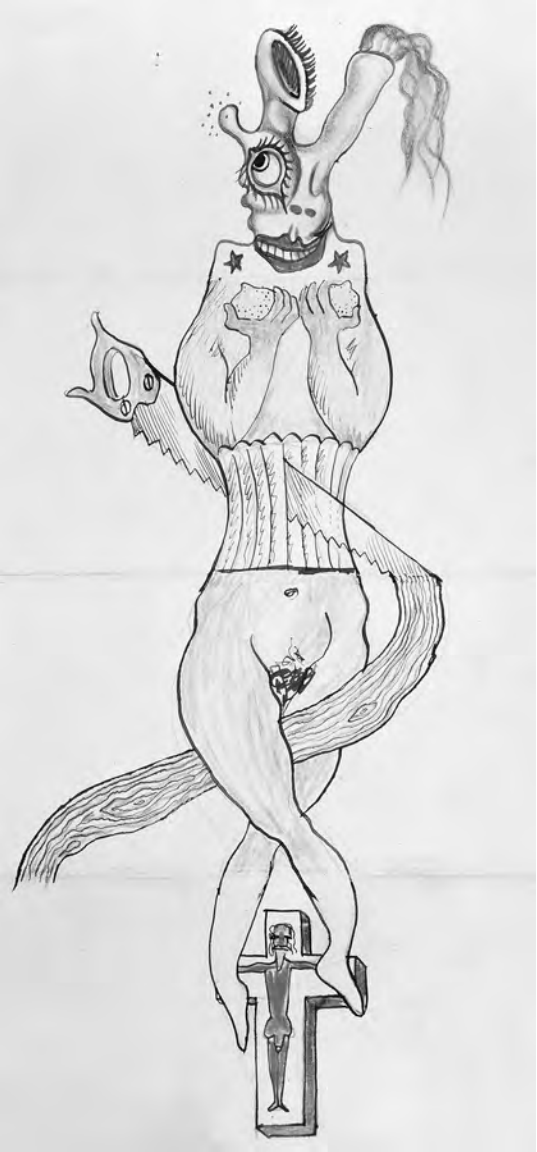
Another point of reference for JODI's work comes from the surrealist game of *cadavre exquis*, or Exquisite Corpse (figure

2.16). The game is of the utmost simplicity. A sheet of paper is folded into as many panels as there are players. One by one, each player draws an image on a surface of the folded paper, taking care to connect to the lines of the adjacent panels without looking at what the other players have drawn. Once all players have drawn on their panels, the paper is unfolded, the full drawing is revealed, and the game is complete.

The art historian Susan Laxton has read Exquisite Corpse as a disruptive gesture that questions the act of drawing and the status of paper.[21] As Laxton noted, "At the fold, form meets content in the drawing and they cancel each other out."[22] The act of folding and refolding the paper and the act of drawing across the boundaries created by the creases draws attention to the status of drawing and, in the process, negates the art value of the piece.[23] The creases are indications of both creation and destruction, and so are a denial of both the act of play and the generation of meaning-making.[24] As Laxton puts it, "It is the buckled page that transgresses drawing, releasing monolithic denotation into the proliferations of meaningless play."[25] Though the figure represented on the unfolded sheet is still present, it is not imbued with the meaning it might have had if it had been created away from the game; instead, the process of playing the game becomes the meaning of the work.

Figure 2.16

Exquisite Corpse, André Breton, Man Ray, Max Morise, and Yves Tanguy, 1927. Color crayon on paper. Photo: Philippe Migeat. © CNAC/MNAM/Dist. RMN-Grand Palais/Art Resource, New York. © 2014 Man Ray Trust/Artists Rights Society (ARS), New York/ADAGP, Paris 2014. Tanguy: © 2014 Estate of Yves Tanguy/Artists Rights Society (ARS), New York. Breton: © 2014 Artists Rights Society (ARS), New York/ADAGP, Paris.



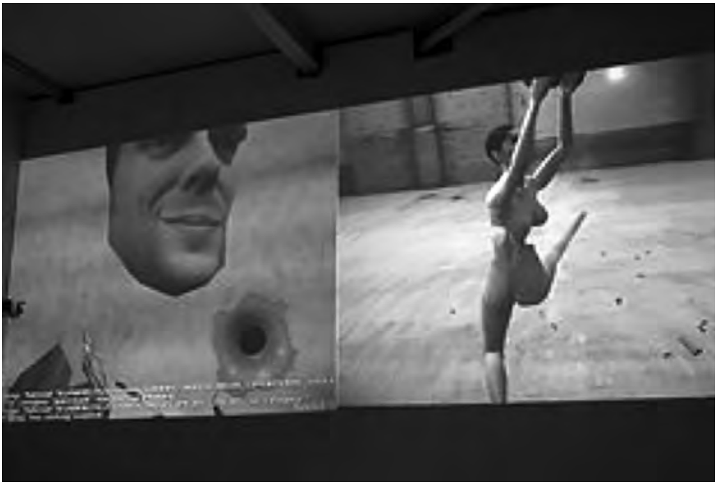


Figure 2.17
JODI, *Max Payne Cheats Only 1*, installation view.

A similar form of negation and disruption occurs in JODI's *Max Payne Cheats Only 1* (2004, figure 2.17). Instead of a playable game, the work is a video compilation of errors and exploits found in Remedy Entertainment's *Max Payne 2* (2003). JODI found and screen-captured a series of moments in the videogame in which bugs appeared in the game's collision detection (the simulation of solid objects and the way they make contact with one another), rendering (the drawing of 3D models as 2D images), interface controls, and other aspects of the game's presentation. At times, distorted human models twist into unnatural poses that seem closer to a demonic ballet than a videogame. In other moments, the camera occludes a character's mouth as he speaks, creating a disturbing and uncertain image. Quick cuts of characters running into and partially overlapping objects and walls punctuate the piece. JODI disrupts the seamless visual experience of *Max Payne 2* by highlighting errors in the game, breaking the sanctity and illusion of 3D videogames.

Max Payne Cheats Only 1 is a time-based work, and not an interactive piece. This creates the distance necessary to contemplate the bizarre, artificial nature of 3D videogames. The work therefore speaks to the making of the original videogame, and not its original use as a play experience. During play, the glitches and flaws are easily glossed over and quickly forgotten, but when the experience is one of passive spectatorship, the errors take on greater import. Like the creases of Exquisite Corpse drawings, these bugs at once affirm and negate the form of the 3D videogame.

Experientially, Exquisite Corpse negates and disrupts the traditional expectations of looking at a drawing. In fact, it throws the purpose of drawing into question by virtue of those seemingly inconsequential creases. The viewer is left to consider an artifact of a play experience and not an intentionally authored image. The emphasis falls on the lines transitioning across the creases and not on the image as a whole. The act of viewing an Exquisite Corpse artifact is disorienting and unanchored, leaving the viewer disconnected from the image; the viewer knows that the real experience of the image is forever gone and understood only by those who actively participated in the game by drawing on a surface of the folded sheet.

JODI's work likewise transforms the anticipated experience and understanding of videogames. The formal affordances of games are turned from the ludic to the visual, technological, and political. *SOD*, for example, intervenes in the formal affordances of the early 3D game engine by flattening the color space from 8-bit to 1-bit, which replaces the illusion of spatial representation with flattened planes of black and white. *Max Payne Cheats Only 1* preys on the 3D gameworld by pushing to the forefront the representational flaws that emerge through player interaction. The video piece therefore is not about the videogame, nor is it trying to tell a linear story. Instead, it becomes a space for exposing and questioning the peculiar trajectory of 3D videogames toward ever greater verisimilitude. Even the title provokes: it makes reference to the tradition of play-through videos in which players record their play experiences, in particular those where cheats (methods to make the game easier to play) and exploits are used, and glitches are exposed. JODI's "cheats" are instead records of chaotic, nonproductive errors, a delight in the flaws of the game. Indeed, the whole enterprise of super-slick 3D games starts feeling sloppy and juvenile after watching *Max Payne Cheats Only 1*.

These effects are not so far from the alienation and questioning Cage wrought upon music through *4′33″*. There are, however, differences. Whereas Cage was ultimately working as a musician to expand the potential of music, JODI approaches games and their technologies from the perspective of outsiders. JODI's work seeks only to alienate rather than to open up possibilities within the form of videogames.

3 Artgames

While artists like Julian Oliver, Cory Arcangel, and JODI have used games to create visual, conceptual, cultural, and critical artworks for quite some time, game makers have only recently begun to think of games with aesthetic, theoretical, and conceptual intentions traditionally aligned with art making. At the forefront of this reconsideration of games was the artgame movement, a group of game makers in the independent games community[1] that produced work from the mid-2000s until the early 2010s. Artgames used the innate properties of games—among them interactivity, game mechanics, and player goals—to create expressive play experiences that explore metaphysical questions around life, ethics, and aspects of the human condition.

To understand how artgame makers approached games as an expressive art form requires an understanding of the systemic nature of games. Many contemporary game makers see games as systems set in motion and experienced through play. Most simply defined, a system is a set of objects, each with their own attributes, that interact within an environment.[2] In a game like Atari's *Pong* (1972, figure 3.1), there are three objects controlled by the players—two paddles and a ball—that occupy a court defined by horizontal dotted lines along the top and bottom of

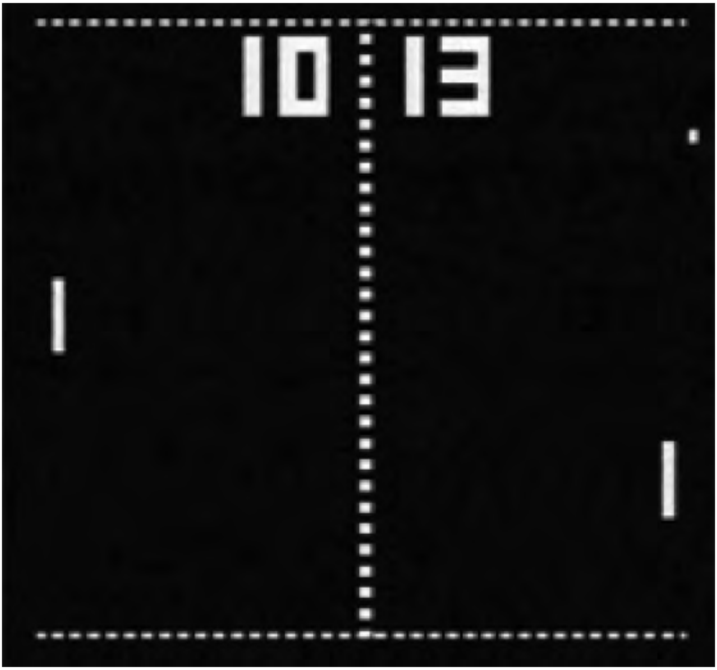


Figure 3.1
Atari, Inc., *Pong*.

the screen and implied vertical boundaries on the sides of the screen. The paddles and ball have attributes that define their behaviors: the paddle reflects balls at angles determined by their origin path and where they touch the paddle, while the ball travels at a constant velocity and follows the basic laws of physics as far as how it bounces off surfaces. The top and bottom edges of the play space are walls that bounce the ball back down into the space at the same angle at which the ball strikes. The vertical sides of the environment behind the two paddles allow the ball to pass, and register a point for the opposing player whenever the ball passes through.

Games have points of contact for engaging with the objects in the system—controlling the paddle in *Pong* is a means of interacting with the ball, the court, and the other player, for example. The points of contact, the "levers" used by players to interact with the system, are referred to as game mechanics. These are carefully designed to provide players with a certain kind of experience as they pursue their goals. Interactivity and the lean-in experience provided by games are characteristics of the form, and are the means by which players experience the ideas and issues embedded in the game.[3]

When we think of systems in games, it is usually in the context of modeling phenomena from the physical and social world—a game of tennis, in the case of *Pong*. But in artgames, the systems are more likely to model ideas and concepts: the journey of life, the ethical complicity of the people involved in carrying out atrocities, the helplessness of depression. Artgames are usually highly stylized systems, using abstraction, allegory, and metaphor to create an idea space that the player can explore by engaging with the system through its game mechanics.

Typically, the experiential "hook" of a game is the sequence of challenges encountered during the play experience in the pursuit of the game's goals. Seldom do shooting, fighting, or literal simulations of real-world systems appear in artgames. Instead, challenge is often found in their unconventional themes and the mechanics used to explore them. The *ur*-example of an artgame is Rod Humble's *The Marriage* (2007, figure 3.2). The game abstractly models the relationship between a man and a woman as a pink and a blue square moving around on a flat background among a series of different-colored circles. The game

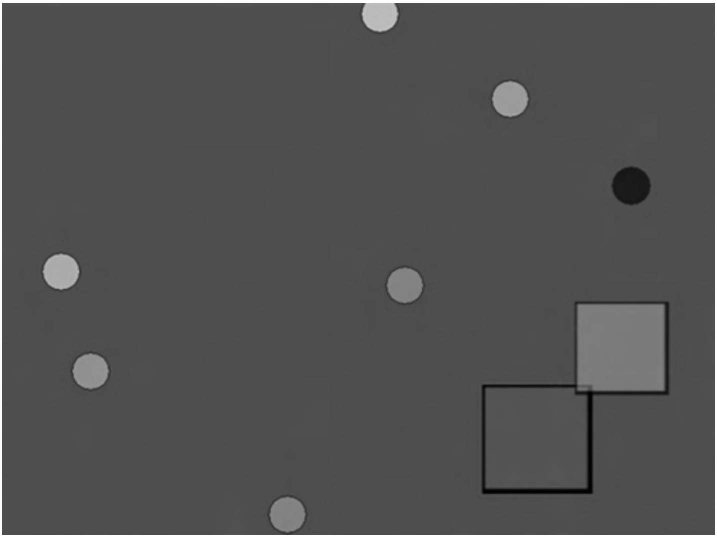


Figure 3.2
Rod Humble, *The Marriage*.

so drastically abstracts the conception of a marriage that without the title, it is unlikely many people would interpret the game as Humble intended.

In *The Marriage*, the goal of the game is to maintain stasis in the system for as long as possible. As Humble noted in his artist statement, "The general game flow will be balancing the need to have the pink & blue squares 'kiss' to insure the pink square does not fade from the marriage versus the blue square needing to touch the circles to insure it does not fade."[4]

The Marriage is very tightly constrained—there are two squares and a group of circles that players can interact with via mouseovers. Once players grasp that mousing over, but not clicking, is the interaction model, they are left to experiment and determine their role in the system. Mousing over the pink and blue squares and the variously colored circles causes a variety of things to occur. Moving over either square results in them shrinking slightly and moving closer to one another; when the two squares collide, the blue square shrinks and becomes more transparent while the pink square grows and becomes more opaque; mousing over a circle makes the pink square shrink and become more transparent; when the blue square touches any circle other than a black one, it causes the circle to disappear and the blue square grows much larger and becomes more opaque; when the pink square touches any circle it shrinks slightly and becomes more transparent; and finally, both squares decrease in size when touching a black circle.

Within this system, a particular rhetorical idea space is open for exploration. The player explores the dynamics between the wife and husband, imagines what the outside influences might be, and hazards guesses at what dark forces are represented by the black circles. This interpretive openness within a tightly defined idea space is typical of artgames. The design of a constrained point of contact and degree of engagement within the system allows a focus on active exploration of the ideas expressed through the game's system.

Artgames were at once forward thinking and conservative. They were forward thinking in that artgame makers had aims beyond delivering male power fantasies involving space marines, wizards, and sports stars. The traditional view of videogames, held by most game developers, is that games do not "mean" anything—they are activities like playing a sport or a cardgame, where meaning is produced endogenously through play and not through messages embedded inside the game content or play experience. Artgames, however, embedded a point of view through the construction of systemic representation of an idea that produced meaning through a player's active participation.

At the same time, artgames were conservative by the standards of contemporary art. Artgame makers were more likely to come from a computer science background, whether through college education or industry experience, than from an art background. This difference in background shaped perceptions of the value of games and what a game maker might attempt to express through a game. Artgame makers embraced a functionalist ideal whereby the play of an artgame was intended to have some social, intellectual, moral, or humanistic impact on the player. Artgame makers believed that a well-designed game could provide an experience unique to games that more clearly drew out ideas and more viscerally engaged the audience than other art forms. The game makers who produced artgames thus had an almost fetishized relationship to the crafts of game design, programming, mathematics, systems thinking, and interaction design in their earnest belief in the expressive potential of games. This is akin to the formalism of modernist graphic design in the mid-twentieth century, with its emphasis on universal communication combined with a nineteenth-century idealization of artistic expression.

Artgames tend to be about something and, more specifically, about a particular rhetorical perspective on that something: relationships, the tyranny of time, complicity, and so forth. These are certainly open-ended ideas, and indeed are explorations of the human condition (a favored declaration of art's role in culture by game makers), but they are designed to be fairly specific in their interpretation. *The Marriage*, for instance, embeds a very male-centric perspective on marriage and gender dynamics, furthering the connection to antiquated art traditions. There is a tension between the open-ended nature of games and their play experiences, and the conception that games can deliver a message. If players can do as they please within the designed space of possibility of a game, then how can game makers expect players to get the intended message?

Though the artgame community was made up of a dozen or more self- and community-identified game makers, there are three in particular that serve as useful markers for thinking about the movement: Jason Rohrer, Brenda Romero, and Jonathan Blow. Rohrer's artgames abstract autobiographical experiences into game mechanics and play experiences. Romero, a commercial game designer with more than thirty years of experience, is best known for her six-game series of nondigital games "The Mechanic Is the Message" (2008–), which take on human tragedies including the Middle Passage, Cromwell's invasion of Ireland, the Trail of Tears, and the Holocaust. Jonathan Blow is the best known and most commercially successful creator of artgames thanks to his wildly popular *Braid* (2008) and *The Witness* (2015). His games explore the process of sensing, thinking, and then acting within new spaces, with a deep investigation of a new way of understanding.

Case Study: Jason Rohrer and Videogames as Autobiography

In my game design classes, I like to begin discussions of the potential of videogames as an expressive form by having my students play Jason Rohrer's *Passage* (2007) and *Gravitation* (2008). For players used to the products of the commercial game industry, Rohrer's two videogames confront expectations in so many ways—low-fidelity, two-dimensional graphics; short play sessions; lack of typical game goals; simple game mechanics; and mundane subject matter closer to their own lives than those of elves or zombies. What I hope my students come to realize by playing *Passage* and *Gravitation* is that there are many other shapes, sizes, and goals for videogames that are yet to be explored.

The idea that a game could be an autobiographical meditation was, in the mid-2000s, unexpected. Instead of thinking of games as another commercial form of entertainment, Rohrer approached videogames as a vehicle for creating autobiographical art. In *Passage* and *Gravitation,* he used himself as the player character. Rohrer's autobiographical videogames distilled life and experience down to a form that allowed others to see into it and reflect back on their own lives.

Jason tells the story of *Passage* (figure 3.3) as emerging from the untimely passing of a family friend.[5] From this experience came a poetic, played meditation on one's movement from adulthood to death. The player begins the game as an eight-pixel-tall male character with blond hair and blue eyes (not so different from Rohrer himself) positioned at the left side of a long space.[6] About two-thirds of the way across the screen is a faint indication that someone else is present. As the player moves her in-game Jason forward, the shape becomes more distinct—a red-haired, green-eyed woman whose likeness is based on Rohrer's wife, Lauren. The player can chose to move down into a maze and avoid her or to continue walking toward her. If the two characters touch,

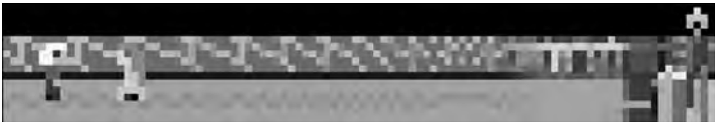


Figure 3.3
Jason Rohrer, *Passage*.

a red heart appears and the pair become connected, with the female character walking a constant body length in front of or behind the male player character, depending on the direction from which he approaches her. The two can then proceed to walk through the game space, a maze of corridors within which a number of treasure chests are placed.

The play experience is quite different if played as a single man than if played as part of a couple. Alone, the player character can navigate wherever he chooses in the maze, making the collection of treasure much easier. When connected, the player is unable to access as many treasures, as the two characters will not fit through some of the narrower passages in the maze. The wife is also unable to collect the treasures on her own—only the male character can collect them—which further constrains the player's ability to collect some treasures.[7]

At the beginning, the far right is a hazy blur of the unknown future, and, as time passes, the left side becomes the foggy past while the right becomes closer and more distinct. As the five minutes of the game pass, the implied camera slowly repositions the character(s) closer and closer to the right edge. The characters begin to age—Jason begins to gray and bald, while Lauren grays; both begin to stoop over and walk more slowly. About four minutes into the game the female character dies and is replaced by a tombstone. The male character continues on alone until the five minute mark, when he too dies.

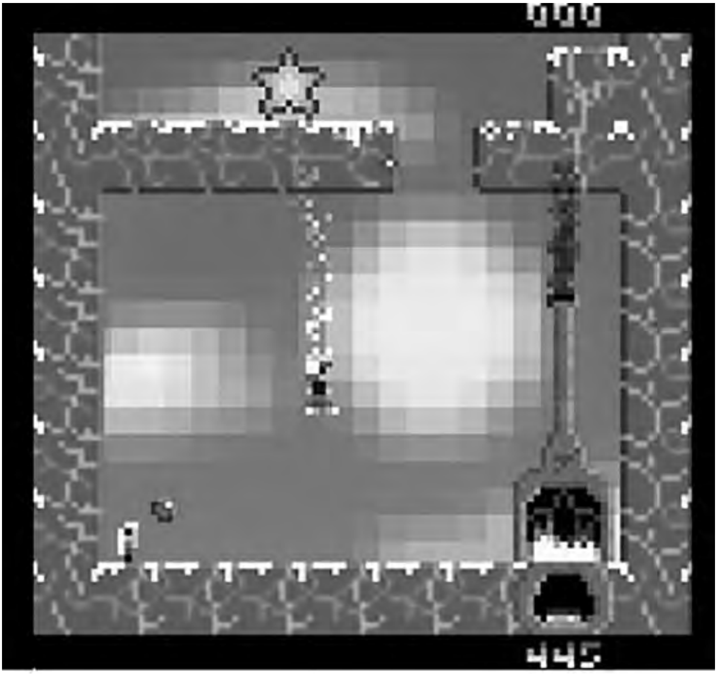
Passage is a modest game by the standards of contemporary videogames. Yet it is deeply moving and powerful. It explores, in game form, ideas pondered for millennia about the meaning of life, its short length, and its limited opportunities. The simplicity of the space is not unlike a brief poem—life twists and turns, sometimes leading to rewards and other times to frustration.

When we are young, the future is unknown, and as we age, the inevitable end becomes clearer and the past more distant. Rohrer certainly could have conceived of something more complex to represent these ideas, but it likely would have obscured rather than sharpened the focus. The simplicity of the game is essential to its role as a ludic *memento mori*.

Rohrer's *Gravitation* (figure 3.4), another autobiographical videogame, followed about a year later. This time, Jason is again the player character but his wife is replaced by their son, Mezza. In-game Jason has to balance his family obligations against his creative urges. The player character has two tasks—keeping his son content by playing catch, which produces love in the son, or following his creative urges, which involves climbing up into a vertical maze to collect stars that become blocks back on the ground that need to be pushed into the hearth in order to provide for the family. The happier the son is, the more of the world the player can see; the sadder the son, the more constrained the view becomes. When in-game Jason is inspired to work (represented by his head catching on fire), he can jump higher and more easily navigate the maze above. But as the child's happiness wanes, the reticle through which the player views the gameworld shrinks, making it harder for the player to navigate the maze. The player's task is then the balancing act of keeping Mezza happy and keeping the home fires burning, all the while following in-game Jason's bliss.

Though less well known than *Passage*, *Gravitation* is a more mature, expressive play experience. The interleaving of the

Figure 3.4
Jason Rohrer, *Gravitation*. The top screenshot shows the game when the son is happy, while the bottom shows the game when the son is sad.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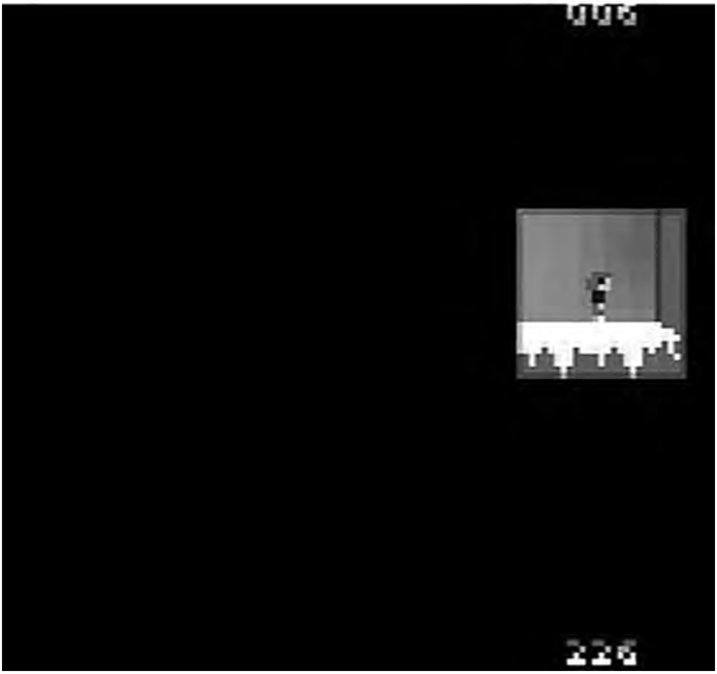
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two opposing goals—play with the child or fulfill his own creative drive—creates a richer space of possibility for the player to explore. The give-and-take of responsibility and self-fulfillment are acutely surfaced in the game. Most players are floored the first time they come back down to earth from a star hunt and discover the son gone, his ball left behind. Players realize that their pursuit of Jason's creative urges produced a void in Mezza's life. But if players always stay down with Mezza, in-game Jason is left creatively unfulfilled.

One of the first things the game community noted about *Passage* and *Gravitation* was their low-fidelity graphics. Though they might bring to mind the retro-graphics nostalgia prevalent in games like *Superbrothers: Sword & Sworcery EP* (2011) and *Fez* (2012), Rohrer's low-resolution graphics were an artistic stance. He wanted the attention to be on the game system and the player's actions rather than the visual and auditory style of the game. For example, rather than creating a highly detailed model of himself in *Passage* and *Gravitation*, he chose to make a minimal, pixelated representation. This provides enough information for the player to know she is represented by a blond, blue-eyed male, which is what is important. The environments in both games are likewise abstracted, but they are also enough to provide the narrative contexts to help players interpret the play experience.

Following *Gravitation*, Rohrer created *Between* (2008), a two-player game exploring ideas about communication and isolation. This was the last of his autobiographical artgames for a period. He followed this with a series of forays into other areas of videogame design: the puzzle game *Primrose* (2009), the storytelling tool *Sleep Is Death (Geisterfahrer)* (2010), the recursive shoot 'em up *Inside a Star-Filled Sky* (2011), and, more recently, *Diamond Trust of London* (2012), a two-player “serious game” about the blood diamond trade.

Rohrer’s *The Castle Doctrine* (2014, figure 3.5),[8] a paranoid fantasy of home invasion, property rights, and masculine identity, has opened a whole new chapter in the critical response to Jason’s autobiographical videogames. The theme of *The Castle Doctrine* was drawn from Rohrer’s own childhood with a security-conscious father,[9] and from his own experiences as an adult living in an area with high crime rates and incidents of violence.[10] Each player starts *The Castle Doctrine* with a small home, complete with a wife, two children, and a safe for storing their possessions. Players have two tasks: protect their home, family, and possessions from robbers, and, in turn, rob the homes of other players. To protect one’s home, the player can build walls,

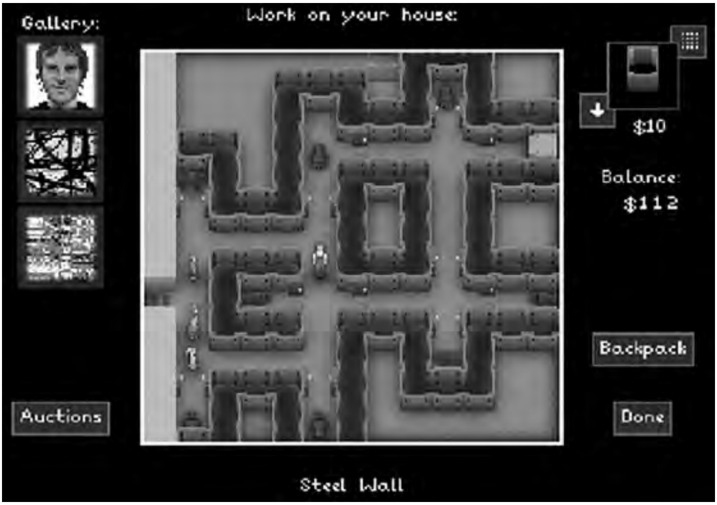


Figure 3.5
Jason Rohrer, *The Castle Doctrine*.

set traps, and have a pit bull patrolling the premises. For the criminal side, they have access to tools like saws, explosives, ladders, and weapons. In the abstract, players are creating puzzles for one another. Within the game narrative, however, they are engaging in a dystopian enactment of the Castle Doctrine, a mix of laws and social values that allow individuals to protect their homes, their families, and their persons by any means necessary.

The Castle Doctrine dives into murky territory both in terms of its subject and also the rhetorical perspectives embedded in the game. The positioning of the adult male as protector, and the family members as what are essentially pawns to be protected, asserts a very conservative and traditional conception of family and gender roles.[11] In this respect, it is no different than *Passage* and *Gravitation*. The values put forward in Rohrer's games feel closer to 1950s ideals—a darker, ludic Norman Rockwell—than the progressive criticality typical of contemporary art. At the very least, there is a deep romanticism in these games; in his earnest use of a medium to convey feeling, Rohrer's games feel more at home in a conversation about nineteenth-century British literature or German painting than they do contemporary aesthetics.

As much as *Passage*, *Gravitation*, and *The Castle Doctrine* may be conservative in their social rhetorics, they are progressive in their expressive use of games. The idea that games can be autobiographically expressive, in the same way a poem, painting, or song might be, is not the traditional way people think about videogames. That it took two hundred years for games to catch up with painting and literature says a lot about how videogames are considered as a medium. In the six years since Rohrer released *Passage*, a lot has happened in the independent games community, particularly in the broadening of games as an autobiographical form. The work of artists such as Merritt Kopas—*Lim*

(2012) deals with the experiences of someone having to "pass" for the sake of one's safety—and Ryan Green and Josh Larson—*That Dragon, Cancer* (2013) addresses a father's battle with his son's cancer—has continued to explore videogames as a medium for autobiographical expression. Happily, it is no longer unusual, at least in indie game circles, to see this approach to videogames.

Case Study: Brenda Romero and Games of Complicity

Brenda Romero has been a game developer since the early 1980s, beginning her career while still in high school on the seminal role-playing videogame series *Wizardry* (1981) and *Jagged Alliance* (1994). But it was not until she was primarily working as an academic in the mid-2000s that she began to consider games as a medium for exploring human tragedy.[12] The idea that a game could address a complex aspect of humanity was not new. Elizabeth Magie's *The Landlord's Game* (1906) was an exploration of Henry George's economic theories about real estate and monopolies in the late nineteenth and early twentieth centuries.[13] More recently, Chris Crawford's *Balance of Power* (1985) explored the conditions of the Cold War between the United States and the Soviet Union. What was new here was someone from within the game industry so radically changing her thinking about games.

Romero's first game of this type was for an audience of one—her daughter Maeza. One afternoon, Maeza came home from school after a lesson on the Middle Passage. As she explained it, Africans were loaded onto cruise ships and taken over to North America. Romero quickly conceived of a game to help her daughter better understand the tragedy of the Atlantic slave trade. She handed Maeza a handful of Meeples (the wooden pawns often used to represent people in boardgames) and asked that she create some families out of them. Once her daughter had carefully colored a few Meeple families, Romero began the game. She arbitrarily pulled Meeples from the families, leaving orphans and widows behind. This immediately upset her daughter. Why would anyone do this? The slaves, the Meeples taken from their families, were then loaded onto boats for the trip across the ocean. Supplies were low, and so Maeza had to make decisions about who would eat and who would starve. By the end of the game, Romero's daughter had a completely new conception of the Middle Passage, and Romero had the seeds for a new project.

Romero's "Mechanic Is the Message" series—six games that explore human tragedies wrought by the hands of others—was revelatory for Romero, and for game makers and game players alike. Two core affordances were at play: the conceptual affordance of game design as a means of abstracting a human phenomenon, and the formal affordance of a material presentation of a game in a form unexpected by videogame, boardgame, and cardgame players and creators. Romero conceptualized games in the series as games, with their emphasis on play mechanics, goals, resources, a play space, and so on. But she did so within a different material framework and at a different scale than one might expect. Best known of the series is *Train* (2008), a game in which players are charged with transporting (or disrupting the transport) of yellow Meeples in boxcars to terminus points. Other games in the series address Cromwell's invasion of Ireland (*Síochán leat*, 2009), the Trail of Tears (*One Falls for Each of Us*, unreleased), and migrant workers in the United States (*Mexican Kitchen Workers*, unreleased).

The strength of the series lies in giving players a role in enacting a human-wrought atrocity. For instance, *Síochán leat* (figure 3.6) abstracts the impact of Cromwell's invasion of Ireland into

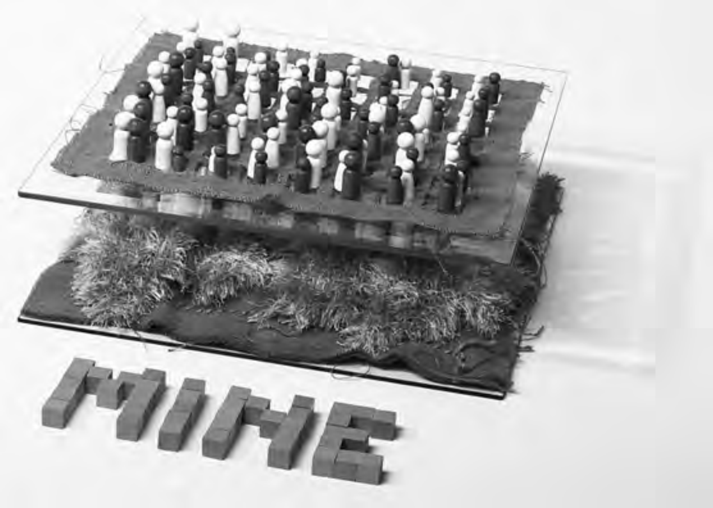


Figure 3.6
Brenda Romero, *Síochán leat*.

a boardgame that allows players to experience one particular aspect of the English invasion: the way the Irish were forced to turn against one another as the English claimed more and more land. The game takes place on an eight by eight grid on which two players attempt to find a place for their people in the face of the English advancements. At the start of the game, each space on the board is filled with one green and one white person. The two players pick either white or green to be their people. The English, represented by orange cubes, make the first move: they occupy a space, displacing all people on it. Should the English block off a section of the board, the players are not allowed to move across the orange border. The players must then take turns to find room for their people in nearby spaces. Each space on the grid can hold up to four. If a player is unable to find room for the people displaced by the move, they are removed from the board and sent to Barbados as slaves. At first, the players cooperate, as there is ample space on the board, but as the English progress, space becomes tighter and tighter, causing the two players to make difficult decisions involving displacing their opponent's people and sometimes even their own in order to stay alive. The game is ultimately unwinnable, as the players are always overrun by the English.

In most artistic depictions of tragic events, some degree of abstraction is used to focus on and draw out particular aspects of a phenomenon. Picasso's *Guernica* (1937), for example, focuses on suffering and emotional anguish, and largely leaves aside the events that produced them. By modeling a particular well-selected aspect of a larger tragedy, Romero creates experiential clarity that focuses on one part of human behavior. Her decision to narrow down each tragedy to provide a more tangible, comprehensible means of engaging with the game is genius. In *Síochán leat*, the focal point is the dog-eat-dog pressures on the Irish to usurp one another's land during Cromwell's invasion. *Train* (figure 3.7) puts the players in the role of Nazis trafficking people to concentration camps (or individuals seeking to free them, depending on how the player approaches the game). *One Falls for Each of Us* does not represent all lives uprooted or lost, but the sheer volume of some 10,000 Meeples makes a powerful statement about the scale of the tragedy.

Key to Romero's series and this focused abstraction is the exploration of complicity. Complicity is at the core of *Train* and *Síochán leat*—the active role players inhabit inside the abstracted horrors makes material the tensions of human actions that led to tragic outcomes. I have witnessed players come to certain moments in *Train* and blanch in horror at the meaning of their

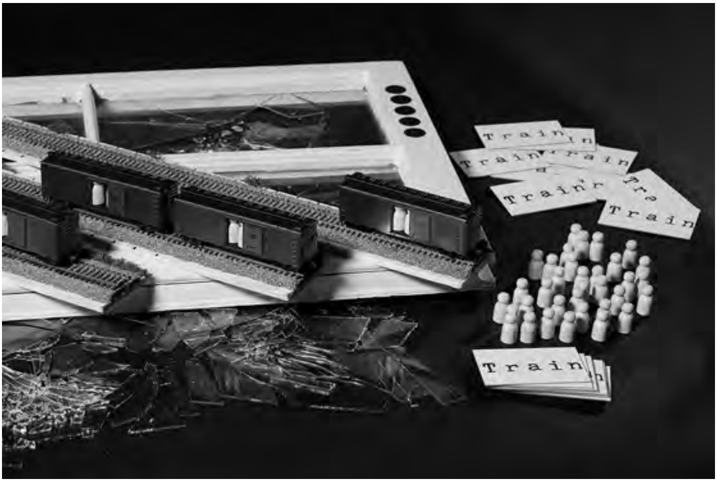


Figure 3.7
Brenda Romero, *Train*.

actions within the game's systems; I have watched *Síochán leat* players agonize over the decisions forced by English encroachments on their land. Games are well suited to put the audience in an active decision-making role; in the games within "The Mechanic Is the Message" series, players are able to explore these tragic moments in human history, giving them a vantage point otherwise difficult to access or consider.

Given the systemic nature of games, it is no surprise that Romero places emphasis on the rules of these games. They are not available online for viewing, and Romero does not allow them to be photographed to ensure that the game remains unpublished beyond the single work she created. For someone with thirty years in the game industry, where releasing a work means having it mass produced or available in infinite digital copies, this stance is worth noting. The uniqueness of the object of each game is important to Romero, and so, keeping the rules private except as part of an exhibition is a way to maintain the sanctity of the works.[14] The uniqueness of the art object is not what is most at stake here, though it does matter; it is in the rules that the materiality lies, as they are the structure and essence of the play experience, and that is what Romero wants to protect.

Case Study: Jonathan Blow and Games as a Mode of Knowledge

As far as the "are games art?" argument goes, Jonathan Blow is decidedly in the "who cares?" camp. That is not to say he does not care deeply about games as a creative and expressive form, nor that he is ambivalent about how games are received. It is just that he finds "Art" to be irrelevant both to culture as a whole and to his own life and work. Yet Blow's game *Braid* (2008) is viewed by many as the most important artgame produced thus far, and *The Witness* (2015) is expected to be equally important. Blow uses the medium of games to express certain ways of thinking about and approaching the world.

My own experiences with Blow's games have been at once frustrating and mind opening. His use of puzzles has, at times, created a "me vs. the designer" dynamic that led me to abandon *Braid* on more than one occasion. I could mechanically move about the world of *Braid* and execute the basic actions of the platformer genre, and soon enough I learned the time rewind ability, but I was at a loss to see how it all came together in a coherent worldview. I tripped myself up trying to predict Jonathan's intentions instead of just playing the game. Once I quit second-guessing Blow and focused on the game, its logic system, and the challenges it presented, my perspective changed. I began to see his games as hermetically sealed universes with their own laws and traditions that, at first, I did not fully grok, but that I could come to understand through focused, reflective play. Then, all of a sudden, I would see what had eluded me—the solution to a particular kind of challenge—and a new concept in the game and the ideas it embodied would be revealed. What seemed impossible would become crystal clear as I played my way through the problem.

This experience of suddenly understanding something that previously was completely unknown and unseeable is at the heart of Blow's games. He uses games as a language system, not unlike mathematics, to create a space within which ideas can be explored. A useful reference here is John Dewey, who viewed art as a framework through which we can generate understanding.[15] The contrast most often drawn is to science—an abstracted methodology for producing knowledge through the process of forming a thesis, which is tested through experiment and evaluated based on the results. The knowledge derived through the scientific process is based on the production of facts. For Dewey, the mode of knowledge produced through art is experiential and therefore varies based on the artist, the artifact, and the individual experiencing the work. A form of second-order communication unfolds through the art experience that generates a personal, idiosyncratic mode of knowledge. This differs from the scientific mode of knowledge that is reproducible (until the thesis underpinning the facts is refuted, of course) by being variable and experiential, and thus lacking tangible, extensible results.

Rather than taking Wittgenstein's stance of "Whereof one cannot speak, thereof one must be silent,"[16] Blow instead uses games as a mode of knowledge, one constructed through the design and production of the game and received and understood through play. Blow's mode of knowledge melds the experiment-based scientific method with Dewey's more intuitive art-based mode through the act of gameplay.

In *Braid*, we see a game that on the surface operates within the tried-and-true platformer genre popularized by the *Super Mario Bros*. series. Instead of following the standard trope of having lives as a resource, however, *Braid* allows the player to rewind time to erase the mistakes that would otherwise lead to the loss of a player's life. And so, the game provides a mode of knowledge for reconsidering the concept of time through gameplay. Running, jumping, climbing, and collecting are the grammar of the knowledge system of the game genre, and *Braid* makes use of them all.

In "The Pit," a level in the first world of *Braid* (figure 3.8), the player is confronted with a seemingly simple challenge—cross from the entryway on the left to the door on the far side of the pit. The door, however, requires a key that lies at the bottom of the deep pit. Getting down to the key is easy enough, but getting

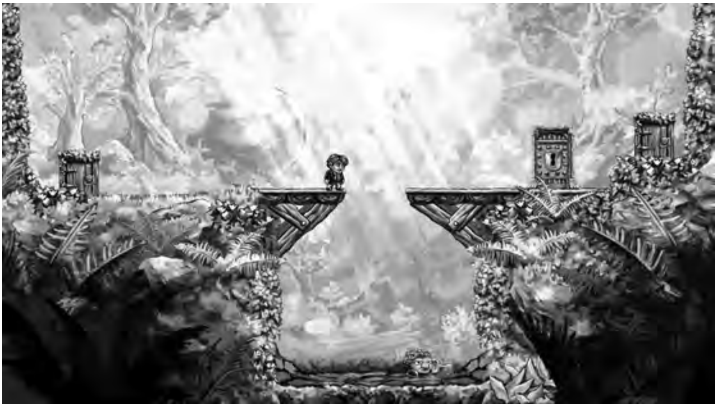


Figure 3.8
Number None, Inc., *Braid*, "The Pit."

back out is harder, as the distance is much higher than Tim, the player character, can jump. The player knows she can use the rewind function to get back out, but will that negate the picking up of the key? A clue is found in the key's appearance—it glows a bright chartreuse, indicating something special is going on. When Tim picks up the key and the player rewinds time, the key stays with Tim. The game has just taught the player that glowing objects do not follow the same laws of time as Tim. Once this is understood, the puzzle becomes simple for the player to solve, and she can easily get Tim out of the pit and unlock the door off to the right. And more importantly, the player has learned a new tenet of the knowledge system of *Braid*.

Within the artgame community, Blow is one of a handful of game designers exploring puzzles as a central component of their work. The practice of placing puzzles inside of videogames goes back to early adventure videogames like *Zork* (1979) or *King's Quest* (1984). How Blow uses puzzles is distinctive, however, and central to his goals as a game designer. In his seminal 1994 essay "I Have No Words and I Must Design,"[17] Greg Costikyan discusses the differences between games, toys, stories, and puzzles. The key point with puzzles is that, unlike games, there is always a single, optimal solution to a puzzle. Take a jigsaw puzzle—there is only one right place for each piece to fit. A game, conversely, has a much more fluid and diverse range of outcomes. A game designer has no control over whether or not a player has a certain experience or understanding, as the player may never play certain parts of a given game.

In the case of Blow's design work, puzzles are an instrument of measurement, a means of ensuring a certain level of understanding is obtained by the player.[18] Blow's games carefully, methodically prepare the player for this knowledge acquisition through sequenced puzzle design. He tends to cluster puzzle types into groups that build on one another until the player has come to a level of mechanical understanding of the limits of that set of actions as they relate to some fundamental understanding in the game and its idea space.

Blow's *The Witness*[19] manifests the idea of games and puzzles as a mode of knowledge in metaphysical and literal ways. The player finds herself seemingly alone on an island. To move through the gameworld, and thus the game, the player must solve sets of path-tracing puzzles. The very start of the game establishes the basic framework for player actions and the lens through which understanding is developed. The player walks down a dark corridor toward a well-lit door on which she finds the first puzzle (figure 3.9). To solve it, and thereby exhibit understanding of the basic laws of the game's knowledge system, the player traces a line from the starting point to the end point of a path. The player demonstrates her understanding of

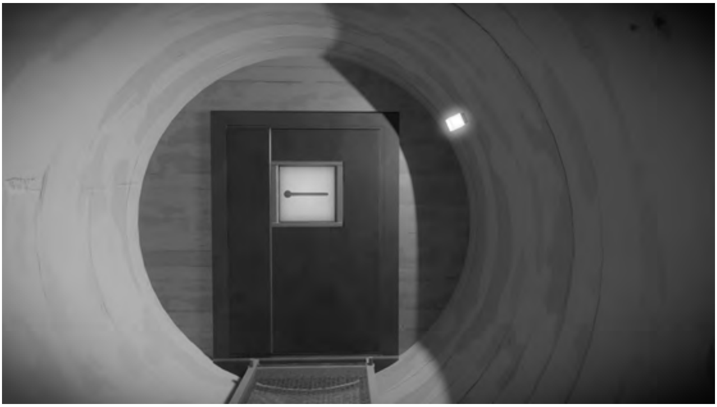


Figure 3.9
Number None, Inc., *The Witness*. The first puzzle of the game.

the basic actions of the game in this opening sequence—walking, observing, path-tracing, and understanding. As soon as this first puzzle is solved, the door opens and the player is released into a small building on the first of many compounds dotting the island.

Not so far into *The Witness*, the player encounters a set of simple visual path-tracing puzzles composed of black and white squares surrounded by paths (figure 3.10). On the left of the first puzzle is the starting point, indicated by a circular cul-de-sac, and on the right, directly across from it, is the end point. To solve the puzzle, the player simply traces a line separating the black and white squares. The second puzzle in the series again presents one black and one white square; this time, the start and end points are at opposite ends. The player must trace a line through the paths that separates the two colors. The puzzles continue to ramp up in complexity within the basic challenge of color separation. My first time playing the game, I quickly solved the first

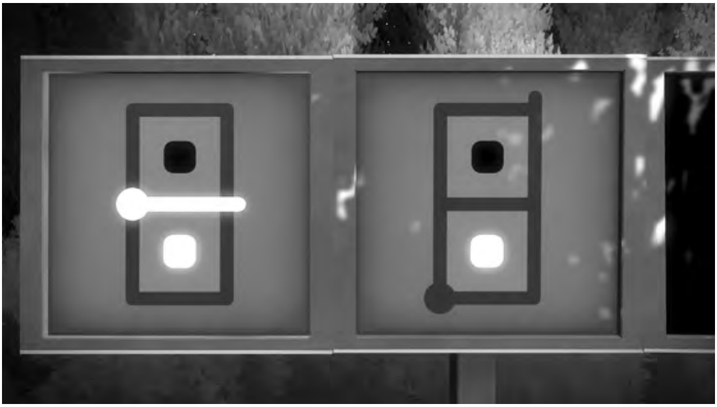


Figure 3.10
Number None, Inc., *The Witness*.

two or three in the sequence, but only through dumb luck. Soon enough, I became stumped by one of the puzzles in the set. I did not understand the premise of the puzzle type, and so was stuck. After thirty or forty minutes of fruitless experimentation, I suddenly saw the logic and was able to solve the puzzle. I quickly moved through the remaining puzzles in the set. What was invisible suddenly came into sharp relief. This insight gave me a new way to think as I had learned another principle of the gameworld.

There are moments of clarity like this throughout Blow's games—a player learns to logically comprehend a new principle and then develops facility in applying it through the play of the game. It is perhaps a poor analogy, but this logical grokking strikes me as similar to the visual experience of suddenly seeing an image hidden inside another image. Take, for example, the FedEx logo. I am not sure how many years I looked at the logo and did not see the arrow in the negative space between the "E" and the "x." But once I saw it, I could never unsee it. Blow's games operate in this way, not in suddenly being able to literally see something previously hidden (though that is the case in parts of *The Witness*), but instead in suddenly understanding the logic of a particular puzzle type within his games and, by extension, gaining a tool for understanding the gameworld.

The experience of Blow's games operates on three levels: mechanically, logically, and conceptually. The mechanical operations concern direct interaction with the gameworld. In the case of *Braid*, this is the running, jumping, and climbing derived from the platform game genre plus the ability to rewind time. The logical operation of *Braid* involves coming to terms with the puzzles of the game. For example, in world four of the game, time progresses when the player moves from left to right but rewinds when Tim moves right to left. Around this, the player has to first identify and then come to understand what, exactly, the puzzle is asking her to contemplate within that logical space. Finally, Blow's games operate conceptually where, in the case of *Braid*, there are considerations of the passage of time and the actions one takes in pursuing one's goals. The game creates a space for meditating on these ideas that is generated through the player's engagement with the logical framework that is manipulated through the mechanical handles of the game.

This three-layer framework, at the very least the mechanical and logical layers, can be said to be present in any game. But what is different with Blow's work is the nuance and sophistication he brings to the design of the puzzles and the logical questions they ask. Blow has spoken about his design process in part involving the investigation of a central idea.[20] In the case of *Braid*, that idea is the manipulation of time within games. From that central inquiry, Blow then asks any number of questions that begin on the logical layer relating to the manipulation of time, which are then spun out in a practical way through the mechanical layer and presumably positioned within the larger metaphysical questions the game opens up. With *The Witness*, Blow explores, among other things, the scientific process of hypothesizing, experimenting, and analyzing as it relates to human perception, as well as its role in understanding oneself and one's place in the world.

Coming back around to Dewey and modes of knowledge, Blow takes games as a place where a different form of understanding can happen that draws on, yet is distinct from, language, images, science, and mathematics. He draws from these, of course, but only so far as they are form-appropriate for games.

4 Artists' Games

The game art and artgame examples in the preceding chapters demonstrate how games are approached in radically different ways by different communities of practice, and even within those communities, there is a good deal of variation. A useful framework for thinking about the differing considerations of games as an art form comes from the philosopher John Hospers and what he calls thick and thin aesthetics. Thin aesthetics are those that focus solely on the formal values of a work, while thick aesthetics are those that take into account the work's place in more complex cultural contexts:

> When we contemplate a painting as something more than a set of relationships of lines and colors, when we enjoy the mood it conveys or the light-values presented in it, or the "sadness" of a piece of music, or the character-study in a novel, or the love-emotion in a poem, I suggest that this kind of experience, depending on previous experience of life, to which the "purists" would deny the title "esthetic" at all, be called *thick* sense of "esthetic."[1]

Hospers's thick aesthetics can be seen as a means of grounding a work in the more nuanced realm of experience, which requires a sophisticated understanding of what can be created through a given medium, how it is useful to its community, and how it fits into the larger whole of its time and place. Expanding Hospers's framework provides a tool for unpacking the ways game designers approach artistic practice and how artists approach games and game design. Game art like Myfanwy Ashmore's *Super Mario Trilogy,* Cory Arcangel's *Beat the Champ*, or JODI's *SOD* would be perceived by many game players and game makers as aesthetically thin. They would likely see these works as dealing only with the surface qualities of videogames. For the contemporary art community, these same works would be perceived to have the qualities of thick aesthetics, as they embody both a criticality and a conceptual rigor. On the other hand, artgames like *Braid* or *Passage* are aesthetically thick for some in the game community in that they are interactive, systemic representations of real-world phenomena and/or the human condition conveyed and experienced through play. But from the perspective of the contemporary art community (should they even consider these games as art at all), artgames are aesthetically thin because of their emphasis on craft and medium and their antiquated ideas of art's function as a window onto the soul.

Game art (art made from games) uses games for the thin aesthetics of symbolic expression in service of the thick aesthetics of conceptual exploration. Artgames take a more conservative approach of emphasizing representational expression in a thick way, at the same time that they thinly explore the conceptually and critically focused aesthetics of contemporary art. But what happens when an artist combines the thick aesthetics of both communities to produce an artists' game?

Robert Rauschenberg and Jim McGee's *Open Score* (figure 4.1) did just that back in 1966. The work was the opening performance of the "9 Evenings: Theater and Engineering" series organized by Billy Klüver's Experiments in Art and Technology

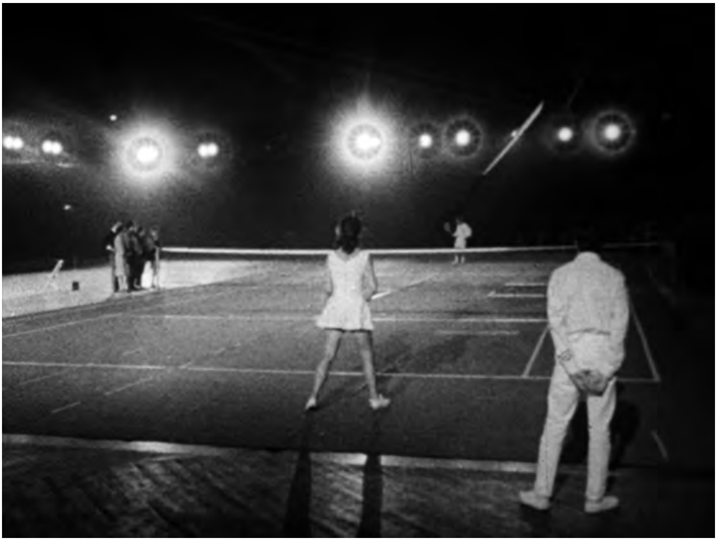


Figure 4.1

Robert Rauschenberg, *Open Score*. Performance presented as part of "9 Evenings: Theatre and Engineering," the 69th Regiment Armory, New York, United States, October 13–23, 1966. Still from the factual footage shot in 16 mm film by Alfons Schilling. The Daniel Langlois Foundation for Art, Science, and Technology, 9 Evenings: Theatre and Engineering fonds. Courtesy of Julie Martin (Experiments in Art and Technology) and the Daniel Langlois Foundation.

(E.A.T.).[2] The emphasis of the series, and E.A.T. in general, was to find new ways for artists and engineers to collaborate from the earliest stages of a project in order to create a more synthetic experience by bringing the best of technological and artistic practices together. Klüver thought of the "9 Evenings" project as a battle: "There are three elements fighting. The artists, the engineers and the audience. These three will have to come to some resolution."[3] The use of a game—tennis—as a core facet of

Open Score makes complete sense in this light. The structure and play of the game created a space within which the artist and the audience could directly interact.

Open Score was anchored by a tennis match between the painter Frank Stella and the professional tennis player Mimi Kanarek on a court set up inside the Park Avenue Armory in New York City. Stella and Kanarek's rackets were each outfitted with a microphone and a sensor. The microphone captured the sound of the ball hitting the racket, which was played back over the sound system, while the sensor triggered a slight dimming of the lights illuminating the court. In addition to the tennis players, there were several hundred amateur performers on hand, each following a minimal choreography that moved them about the space. Slowly, as the match proceeded, the building became darker and darker until the space was nearly pitch black to the unaided eye. The hundreds of ancillary performers moved through their routines as Stella and Kanarek attempted to continue their match. This allowed the viewing audience, who watched on displays, to see the whole event—both the match and the ancillary performances. And so, as the main lights dimmed, the viewing audience could continue to see the activity.

Rauschenberg described the piece:

> Tennis movement. Put in the context of theater, it is formal dance improvisation. The unlikely use of the game to control the lights and to perform as an orchestra interests me. The conflict of not being able to see an event that is taking place right in front of one except through a reproduction is the sort of double exposure of action. A screen of light and a screen of darkness.[4]

Several key points emerge here. Rauschenberg and McGee used the structures, rules, and technologies of tennis, including its ball, rackets, and court, as a game, but to a completely different aesthetic end. Rather than a contest between players, the game became an engine for generating music and a process for procedurally changing the atmospheric lighting of the performance. Rauschenberg and McGee reimagined and refocused tennis in order to create a new kind of spectator experience. Their use of tennis was closer to modern dance or music than to the game's traditional use value of play and competition. And from visual and performing art, they drew yet more elements: musicality, instrumentality, and musicianship; performer and audience roles; and the framing of direct and indirect spectatorship. *Open Score* wove together aspects of game design, theater, and performance art in ways that created a synthetic, aesthetically thick exploration of play. The work was clearly a game, but also clearly a work of art. In other words, *Open Score* was an artists' game.

One of the important aspects of thick aesthetics in games and art is the role of play. From the late eighteenth century onward, play has philosophically been central to the practice of art.[5] However, it has almost exclusively been seen as part of creation and artistic practice and not in terms of reception and experience. Even in more contemporary contexts, play is the domain of the artist, not the audience.[6] Look no further than Exquisite Corpse, where playfulness resides in the interaction between artists and folded paper.

But what happens when play is intended as the audience experience? What if authorship resides with player *and* creator?

Fluxus event scores were one of the first forays into this conception of art. Event scores were simple instructions for performing a work of art. They were often open ended, creating a space for interpretation on the part of audience members and thereby allowing them to participate in the creative act. Take Mieko Shiomi's "Mirror" (1963): "Stand on a sandy beach with your back to the sea. Hold a mirror in front of your face and look into it. Step back to the sea and enter the water."[7] There is ample room for input on the part of the audience: On which beach? With which mirror? Walk how far into the water? This approach, whereby the persons who enact it also complete the work, was and continues to be an important addition to artistic practice. As game designer Greg Costikyan points out,[8] Fluxus artists in particular embrace a conception of playfulness. Fluxus asks its viewer to get involved, to literally and figuratively do some of the work of creating the artwork.

Games and their play can be a medium concerned with an aesthetics of performed experience. A gameplay experience is crafted through rules, mechanics, and goals in order to generate a space for player actions. The materiality of games arises from gameplay itself and not form the objects used to play the game. Games can be a medium through which play makes material both concept and form. This is the territory explored by artists creating artists' games. Three in particular show the breadth of possibilities of games and play in artistic practice: Blast Theory's ongoing explorations of the what, where, and how of games and their play; Mary Flanagan and her work activating play as a form of criticality; and Nathalie Pozzi and Eric Zimmerman's collaborations, which turn a modernist emphasis on medium into a postmodern experience.

Case Study: Blast Theory and Games as Speculative Design

For an art group, Blast Theory is organized in an unusual way. It operates as something between an event production company, a theater troupe, and an academic research center. It has a board of directors, but also artists—Matt Adams, Ju Farr Row, and Nick

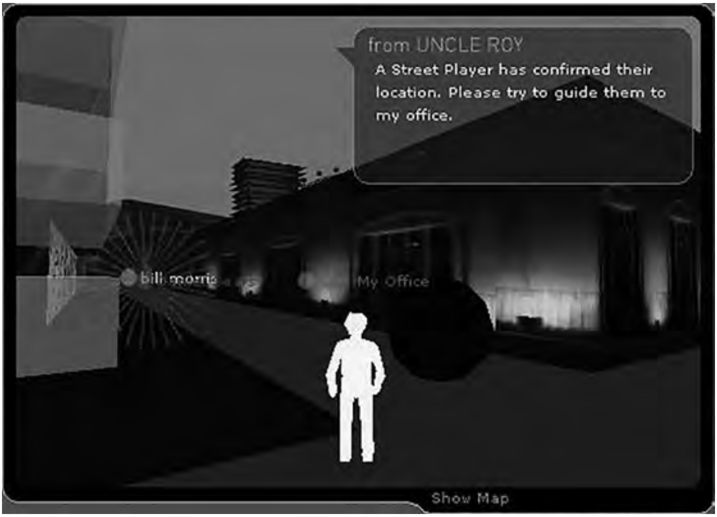
Tandavanitj—who operate in the same way that the principles in an architecture or design firm might. They are represented by Creative Artists Agency, which more often handles actors and musicians. On the surface, it is all very slick and corporate looking. Yet Blast Theory produces art—not products, not marketing events, but art.

Though not spoken of by Nicolas Bourriaud in *Relational Aesthetics*,[9] nor in his follow-up *Postproduction,*[10] Blast Theory operates very much in the spirit of Bourriaud's aesthetic framework concerning works that have a greater relevance to contemporary life outside the "white cube" of the art gallery and museum. More recent approaches, like Grant Kester's dialogical or collaborative aesthetics[11] and Claire Bishop's framework for participatory art,[12] seem to run counter to Blast Theory's quasi-commercial work, though its projects do have a place in Kester's and Bishop's aesthetic systems. A key tenet of all these various conceptions of a new participatory aesthetics is the removal of the distance between artist, work, and audience, and a corresponding reimagining of the contexts (geographic, social, economic, cultural) in which art takes place. Rather than being constrained by a market or a particular delivery platform, Blast Theory is guided by broader, more conceptual concerns and questions including the investigation of the social and political aspects of technology through participatory, site-specific works.

The work of Blast Theory creates an openness that speaks to prevailing concerns around participatory art in ways that also have natural affinities with games. A reoccurring theme in discussions of participatory art is an emphasis on process and experience over product. This draws out an important aspect of systems-oriented work—the process *is* the product, even if its materiality is temporal and often ephemeral. The space of possibility—the possible experiences and outcomes of the play experiences generated through play within the game's rules—of an artists' game is a clear form of participatory art; Blast Theory's explorations of gameplay are melded with an artistic sensibility about the roles of technology, presence, and other similar ideas.

Uncle Roy All Around You (2003), a game created for and premiered at the Institute of Contemporary Arts (ICA) in London, is a prime example of Blast Theory's participatory art. It is a site-specific, locative game that combines a fictional conceit of seeking out a mysterious figure, Uncle Roy, in a mix of real and virtual spaces. For in-person players, called street players, *Uncle Roy All Around You* began at the ICA. Street players were asked to give up anything in their pockets (their keys, wallet, phone, etc.) and in return, they were given a handheld computer and a sixty-minute period to find Uncle Roy. Their only clue was, "Head to a location in the park. Uncle Roy will send you a message indicating where this is. Once you are there, tap 'I am here.'" The handheld computer was outfitted with technologies that enabled a map application for tracking the street players' progress. The only communication functionality came via voice memos that could be sent to the other group of players, called online players.

Online players were located inside the ICA. They were stationed at computers on which they tracked an assigned street player via a virtual recreation of the area around the museum (figure 4.2). The online players had two goals: to find Uncle Roy's office, and to find and help their assigned street players do the same. Uncle Roy let the online player know that he could click on the generic icons representing the street player to send text-based messages to guide her to Uncle Roy's office. The online player could also see a photo of the street player and get some basic information about her appearance. Once the street



from UNCLE ROY
A Street Player has confirmed their location. Please try to guide them to my office.

Figure 4.2
Blast Theory, *Uncle Roy All Around You*, online player's view.

player found the proper location in the park and tapped the "I am here" button, the street player's location was confirmed for the online player, making it easier for him to track and assist.

When the street player found and entered Uncle Roy's office, the online player was given the option of being able to remotely watch the street player inside the office. If the online player said yes, the two were no longer able to communicate with one another. At this point, both players were asked to answer a series of questions "as honestly" as they could. The street player was asked to answer some questions verbally and one question in writing on a postcard: "When can you begin to trust a stranger?" The online player was asked questions by Uncle Roy via text: "If someone you'd never met before was having a personal crisis would you be willing to offer them support?" A second question was then posed: “Somewhere in the game there is a stranger who is also answering these same questions. Are you willing to make a commitment to that person that you will be available for them in a crisis?” The online player was then given a choice of going out into the real-world game to meet the street player at Uncle Roy’s office, continuing to occupy the virtual world to observe and chat with other street players, or simply to quit the game.

After a last request to “picture a stranger in your mind and stare at the camera,” the street player was sent back out into the street with instructions to go to a phone booth to await a call. Eventually, a call came asking the street player to get into a nearby white limousine. A man entered the car and sat next to the street player. The man began to ask a few additional questions, including,

> If a stranger was having a personal crisis, someone you’d never met nor spoken to before, do you think you could call and offer them words of encouragement or advice? At the moment, Uncle Roy has arranged for another player of this game to be asked the same set of questions. But they are also being asked if they would be willing to give a commitment of twelve months. What Uncle Roy would like to know is if you would be willing to give this player a similar commitment of twelve months.[13]

If the street player answered yes, she was asked for contact information at which she could be reached during the upcoming year. Once the passenger had the information, the limousine stopped, and the street player exited the vehicle. The passenger let the street player know she should return to the ICA, where she would be given the possessions she surrendered at the start of the play session. The street player’s postcard was then mailed to one of the online players.

Uncle Roy All Around You provides a mixed-reality experience that most closely aligns with the Augmented Reality Game

(ARG) genre—games that attempt to extend the space of play into unexpected aspects of life by delivering the experience via websites, fax machines, cell phones, and the like. But the game goes deeper than being a diverting puzzle lying in plain sight. *Uncle Roy All Around You* is an investigation of how in-person and networked relationships can create bonds, both real and artificial in nature. The game sets up a space within which players are asked to collaborate and communicate in ways that otherwise would not happen in daily life, particularly among strangers.

The structures afforded by games position works like *Uncle Roy All Around You* as an answer to the process-over-product critique of participatory art. Blast Theory's game puts all participants in the role of both performer and creator. More importantly, the ephemeral nature of the play experience leaves no expectation of material product. The entire experience is an elaborate experiment to see how players will respond to the question of committing for a year's time to provide a stranger support in times of crisis.

In addition to the aesthetic frameworks of Bourriaud, Bishop, and Kester, we can add another two referents for Blast Theory's work: the speculative design of William Gaver's Interaction Research Studio and the collaboration of Fiona Raby and Anthony Dunne. These researchers are doing work that merges product design, basic design research, and artistic practice in speculative, research-driven projects. Though Gaver's Interaction Research Studio and Dunne & Raby produce work that has the material qualities of product design, the exploratory nature of the two groups falls decidedly outside the post-Dreyfuss concern for designing for utility, wherein human-centered design was a means of improving products—a design-as-problem-solving approach if there ever was one.[14] This opens up otherwise unexpected research and experiential possibilities, as demonstrated by the projects that Gaver's lab and Dunne & Raby have created: an LED stand for guiding nun's prayers, a series of devices for individualized harvesting in a post-industrialized agriculture world, and a small loft for protecting one's possessions from electromagnetic fields.

Central to this type of work is ambiguity—of function or purpose, of operation, and of the role the objects play in our lives.[15] While these ideas may be familiar to artists, they are uncomfortable for most designers. With games, however, ambiguity is already a large part of the design process. The design of the system of a game—defining its actions and goals, creating the tone of the overall experience, and so on—shapes the space of possibility within which players complete the game through their play. Design-wise, the designed space of possibility leaves itself open to exploration and interpretation, which by its nature results in uncertain outcomes. The play experience cannot be known until the game is played. And even then, players are left to make sense of and determine their own intentions and the meaning of their experiences. Like the Interaction Research Studio and Dunne & Raby, Blast Theory's speculative design asks more questions than it answers, thereby creating experiences that open up new ways of thinking and feeling.

Another Blast Theory project, *The Goody Bullet* (2010), is a case in point. Commissioned for the Victoria and Albert Museum's Decode Lab, *The Goody Bullet* is a location-based SMS (text-messaging) game designed for play within the museum via text messages, in-person interactions, and a large player token–tracking board (figure 4.3). At the start of the three-hour play session, players are given in-game names that label their tokens and become their screen names in the SMS layer of the game. The narrative places the players inside an underground government

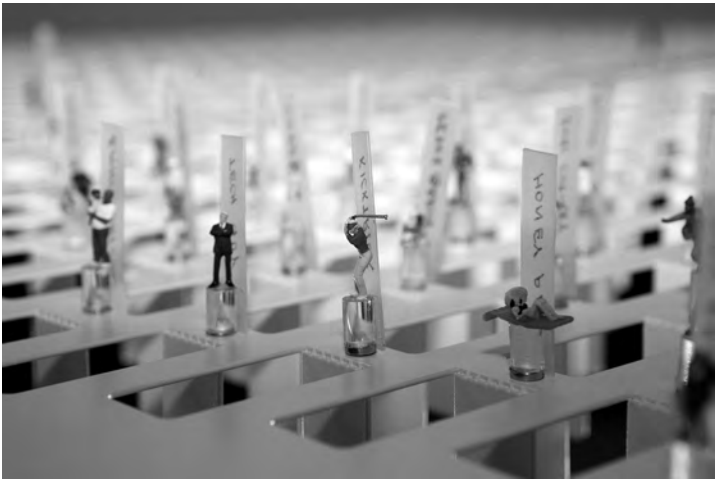


Figure 4.3
Blast Theory, *The Goody Bullet*, installation view. Photo credit: Peter Kelleher.

bunker where players are tourists visiting the facility. During a dinner party, a disaster strikes outside the bunker and the facility goes into lockdown. One of the tourists is killed, and the rest of the tourists have to figure out who killed the victim.

As the game unfolds, players send and receive messages to and from one another and the game itself. In addition to freely talking with other players in the physical space, each player has five SMS commands she can issue: *update*, which lets the player know what is going on in the game's narrative; *say*, which allows the player's character to say something to all other player characters seated at her imaginary table; *accuse*, which accuses another player of being the murderer; *find*, which lets the player change tables to talk with other player characters; and *commit suicide*, which lets the player exit the game.

The game explores ambiguity in a number of ways: the ambiguity of space, as the space physically occupied by the players differs from the imagined location inside the game; the ambiguity of interaction, as the players interact with one another in real-life, via SMS, and through the large, publicly displayed player-tracking screen, uncertain of who is who, with others at the museum not playing the game, and with nonplayer characters inside the game; and the ambiguity of locus and focus, as the cognitive demands of the game, the museum, and the social interactions all pull in different but related directions. Lastly, there is an ambiguity of intention. Are all players striving to find the killer? Or are they inhabiting the game for other reasons? Are they just at an event socializing? The kinds of investigations that can be explored through this type of project, and the experiences they provide, create fertile space for games, artists, and players alike.

Blast Theory exists in a space between augmented reality games, research-driven speculative design, and participatory art. It appears to be comfortable inside august institutions like the Institute of Contemporary Arts and the Victoria and Albert Museum and within the game industry, which has recognized its work on a number of occasions. The company produces projects that investigate, entertain, and provoke. On a larger scale, the professional veneer of its projects functions as a meta-layer of investigation: what happens when a company engages with speculative participatory art?

Case Study: Mary Flanagan and the Medium of Play

Mary Flanagan brings a playfully critical eye to games, their design, their play, and their place in culture. She does this by working with the medium of play—play in the sense of playing games, but also in the sense of playfulness and the occupation of the wiggle room created between culture as a whole and the cultural objects of games and art. Flanagan has discussed her interest in Umberto Eco's *The Open Work*:[16] the idea that a cultural artifact (a piece of literature, a poem, a painting, etc.) is open to interpretation, thereby creating a coauthored output by the author or artist and the reader or viewer. In her own work, Flanagan's artists' games use play as an open, coauthored medium for engaging with and in critical discourse.[17]

[giantJoystick] (2006, figure 4.4) embodies Flanagan's approach to play as an artistic medium. The title is understatedly descriptive: the work is a functioning ten-foot-tall model of an Atari VCS joystick. In exhibitions, the oversized controller is attached to an Atari VCS (or one of its more recent re-releases), where it is used to

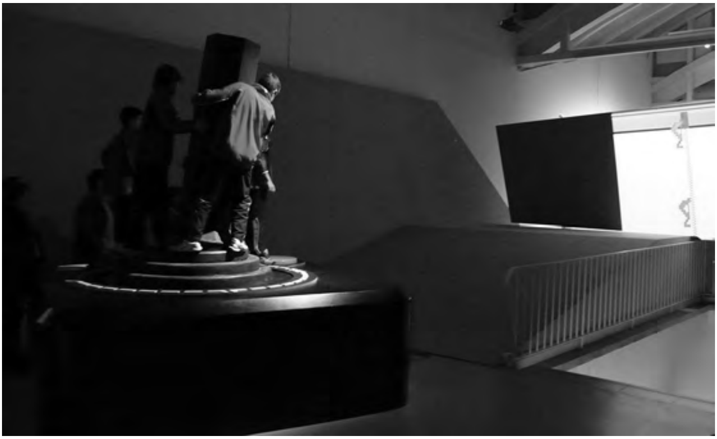


Figure 4.4
Mary Flanagan, *[giantJoystick]*, installation view. Image courtesy of the artist.

play classic games like *Breakout* (1976), *Asteroids* (1979), and *Missile Command* (1980). While the games played with the oversized controller are single player, it is nearly impossible for one person to simultaneously manipulate the large stick and press the oversized button. And so, by necessity the play experience becomes collaborative. The top of the controller becomes a de facto platform on which people stand in order to maneuver the stick, gather to watch, or simply wait their turn. The button is more often controlled from the ground, with players poised to press with one or both hands at the appropriate moments of gameplay.

[giantJoystick] is not a game in the strict sense, as Flanagan's creation is not a game or even an original work in the design sense. Instead, *[giantJoystick]* is a reimagining of scale of a five-inch-tall controller into a ten-foot controller. This act defines a new space of possibility that critically engages notions of game design, interface, co-play, and the contexts of play. The work is not unlike a Fluxus event score asking us to playfully engage with the world in an unexpected, open-ended way. What does it mean to collaborate on play activities designed for a single player? How are decisions made? How can two (or more) work as one? Is it necessary that someone lead? Can players collaborate through play without additional communication? And by placing *[giantJoystick]* in a gallery rather than in the home, the typical location for an Atari VCS, Flanagan also asks us to think about games and play. What is being exhibited with this work? The game? The controller? The players and their performance? Play becomes a contextual medium within which the player can think critically about videogames and play experiences, all while having fun.[18]

This approach to games as a means of generating critical, interpretive play is key to Flanagan's work. *Career Moves* (2000, figure 4.5), for example, uses play to ask questions about gender biases

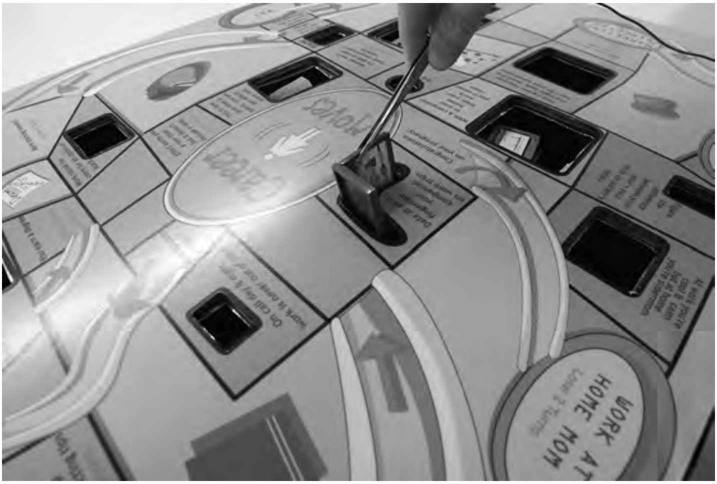


Figure 4.5
Mary Flanagan, *Career Moves*. Image courtesy of the artist.

in the workplace. The piece is a digitally augmented boardgame that appears to be some sort of race game in the tradition of *The Game of Life* (1960) or *Chutes and Ladders* (1943), with a touch of *Operation* (1965) and *Monopoly* (1935) thrown in for good measure. The game presents the player with a mix of stereotypically "female" career choices—for instance, waitress and stay-at-home mom—and those that at first might appear to speak to a more progressive set of choices—project manager, consultant, or CEO. But as the players move around the board, gender biases rise to the surface to show the ways in which women are perceived and to expose implicit and explicit limits on how they are positioned within male-dominated corporate structures. Scattered throughout the game board are inset spaces that, when landed upon, require the player to use a pair of metal tongs to extract objects. If the player touches the edge of the inset space, audio excerpts of self-help and career advice targeted at women play, further exposing gender biases embedded deep inside our culture though their implicit discrimination and oppression.

In her artist statement about the game, Flanagan references Claude Lévi-Strauss's concept of collective creation, the social construction of the practices of society.[19] *Career Moves* uses the structure of games and well-known game tropes from popular boardgames played by most American children to create a play experience that critiques the ways in which we are all complicit in creating and keeping in place restrictions on women in the workplace.

Flanagan in part achieves this social critique through the design of the information system of *Career Moves*. Games are generally divided into two kinds of information systems: perfect and imperfect. Perfect information systems make all information presented and generated by the game visible to all players. The children's boardgame *Candy Land* (1949) illustrates this well—everything a player needs to know about the state of the game's play and its players' performance is learned by looking at the board and the placement of the players' tokens on it. Imperfect information systems obscure some information from players while making other information about the game's state visible to all. Texas hold'em poker is an imperfect information system—though all players can see the shared face-up cards, only individual players know what cards they hold, and no one knows what cards are still to be played from the deck. Perfect and imperfect information systems are design tools for the information space that is available to players and with which they make sense of their play experiences.

Flanagan uses information systems to create the structure within which her players explore, unveil, and ultimately experience her critique. *Career Moves* deftly plays with the player experience of a game's information system to produce a range of interpretations. It can simply be played as a game but it is also a vehicle for reconsidering the cultural frames shaping and limiting women's career choices and trajectories. At the same time, the piece is a critical artwork that, through its play, questions the role of popular cultural artifacts, like games, in the reinforcement of stereotypes. Why are women trapped in these roles? Why do we perceive women to be in need of patronizing and role-reinforcing motivation? Why does so much of our culture work to maintain gender bias?

[pile of secrets] (2011, figure 4.6) takes Flanagan's use of play as a medium in a very different direction. The piece catalogs gameplay footage of videogames from the 1990s through the early 2010s in order to identify and present patterns of game design and play. The footage from the games was curated into clips around themes like jump, run, explode, and other activities

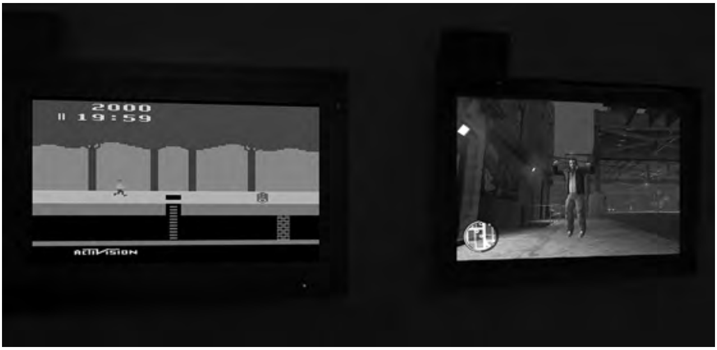


Figure 4.6
Mary Flanagan, *[pile of secrets]*, installation view. Image courtesy of the artist.

frequently carried out while playing videogames. That Flanagan chose to focus on the run-time mechanics of a game, rather than on story elements, demonstrates a conceptualization of games as systems, with an emphasis placed on the actions (run, jump, etc.) and outcomes (explode, collect, etc.).

The title alludes to an experiential aspect of games—play experiences are indeed a series of secrets uncovered and interpreted by players. To play a game is to construct theories about how to act in order to best obtain one's goals, whatever they might be. These theories are enacted and evaluated, and then reconsidered and reenacted throughout the play experience. Flanagan collects these moment-by-moment decisions in *[pile of secrets]* and catalogs them for inspection, hoping to unlock the larger secrets of what constitutes games and their play.

The work is a commentary on the state of our shared understanding of play and games and their roles in our lives. *[piles of secrets]* approaches games as a dark continent to be examined in the hopes of discovering their meaning and purpose. It is no mistake that the work is presented as a series of videos; videogames are often considered offshoots of television and film rather than as part of the much longer lineage of games. *[pile of secrets]* engages play through reflection rather than through activity. To players, the actions and outcomes captured in the play footage provide memories of playing the represented videogames. The secret knowledge of understanding through play is revealed and reexperienced. For those unfamiliar with the videogames featured in the work, *[pile of secrets]* shows glimpses of the play experience, something usually accessible only through direct experience. Paradoxically then, by presenting play moments as video, Flanagan emphasizes the importance of play to games, and of play as the core of her own practice of critical appraisal.

Case Study: Nathalie Pozzi, Eric Zimmerman, and Games as Postmodern Craft

Nathalie Pozzi, an architect, and Eric Zimmerman, a game designer, collaborate on site-specific game installations. Their projects span the fields of architecture, graphic design, game design, and installation art in ways that vary from project to project but that always bring a polyglot design eye to artistic concerns. If I had to describe Pozzi and Zimmerman's work in a single phrase, I'd call it playfully conflicting. Their work is aloof and engaging, critical and entertaining, playful and austere, abstract and concrete, art and design. With *Cross My Heart + Hope to Die* (2010), they created a maze that filled a gymnasium with twenty-foot-tall billowing red cloth walls through which players darted about in minotaur masks. In *Flatlands* (2010), they created a game about discussing aesthetics through the lens of 1970s and 1980s boardgames. *Starry Heavens* (2011), designed for the Museum of Modern Art's courtyard, combined the children's game "king of the hill," race games, and weather balloons. And *Interference* (2012) is a strategy game in which multiple play sessions take place on a shared field of play made of a set of delicate metallic lace walls.

I would like to focus on their first project, *Sixteen Tons* (2010, figure 4.7). At first glance, *Sixteen Tons* has the sophistication of modernist Italian furniture design. The curve of the wall and the design of the craft paper folds interplay with light to create a complex, high-contrast, vertically patterned surface. It is a work that is vague about the value proposition its play offers; in some states it may even be illegal. Walking around the six-foot-tall work, there isn't a clear set of handles to guide interpretation.

If you look through the two narrow openings in the irregular oval formed by the two walls, you discover a small interior

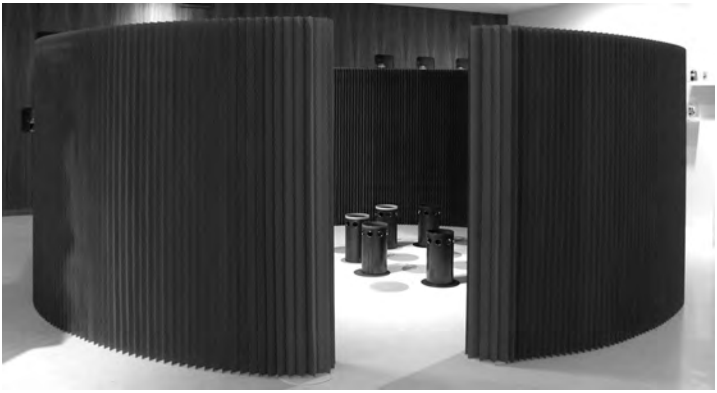


Figure 4.7
Nathalie Pozzi and Eric Zimmerman, *Sixteen Tons*. Image courtesy of the artists.

room. Placed slightly to one side of the space are eight steel cylinders arranged atop a four-by-four grid of colored dots. Each of the 1950s kitchen appliance colors are assigned to two pipes, two dots, and a corresponding number from one through four, each located along one of the sides of the grid. Should you try to pick up a length of pipe, you will discover it is quite heavy—about twenty pounds. Things become less clear with the discovery of these items. What are these objects? Why are they so heavy? Why are they numbered and color coded? And why are they inside these walls?

Moving into the space, you see four large text panels hanging on the interior of one wall. The panels are not the standard didactic text found in museums, but instead display a title ("Sixteen Tons: A Game for Four Players"), a quote from an obscure mid-twentieth-century country song, a set of instructions for setting up a game, and rules for playing the game. At this point, everything about the grid, pipes, and numbers transforms. What were moments earlier inscrutable objects of art or design now compose a large-scale game board and its play pieces.

The walls can be read as a playful literalization of the "magic circle," a concept derived from Johann Huizinga's *Homo Ludens* from 1938:

> Just as there is no formal difference between play and ritual, so the "consecrated spot" cannot be formally distinguished from the play-ground. The arena, the card table, the magic circle, the temple, the stage, the screen, the tennis court, the court of justice, etc., are all in form and function play-grounds, i.e. forbidden spots, isolated, hedged round, hallowed, within which special rules obtain. All are temporary worlds within the ordinary world, dedicated to the performance of an act apart.[20]

The craft paper walls become the magic circle of the game, and the openings in the walls become the passage through which you enter the space to perform "an act apart." The exhibition space itself, whether a museum, gallery, or game show floor, is another form of hallowed space "within which special rules obtain"; the game is inside a game, so to speak. By putting the game inside a second set of walls, Pozzi and Zimmerman have created a protective barrier that shields the game and its players from the normal behavioral expectations of a gallery space.

Next to the game's title is a quote from the 1943 Tennessee Ernie Ford song "Sixteen Tons": "You load sixteen tons, what do you get? / Another day older and deeper in debt." The lyric creates an interesting frame for the game. Does the sixteen reference the number of dots in the grid? If so, is it suggesting that playing the game is work, and that its players are laborers? Or maybe it is a reference to the weight of the lengths of pipe? Is this a nod to the fraught connection between manual labor and the post-industrial fear of leisure? Do the walls form a mine or factory? Or a gambling den? What kind of debt could possibly be accrued here? And what does any of this have to do with a game for four players?

Moving to the next panel of wall text, you find a set of instructions for positioning the steel play pieces and the four players. All three instructions hint at *Sixteen Tons*'s layers, simultaneously establishing and commenting on its gameness and artness. The explicit instructions for how to position and manipulate the pieces—"Move the pieces to the matching colored spaces"—goes against the grain of "look, don't touch" gallery conventions while providing straightforward explanations of what the player should do with the pipe length when playing the game. The second setup instruction—"Stand on a number. This determines your color and the turn order"—continues the transformation of the art viewer into a player.

The third and final setup instruction, "Take out three dollars," is the real kicker, and the source of much of the playful conflict in the game, opening up all sorts of problems for games and art. Depending on who you listen to,[21] money has corrupted, made boring, or otherwise transformed contemporary art into something unrecognizable. Brought to the foreground here is the crass act of commerce, whose integral role in the subcultural ecosystem is often glossed over. Games as cultural objects, unlike art, are almost exclusively considered as mass-produced commercial entertainment products, which excludes them from serious consideration as high culture. Money has also plagued games and their cultural status over the last five or six thousand years—money separates games of skill from games of chance, legal from illegal, and athletic honor from compromised integrity.

Just below the setup instructions is the game's win condition: "You win when the two pieces of your color are directly adjacent to each other." Looking at the game—a four-by-four grid with two pipe lengths per player—things do not seem very promising. At this point, without having fully read the rules, *Sixteen Tons* feels like an enlarged variant of tic-tac-toe or one of those peg games on the tables at Cracker Barrel restaurants.

Moving over to the next panel, you find the game's rules. Another layer of preconceptions peels back: players do not necessarily move their own pieces. Instead, one player puts her move up for auction by asking her three opponents to "put me to work." The winning bidder gets to tell the active player which piece to move to an adjacent or diagonally adjacent "square"[22] that is not already occupied. Should no one bid, the active player can move her own piece.[23] Play then continues until one player has met the win condition of having her two pieces directly adjacent to one another.

Sixteen Tons nests two interlocking game systems: a simple "match two" movement game constrained by a resource management game. The tension produced by these two simple game systems and the layers of indirection they produce is wonderful to watch unfold. Almost from the start, one or more players gets within a move or two of winning. With a win seemingly so close at hand, players often spend their money trying to block the player closest to pulling off the win condition of directly adjacent play pieces. Soon, this phase of the game feels intractably stagnant. How will anyone ever break out of this cycle of short-term defensiveness? Is this the drudgery alluded to in the lyrics?

This is when *Sixteen Tons* gets interesting. Players have to start thinking strategically about the money in relation to turn order and the position of their pieces. As simple as the two game systems are, it can be really difficult to keep track of the play pieces and the flow of money. Strategies are developed for manipulating opponents into moving the pipe sections around the grid and the money from player to player. Whoever has the most money is able to coerce her opponents into doing things that hurt their own interests. As the rules state, “You MUST accept the highest payment and take the money,” which means that the active player has to move a piece however the highest bidder requests. It also means that one player is going to win the game for one of her opponents in her attempts to try to earn enough money to win the game for herself. The bartering and orders issued by the turn-buyer are full of submission and dominance, though it is not always clear who comes away from each transaction with the upper hand until the game is over.

At key moments of play, *Sixteen Ton*s transforms into a gambling pit. Money in hand, the players take on a demeanor resembling something between gamblers and bidders at an auction. With all the “put me to work” cries coming out of the walls, nearby spectators gather to see what is going on. As more people come in and the doorways seal closed with bodies, the temperature inside the walls rises, sometimes by ten or more degrees. The space is now a far cry from a reserved art installation. No one is paying attention to the texture of the walls, the elegant mid-century muted palette, or the symmetry of the play pieces. Everyone, players and spectators alike, is crowded inside the walls, transfixed by the movement of pipes and dollars.

Looking deeper into the game, we see a potent critique of the post–industrial age fear of leisure time for the poor. *Sixteen Tons* pushes on class prejudices by having the players perform the role of gambler, in the process embedding class and race issues within their play performance. The labors of the day that produce the meager cash alluded to in the lyrics are no longer separated from after-hours pursuits. At the height of activity, the walls barely contain the game's energy. All the references to gambling raise the specters of race and class, as well as their relation to the fears associated with gambling spaces filled with poor, brown-skinned people. Once the Industrial Revolution set in, politicians, sociologists, and clergy all fretted about how to keep working class people entertained during their hours off the job.[24] Could they be trusted with their time? Could they be trusted at all, despite their importance to the economy? It was in part this line of thinking that created the border between high and low culture during the nineteenth and early twentieth centuries.

Late in the game, the refrain from the song lyric rings true: "Another day older and deeper in debt." At some point, all but one player find themselves digging deeper into a hole, further from the seemingly easily obtained goal of placing two steel pipes next to one another. Despite their best efforts, three of the four players will be left with too little to stop that one shrewd (or lucky) player from winning the game.

But what happens to the money at the end of the game? The rules are ambiguous on this count. Does the winner take all? Do the players get to keep whatever is in their hands at the end of the game? Does everyone get their money back? How players decide to settle this transforms the game yet again. Sometimes, to win is to lose. Other times, money doesn't actually mean anything at all beyond an abstracted resource that could just as well be *Monopoly* money. At the end of each game, players are left standing in the middle of a gallery to sort this out themselves, creating yet another layer of interaction and conflict. I have heard of three variants—redistribution, winner take all, and keep what you have. If the players are simply redistributing the money to its original owners, then the money was nothing more than a prop, a little bit of artificial thrill. If playing winner take all—what has become known as “high stakes *Sixteen Tons*”—there is no choice but to win if a player wants her money back. If players keep what is in their hands when the game ends, then the winner, according to the win condition, has likely just paid off another player with at least one-third of the total economy and lost all her money, while one or more of the other players who “lost” just received a cash bounty.

Pozzi and Zimmerman are as close to modernist ideas of design as they are post-structural criticality. The degree to which they focus on a finely tuned game experience played with a just-so set of materials seems to run counter to the post-medium tendencies of contemporary art. Yet their work finds a way to have its game cake and eat its postmodern conceptualism, too. *Sixteen Tons* is a game, but a game used to explore a series of ideas about labor, the transformation of space through use, the role of money in games and art, the unease of gambling, and so forth. So as much as the work operates as a game, it is toward a conceptual end. The conceptual territory covered by the game is enacted by the four players and their audience. Along with steel and paperboard, play becomes another refined material crafted by Pozzi and Zimmerman.

5 Games as a Medium

To make sense of the artists' games of Viola and the Game Innovation Lab, Pozzi and Zimmerman, Flanagan, and Blast Theory, we need a new aesthetics attuned to the ways that games and play operate within the traditions of artistic practice. We need an understanding that can assess the materiality of play as much as that of the ideas or the objects themselves. A game can produce meaning or, perhaps better stated, experience. But what kinds of experiential meaning can games generate, exactly? What do we get by playing *The Night Journey*, *Sixteen Tons*, or *The Goody Bullet*? Is there a different sort of aesthetics at play in an artists' game that combines the values of both the art and game communities than that found in a more traditional approach to games or art? Are these three games' play experiences different than those of *Candy Crush Saga* (2012) or *NBA 2K 12* (2011) or *Spelunky* (2009)? Are they different than the experience provided by artworks like Rachel Whiteread's *House* (1993), Ryan Trecartin's *Re'Search Wait'S (Edit 1: Missing Re'Search Corruption Budget)* (2009), or Tino Sehgal's *The Kiss* (2010)?[1]

In his essay "Situational Aesthetics," Victor Burgin speaks to the issue at the heart of these questions:

> It may no longer be assumed that art, in some mysterious way, resides in materials. Attempts to determine the necessary and sufficient conditions

> of aesthetic structure have failed from an emphasis upon the object rather than upon the perceiver. The implications of a redirection of attention, from object to perceiver, are extensive. It may now be said that an object becomes, or fails to become, a work of art in direct response to the inclination of the perceiver to assume an appreciative role.[2]

This statement describes the layers of expectations, norms, and affordances that surround the complexities of art conceptualization, production, and experience. Art and games are not anything unto themselves. The experience of an artifact is contingent on so many factors outside the control of the object itself, let alone the artist or designer: historical context, situational context, the prior experiences and knowledge of the individual, and so on. There is no set way for a game to unfold or for play acts to be performed. The space of possibility within a game is all potential, a potential realized through play. Games, when approached with artistic sensibilities, explore an aesthetics located somewhere between the conceptual and the experiential.

To make sense of artists' games requires that we recognize that there is a difference between games as entertainment and games as a medium. "Medium" here refers to a creative substrate like oil paint or charcoal, not media like TV or film. And so, in the same way oil suspends pigment for application to a surface in order to make an image, games are the medium in which play is suspended. Moving past the remediated baggage of media expectations[3] and toward the idea of a medium of potentiality that is activated through audience engagement is critical to a new way of thinking about artists' games and their play.

We can already trace such an aesthetic for games by connecting the dots between *Open Score*, *Career Moves*, and *Uncle Roy All Around You*. Conceptually, there is common ground that explores questions of process, performance, and criticality that does not leave behind an object but instead only the ephemeral traces of play. Formally, these works embrace a space of possibility, a designed framework of mechanics and goals, that leaves ample space for ambiguity and interpretation. Competition is often minimized, exploited for expressive purposes, or altogether removed. Experientially, these works engage the player in ways that may be fun, reflective, critical, confusing, or most any other emotion on the spectrum.

In her book *The Contingent Object of Contemporary Art*, Martha Buskirk explores the aesthetics and ramifications of the move in art toward less clearly delineated artistic output and how this affects the experience of works when they are never the same twice. She discusses her own experience with Richard Serra's *Torqued Ellipses* (1997–1998) at Dia:Beacon where viewing the steel sculptures at different times of day transformed the experience due to changes in light.[4] During her discussion of Serra, Buskirk references Hal Foster's sense that "minimalist work complicates the purity of conception with the contingency of perception, of the body in a particular time and space."[5] With a game, this purity and contingency are baked into the very form. Although games are often comprised of objects like boards, tokens, and software, these are not the real work, though they are important. Games become material through the player's perceptions expressed through play performance.

I distinctly remember watching people attempt to play Mark Essen's *Flywrench* (2007, figure 5.1) at the New Museum's "The Generational: Younger Than Jesus" exhibition. The game was displayed in a small alcove with a Nintendo Entertainment System game controller. *Flywrench* seems like it should be easy enough to play. The player attempts to move her ship—a thin, bifurcated line—through a series of vector art passageways. The

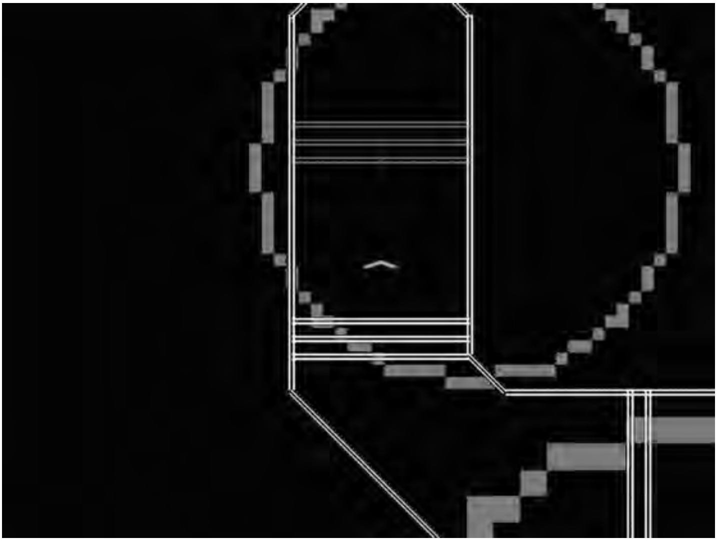


Figure 5.1
Mark Essen, *Flywrench*.

controls do not seem too difficult, either—on the NES controller, the left D-pad (the four-way directional control) handles left and right movement while the “A” button handles flapping (upward movement) and the “B” rolling (spinning). Flapping also turns the ship red, while spinning turns it green. Together, these controls allow the player to navigate the ship. Things get tricky fast, however. Obstacles block the ship’s path, requiring that the player match the obstacles’ color to pass through them. Added to this is the fact that the ship’s default state is falling toward the bottom of the screen, requiring the player to flap to stay aloft. A frantic balancing act ensues in which the player moves laterally while keeping aloft, all the while noting the colors necessary to move through particular parts of the environment.

Walking through “The Generational” exhibition, I had varying degrees of success in making sense of the artworks. Some I was just not able to fully connect to no matter how much time I spent with them, their intended meaning and experience seeming forever inaccessible. *Flywrench* was different. Like a Fluxus event score that reveals itself when the viewer follows its instructions, the game revealed itself through play. Beyond the initial flatness of the viewing plane, works like *Flywrench* are dimensional frameworks that invite participation. *Flywrench* directly engaged me by providing feedback on my understanding of its controls and my ability to reach its goals. The more I wanted to understand *Flywrench*, the more I had to play it. If I did not understand what to do—which buttons to press to make the ship change colors and navigate the passages—my lack of understanding was exposed for all to see right there on the screen. If I had the basics down of how to play but still could not execute moves as quickly and precisely as the game required, that too was made visible. But through repeated play, I was able to come to terms with the game and at least my own thoughts on its meaning.

Like many games, *Flywrench* is a hermetically sealed universe with its own knowledge system that generates play and players’ understanding of it. The process of knowing how to “see” a work—how to understand its conceptual, formal, and experiential values—is critical to having meaningful experiences of artworks and games alike. But with games, the act of comprehension and experience is made material in new, exciting ways. There is a literacy required to “get” artists’ games. So, while a well-designed game can teach a player how to play, there is still a baseline of experience with games necessary to appreciate this sort of work. The development of a broader literacy beyond that of a small group of artists, designers, and their audience is a challenge for this new synthesis of games and art.

A cautionary tale is found in Philip Johnson's 1934 Museum of Modern Art "Machine Art" exhibition in which hundreds of machines and machine parts were exhibited.[6] Instead of focusing on the thick aesthetics of the machines—what they did, for whom they did it, and the ramifications of these actions—Johnson instead emphasized a thin aesthetics derived from the visual arts, one that focused on light, color, and motion. These are of course aspects of appreciating a machine, but certainly they are at best surface concerns. Johnson neutered the machines, asking the audience to see them not as functional objects but as still or moving images. Johnson saw only half the beauty of the equipment exhibited—its thin aesthetics. Imagine the power the exhibition could have had if he had made more legible the thick aesthetics of the machines.

The interactions of games and art are littered with similar missed opportunities. Developing a thick aesthetics that makes clear how artists' games can be valued as artworks is essential. So, too, is the need for more and more game makers to embrace the values of contemporary art and for more artists to see the value of games.

Two artists synthesizing games and art are worth noting here in light of these challenges: Molleindustria and Anna Anthropy. Molleindustria, the pseudo-corporation created by Paolo Pedercini, makes videogames that play like games—they are versed in the tropes and traditions of game design—but they do so in ways that participate in the critical discourse central to contemporary artistic practice. Take *The McDonald's Videogame* (2006, figure 5.2), for example. The game uses the genre of tycoon simulators like *Sid Meier's Railroad Tycoon* (1990) or *Zoo Tycoon* (2001) to

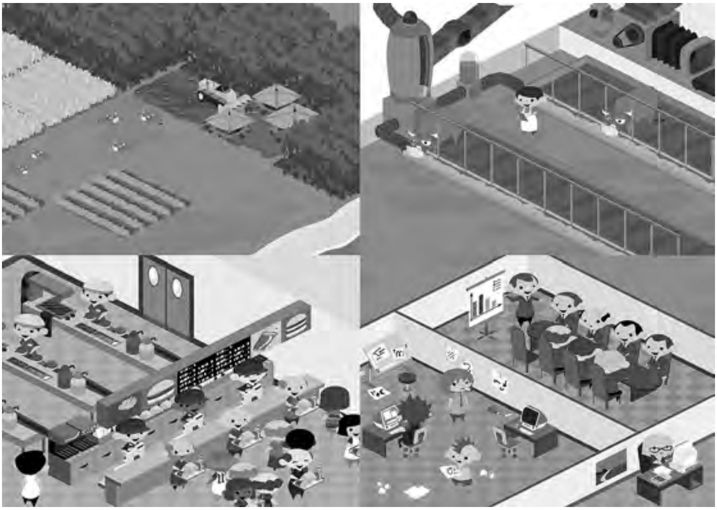


Figure 5.2
Molleindustria, *The McDonald's Videogame*. Montage of the four game environments.

critique McDonald's impact on agriculture, animal welfare, and worker's rights. The player moves between soybean farming, cattle raising, slaughterhouse work, restaurant assembly line work, order taking, and corporate decision-making environments to maintain a profitable fast food company.

The McDonald's Videogame distances players from the object of critique through cute graphics and an oversimplification of the fast food company's operations. The game requires players to materially participate through their play—they labor for McDonald's *and* for Pedercini. Playing the game makes players implicitly involved in McDonald's exploitation of the earth, animals, and people, while they also experience Pedercini's critique of McDonald's policies and processes. The game's friendly surface belies a deep critique of the company, but also a critique of games for change and of game makers' well-meaning, earnest use of games.[7]

A more recent Molleindustria game, *The Best Amendment* (2013, figure 5.3), looks at the rhetoric of gun control and gun violence in the period shortly after the 2012 Sandy Hook Elementary School shooting. As the game begins, the player is reminded of executive vice president of the National Rifle Association Wayne LaPierre's statement: "The only thing that stops a bad guy with a gun is a good guy with a gun." LaPierre's tortured logic establishes the premise of the game—the shots fired by the white-hooded good guy set up the behaviors of the black-hooded bad guys. The game quickly becomes filled with bad guys mimicking the good guy's previous actions. So, if the player

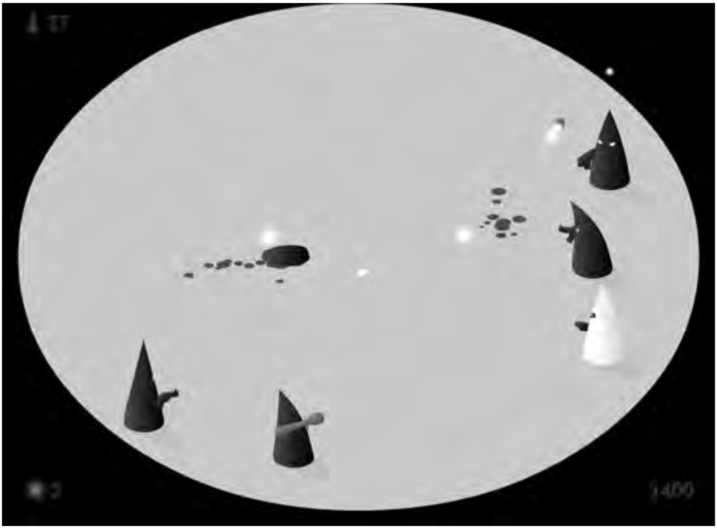


Figure 5.3
Molleindustria, *The Best Amendment*.

shoots three bullets at the one bad guy in the first round, the second round will include a new bad guy but also a bad guy exactly replicating the good guy's three shots from the previous round. This produces a pitch-perfect critique of the simple-minded logic of the NRA.[8] Pedercini achieves this by working within the formal affordances of games, but in a way that is recognizable to game makers and the contemporary art community alike. We play in and play with his critique. It is a ludic experience, even a fun one, but also a critical revelation through systems modeling.

Another strong argument for an accessible, synthetic aesthetics of games as a medium is found in Anna Anthropy's *dys4ia* (2012, released under the pseudonym Auntie Pixelante). Through a series of microgames in the spirit of Nintendo's WarioWare series, *dys4ia* (figure 5.4) explores Anthropy's experiences with hormone replacement therapy. The game is divided into four sets of minigames, each addressing a different aspect of her transition: "Gender Bullshit," "Medical Bullshit," "Hormonal Bullshit," and "It Gets Better?" In "Gender Bullshit," the player performs actions like walking the in-game Anna past people who mis-gender her and moving her through a maze-like women's restroom. In "Medical Bullshit," the player engages in activities like helping Anna find a clinic and answering gender-biased medical questionnaires. "Hormonal Bullshit" reflects on the effects of medication through microgames that feed Anna pills that damage her liver or require the player to attempt to navigate her overly sensitive breasts through an obstacle field. Finally, in "It Gets Better?," the player explores a mix of the good and bad things that happen to Anna once her hormone replacement therapy is underway, including navigating her through a maze of mirrors in hopes of seeing her beauty and continuing to deal with mis-gendering.

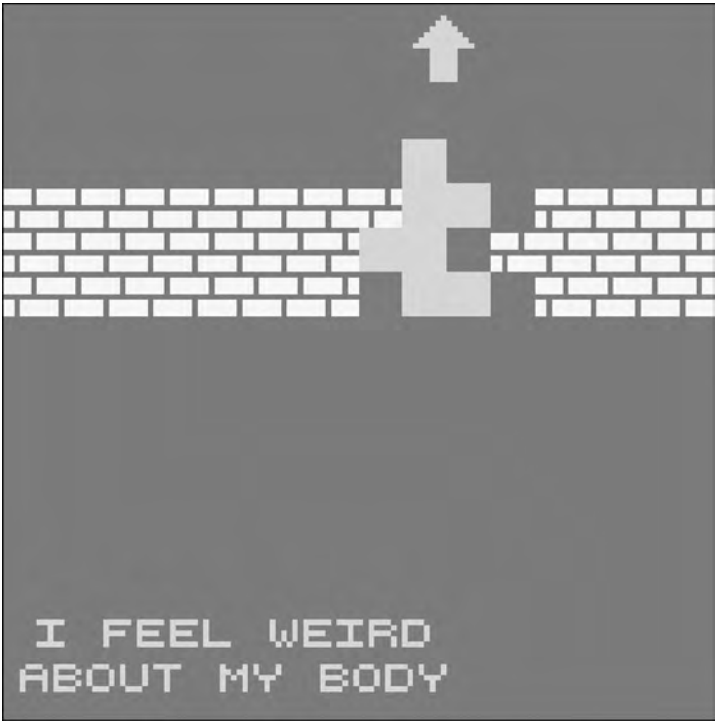


Figure 5.4
Auntie Pixelante, *dys4ia*.

Anthropy uses games to express her experiences as a transgender woman and to give players an experience that can provide insight and empathy. *dys4ia* is a game in its form, but Anthropy uses game design in decidedly artistic ways. The expression of personal experience, the critical perspectives on gender norms, the choice to view games as a populist outlet[9]—Anthropy's work melds the deft touch of a game designer with a critically engaged artist.

As Bourriaud notes early in *Relational Aesthetics*, "Artistic activity is a game, whose forms, patterns and functions develop and evolve according to periods and social contexts; it is not an immutable essence."[10] This embodies the situation within which we find ourselves here in the early decades of the twenty-first century. The status of games is on the rise, if for no other reason than their ubiquity. As more and more people from a broader spectrum of the population make games, the boundaries of what constitutes gameness shifts. And as the boundaries of what constitutes art have grown increasingly broad, the overlap of these two cultural domains was destined to happen with increasing frequency and volume.

In the four years since I began this book, a great deal has changed about the intersections of art and games. The artgames movement has more or less ended, and game art is even more a cul-de-sac inside the marginalized world of media art than it was before. Indeed, as I have worked on this book, chapters 2 and 3 became art history. I do not see this as a tragic turn. Instead, it gives me hope to see more artists cross-fertilizing games and art in the creation of artists' games—Pozzi and Zimmerman, Flanagan, and Blast Theory, of course, but also Pedercini, Anthropy, and others like Kaho Abe, Pippin Barr, Tracy Fullerton, Tale of Tales, Eddo Stern, and Zach Gage. These artists synthesize the concerns of games and those of art in ways unimaginable just ten years ago.

Over the last few years, thanks to his chess-playing phase and his zinger that he has "come to the personal conclusion that while all artists are not chess players, all chess players are artists,"[11] Marcel Duchamp has become the patron saint of the games and art discussion. In discussing Duchamp's interest in chess, Hubert Damisch places the beauty in the play of chess[12]—the space created within the game for players to perform, to solve problems—and not in the design of the game. The ephemeral nature of the experience of chess is what appealed to Duchamp. That chess was a folk game, one with innumerable unnamed designers, must have seemed like a potent counter to the artist-centric community of practice within which he found himself.

Duchamp lived in an era that largely predated the videogame industry and the conception of game design as a creative pursuit, dying six years after *Spacewar!* (1961, the first digital computer game), four years before *Pong*, twenty-seven years before game art appeared on the scene, some thirty-five years before the rise of artgames, and forty-five years before the release of *The Best Amendment* and *dys4ia*. Had Duchamp lived to see the view of games evolve from their being a vital but largely overlooked aspect of life to a substantial part of the entertainment economy and a medium for artistic practice, I wonder what he would have thought of it all. Would he would have seen kindred spirits among the creators of *Sixteen Tons*, *Uncle Roy All Around You*, *[giant Joystick], and The McDonald's Videogame*? Could he have imagined what is yet to come?

Notes

Chapter 1

1. Mary Flanagan's *Critical Play* and *From Diversion to Subversion*, ed. David J. Getsy, are both excellent resources for deeper exploration of games as art.

2. *Community of practice* is a concept explored in Lave and Wenger, *Situated Learning: Legitimate Peripheral Participation,* that was later expanded upon in Wenger, *Communities of Practice: Learning, Meaning, and Identity*. I am using the term here in a broader sense, and branching off into an expanded usage by connecting it with affordances.

3. In Shaw and Bransford, *Perceiving, Acting and Knowing*, pp. 67–82.

4. Norman, *The Design of Everyday Things*.

5. For an early, thoughtful discussion of the component parts of games, see Costikyan, "I Have No Words and I Must Design." For a discussion of the design of *Super Mario Bros.*, see Anthropy, "to the right, hold on tight."

6. *Donkey Kong* was designed by Shigeru Miyamoto, designer of *Super Mario Bros*.

7. Other terms used to describe this sort of game include *arthouse games* and game art. I believe *artgames* is the best descriptor, so that is what I will use throughout the book.

8. *Independent game maker* refers to someone who produces games outside of a larger game development company. Sometimes independent developers work alone to create their games, as in the case of Jason Rohrer. Sometimes they do so within small company structures, as in the case of Jonathan Blow and Number None, Inc. For more on the independent games phenomenon, see my essay in *Debugging Game History: A Critical Lexicon.*

9. Artworks made from or about games are sometimes called art games, sometimes *media art*, and sometimes game art, among other descriptors. For the purposes of this book, I will call them game art to differentiate from artgames as introduced with *Braid*.

10. I have written a sketch of a history of game art: Sharp, "A Curiously Short History of Game Art," pp. 26–32.

11. Bourriaud, *Postproduction*.

12. "Hot Circuits: A Video Arcade," curated by Rochelle Slovin. The Museum of the Moving Image, 1989, 1993.

13. Brown, Governor of California, et al. v. Entertainment Merchants Association, et al., S. Ct. 08-1448 (2011).

14. Whether or not games are "Art" is not that interesting of a question (and thus addressed here in an endnote), as the answer is obvious—sometimes. More importantly, this single yes/no question clouds the subtleties of a very curious corner of popular culture.

Chapter 2

1. Damisch, *Moves*, p. 86.

2. One of the best discussions of Duchamp's exploration of chess from an art perspective was written by Hubert Damisch. See Damisch, "The Duchamp Defense," pp. 5–28.

3. Saito's series is part of the larger Fluxus series Fluxchess instigated by George Maciunas. Maciunas was interested in Duchamp's relationship with Chess, and so began the series using as his primary inspiration

Duchamp's declaration, "all chess players are artists." Maciunas asked Saito and others to make disruptive versions of chess.

4. A useful resource for this movement is Alberro and Blake, *Conceptual Art*.

5. LeWitt, "Paragraphs on Conceptual Art."

6. For more on this type of work, see Paul, *Digital Art* and Rush, *New Media Art*.

7. There are earlier videogames made by artists—games that are works of art like Bernie De Koven and Jaron Lanier's *Alien Garden* (1982) and Michael Smith's *Mike Builds a Bomb Shelter* (1983)—but these are more traditionally in the spirit of games in that they embrace the formal affordances of rules, goals, etc.

8. The timing of *Ars Doom* is important to note. The first game engines with level editors accessible to nonprogrammers were just starting to emerge, presenting artists with a new set of tools with which to create.

9. Tom Betts's *QQQ* (2002) is an earlier work that exploits the same bug to similar ends. Oliver himself also made an earlier version in 2002–2003 under the title *q3apaint* under the pseudonym Delire.

10. In Siegel, *Art-Words*, pp. 154–155.

11. For more on Rauschenberg's Combine Paintings, see Schimmel, *Robert Rauschenberg*.

12. Quaranta, "Delire (Julian Oliver)," pp. 130–137.

13. Useful references for visuality include Mirzoeff, "On Visuality," pp. 53–79, and Foster, *Vision and Visuality*.

14. Arcangel, http://www.coryarcangel.com/things-i-made/ Accessed June 1, 2011.

15. The game is still technically playable in so far as Arcangel did not alter the code allowing player input, though playing is easier said than done without any visual feedback.

16. Christiane Paul drew my attention to the landscape qualities of the work during her February 2010 keynote "Image Games" at the Art History of Games symposium in Atlanta, GA.

17. Arcangel, http://www.coryarcangel.com/things-i-made/ishotandy-warhol/. Accessed June 1, 2011. Like *Super Mario Clouds*, *I Shot Andy Warhol* was both an installation and a DIY project. In this case, the ROM binary is available via Arcangel's website.

18. Arcangel, http://www.coryarcangel.com/things-i-made/supermario-clouds/. Accessed December 2, 2013.

19. The piece debuted at the Barbican in London, and was later the centerpiece of Arcangel's solo exhibition at the Whitney Museum of American Art in 2011, which is where I encountered it.

20. The work was set up and run in the Museum of Modern Art's sculpture garden, where, like a mad Rube Goldberg machine, it ran just once; the end result of the machine's operation was its own destruction.

21. Laxton, "This Is Not a Drawing," p. 34.

22. Ibid.

23. Ibid.

24. Ibid., p. 35.

25. Ibid., p. 31.

Chapter 3

1. *Independent games* is a term used for a number of different things, but for our purposes, it refers to game makers working outside the confines of large game companies.

2. An excellent introduction to systems thinking is found in Meadows, *Thinking in Systems*.

3. This understanding of how games generate meaning is largely based on the ideas of procedural rhetoric developed in Bogost, *Persuasive Games*.

4. Humble, *The Marriage* website.

5. Conversation with Rohrer, August 27, 2010.

6. The game was created as an entry to Kokoromi's Gamma256 competition, which constrained game makers to a game resolution of no more than 256 by 256 pixels (*Passage* is only 100 pixels wide by 16 pixels tall).

7. These choices have attracted criticism from some within the indie game community. Anna Anthropy, for example, has noted *Passage* as yet another heterosexual white male take on the world, while Mattie Brice has created her own take on the game in her *Mainichi* (2012), which reflects her experiences as an African American transgender woman. The specificity of the representations and rhetorics around gender roles have certainly prevented some from taking Rohrer's games as seriously as they might have.

8. I played this game as a prerelease alpha build in the fall of 2013. As a result, the published game may differ from what is discussed here.

9. Personal communication with Rohrer.

10. Brindle, "Interview."

11. Interestingly, a few months into the game's alpha prerelease, Rohrer posted a revision to the game that allowed the player to outfit the wife with a shotgun. The wife becomes the functional equivalent of the pit bull, making her somewhat empowered, but still secondary.

12. Romero discusses the process in our co-authored essay, Brathwaite and Sharp, "The Mechanic Is the Message," pp. 311–329. Romero has since changed her name from Brathwaite.

13. The game was later adapted and revised into the much better-known *Monopoly*.

14. Should the rules end up on, say, Boardgamegeek.com, a popular site for boardgame and cardgame enthusiasts, then players could produce their own homemade versions of the games.

15. For more on Dewey's ideas, see Dewey, *Art as Experience*.

16. Wittgenstein, *Tractatus Logico-Philosophicus*, p. 155.

17. Costikyan, "I Have No Words and I Must Design," 1994.

18. This is of course only measuring players' mechanical understanding within their performed play and not the meanings beneath the systemic metaphor, but it is nonetheless establishing at least this level of insight.

19. My discussion of *The Witness* is based on prerelease versions of the game played during spring 2011, fall 2013, and spring 2014. As a result, the game may be different than described here when released.

20. Blow discusses this in his Champlain College guest lecture "Games as Instruments for Observing Our Universe." Links to the slide deck and audio are available at http://braid-game.com/news/2010/02/a-new-short-speech-about-game-design/.

Chapter 4

1. Hospers, *Meaning and Truth in the Arts*, pp. 13–14. Hospers is most infamously known for his quixotic 1972 run for the American presidency as the first Libertarian candidate, and for his friendship and eventual falling-out with Ayn Rand.

2. Klüver ran Experiments in Art and Technology through Bell Labs as part of a larger series of activities inside and around the company that promoted innovation and collaboration between artists and engineers.

3. Quoted in Morris, "*9 Evenings*," p. 9.

4. Ibid., p. 17.

5. A survey of play and its relation to art theory is found here: Laxton, "From Judgment to Process," pp. 3–24.

6. Johanna Drucker, for instance, discusses ludic formalism as "self-consciously indulging in the pleasures of material practice in all its associative and suggestive possibilities," which I interpret as referring to the play that exists in the making and through the conveyance of the work. Drucker, *Sweet Dreams*, p. 87.

7. In Friedman, Smith, and Swachyn, *The Fluxus Performance Workbook*, pp. 47.

8. Costikyan, “Tabletop Tuesdays: Surrealist Game Design.”

9. Bourriaud, *Relational Aesthetics*.

10. Bourriaud, *Postproduction*.

11. Kester, *Conversation Pieces*; Kester, *The One and the Many*.

12. Bishop, *Artificial Hells*.

13. Blast Theory, *Uncle Roy All Around You* website, accessed September 5, 2014, http://www.blasttheory.co.uk/projects/uncle-roy-all-around-you/.

14. Dreyfuss, *Designing for People*.

15. In a conversation with Blast Theory’s Matt Adams, Gaver’s paper “Ambiguity as a Resource for Design” was discussed as giving context to Blast Theory’s projects. Gaver, Beaver, and Benford, pp. 233–240.

16. Eco, *The Open Work*.

17. In her 2009 book *Critical Play*, Mary Flanagan lays out a history of games as instruments for cultural critique, as well as her own thoughts on the importance of making artful play experiences that critique the norms of our world.

18. Ah, fun. There’s a subject in need of unpacking.

19. See http://www.maryflanagan.com/career-moves.

20. Huizinga, *Homo Ludens*, p. 10. It is also worth noting that Zimmerman was instrumental in popularizing the phrase “magic circle.” *Rules of Play*, a book coauthored by Katie Salen and Zimmerman, introduced Huizinga’s statement and provided an expanded interpretation of the importance of the concept to games. Zimmerman more recently wrote on the curious history of the magic circle in game studies: “Jerked Around by the Magic Circle—Clearing the Air Ten Years Later.”

21. Thornton, “Top 10 Reasons NOT to Write about the Art Market,” pp. 82–83; Dave Hickey, as discussed in Helmore and Gallagher, “Doyen

of American Critics Turns His Back on the ‘Nasty, Stupid’ World of Modern Art”; among others.

22. Square? What square? There aren’t any found in the game outside that implied by the grid.

23. In all my experiences with the game, I have never seen this rule come into play.

24. Nash, *Spectatoritis*.

Chapter 5

1. What passes for traditional in contemporary art is harder to pin down than in games, no question about it.

2. Burgin, footnote 3.

3. Frank Lantz touches on this in “Games Are Not Media.”

4. Buskirk, *The Contingent Object of Contemporary Art*, pp. 21–25.

5. Foster, “The Crux of Minimalism,” p. 40.

6. The original exhibition catalog was reproduced by the museum on the sixtieth anniversary of the show: Johnson, *Machine Art*.

7. See Pedercini’s talk at Games for Change 2014, “Making Games in a Fucked Up World,” accessed September 5, 2014, http://www.molleindustria.org/blog/making-games-in-a-fucked-up-world-games-for-change-2014/.

8. We will leave the dark satire of the character costumes for another discussion.

9. Anthropy presents this argument in *Rise of the Videogame Zinesters*.

10. Bourriaud, *Relational Aesthetics*, p. 11.

11. From a speech to the New York State Chess Association, given in August, 1952, during its annual meeting in Cazenovia, New York. He took sixteenth place in the tournament.

12. Damisch, “The Duchamp Defense,” pp. 5–28.

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